

FW: Wilton Junction PS - Subsidence Advisory NSW - School Site

From Rob Walsh < Rob. Walsh 6@det.nsw.edu.au>

Date Tue 05/12/23 10:14 AM

To Mabel Chew <mabel.chew@area3.com.au>; Mathew Klumper <mathew.klumper@area3.com.au>; Matthew Mead <MatthewMead@genusadvisory.com.au>; Eraj Shrestha <ErajShrestha@genusadvisory.com.au>

Cc Paul.sancandi@bgeeng.com <Paul.sancandi@bgeeng.com>; katarina.vrdoljak@ptw.com.au <Katarina.Vrdoljak@ptw.com.au>; Diane Jones <Diane.Jones@ptw.com.au>; Lachlan Brown <Lachlan.Brown91@det.nsw.edu.au>; Yusra Hadi <Yusra.Hadi1@det.nsw.edu.au>

1 attachment (11 MB)

Stage 1 North Wilton stamped approved plans.PDF;

Hi team,

I've just tied up a loose thread with mine subsidence. Below and attached confirmation from Subsidence Advisory NSW, advising that the school site is subject to 'Surface Development Guideline 8 - No restrictions'. I believe we can drop this off as a risk now.

Regards,

Rob Walsh

Project Director | Infrastructure Planning

0407 955 459 | Rob.Walsh6@det.nsw.edu.au | education.nsw.gov.au Level 10, 259 George Street, Sydney, NSW 2000 | GPO Box 33, Sydney, NSW 2001



I acknowledge the homelands of all Aboriginal people and pay my respect to Country.

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From: Rob Walsh

Sent: Tuesday, December 5, 2023 9:26 AM

To: Lachlan Brown < Lachlan. Brown 91@det.nsw.edu.au>

Cc: Ryan Thoroughgood <Ryan.Thoroughgood7@det.nsw.edu.au>; Sezen Furmage (Sezen Furmage)

<Sezen.Furmage@det.nsw.edu.au>; George Demetriou <George.Demetriou1@det.nsw.edu.au>; James Kennedy (James Kennedy) <James.Kennedy21@det.nsw.edu.au>; Paul Lalich <plalich@hwle.com.au>; 'Andrew Scully' <ascully@hwle.com.au>

Subject: FW: Wilton Junction PS - Subsidence Advisory NSW - School Site

Hi Lachlan,

Please refer below email correspondence from Subsidence Advisory NSW in response to my enquiry. Subsidence Advisory NSW has advised the School Site (defined per attached plan) is subject to 'Surface Development Guideline 8 - No restrictions'. This confirms we appear to have no subsidence risks associated with the School Site.

Regards,

Rob Walsh

Project Director | Infrastructure Planning

0407 955 459 | Rob.Walsh6@det.nsw.edu.au | education.nsw.gov.au Level 10, 259 George Street, Sydney, NSW 2000 | GPO Box 33, Sydney, NSW 2001



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From: subsidenceadvisory < subsidenceadvisory@customerservice.nsw.gov.au>

Sent: Tuesday, December 5, 2023 9:16 AM **To:** Rob Walsh <Rob.Walsh6@det.nsw.edu.au>

Subject: RE: 195 Fairway Drive Wilton - North Wilton Project - School Site

[External Email] This email was sent from outside the NSW Department of Education. Be cautious, particularly with links and attachments.

Dear Rob Walsh,

Thank you for your email.

Property Details

Lot/Section/Plan No: 101/-/DP1293737

Address: 195A Fairway Drive, Wilton NSW 2571

Allocated Guideline: Guideline 8

Please see the full guideline document for further information about development restrictions on this property here - https://www.nsw.gov.au/sites/default/files/2023-03/Guideline-8-No-restrictions.pdf

You can find out if a property is in a Mine Subsidence District and the guideline assigned to the property on the ePlanning Spatial Viewer site once the lots are registered -

https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address

Disclaimer

Please note Subsidence Advisory NSW's surface development guidelines are subject to change.

Kind regards,

Melissa Parciany

Customer Service Support Officer

Subsidence Advisory NSW

Better Regulation Division | Department of Customer Service

T 02 4908 4300 E <u>subsidenceadvisory@customerservice.nsw.gov.au</u>

www.nsw.gov.au/subsidence-advisory



Subsidence Advisory NSW

To report a mine subsidence safety issue, please call our 24 hour emergency hotline on 1800 248 083.



I acknowledge the traditional custodians of the land and pay respects to Elders past and present.

I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time.

Please consider the environment before printing this email.

From: Rob Walsh < Rob. Walsh 6@det.nsw.edu.au >

Sent: Monday, 4 December 2023 5:24 PM

To: subsidenceadvisory < subsidenceadvisory@customerservice.nsw.gov.au >

Cc: Lachlan Brown < Lachlan.Brown91@det.nsw.edu.au >

Subject: RE: 195 Fairway Drive Wilton - North Wilton Project - School Site

You don't often get email from rob.walsh6@det.nsw.edu.au. Learn why this is important

[CAUTION: This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.]

Hi,

School Infrastructure NSW is conducting due diligence investigations in relation to Landcom's development at North Wilton. Refer below email trail between Landcom and Subsidence Advisory NSW for correspondence.

I am seeking Subsidence Advisory NSW confirmation that the area denoted 'School Site' on the attached plan is also subject to 'Surface Development Guideline 8 - No restrictions'. Please confirm.

Regards,

Rob Walsh

Project Director | Infrastructure Planning

0407 955 459 | Rob.Walsh6@det.nsw.edu.au | education.nsw.gov.au Level 10, 259 George Street, Sydney, NSW 2000 | GPO Box 33, Sydney, NSW 2001



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From: Jeff Williams < jwilliams@landcom.nsw.gov.au >

Sent: Friday, September 15, 2023 3:59 PM

To: Steven Martion < smartion@landcom.nsw.gov.au >

Subject: FW: 195 Fairway Drive Wilton (multiple properties) - North Wilton Project

From: subsidenceadvisory < subsidenceadvisory@customerservice.nsw.gov.au >

Sent: Tuesday, October 4, 2022 1:20 PM

To: Jeff Williams < jwilliams@landcom.nsw.gov.au >

Subject: RE: 195 Fairway Drive Wilton (multiple properties) - North Wilton Project

CAUTION: This email originated from outside of the Landcom network. Do not click links or open attachments unless you recognise the sender and are expecting the content or attachment from the sender.

Hi Jeff,

Thank you for your email.

The guideline assigned to the proposed lots 150 – 199 in Guideline 8.

More information on this Guideline can be found here - https://www.nsw.gov.au/subsidence-advisory/guideline-8

Please note SA NSW's surface development guidelines are subject to change.

Kind regards,

Brooke | Administrative Support Officer Subsidence Advisory NSW

Better Regulation Division | Department of Customer Service

P: 4908 4300

E: <u>subsidenceadvisory@customerservice.nsw.gov.au</u> | <u>nsw.gov.au/subsidence-advisory</u>



Please consider the environment before printing this email

Subsidence Advisory is committed to protecting the personal and sensitive information of our customers. We encourage you to not send personal and sensitive information as an attachment over email. If you choose to do so, we will manage it safely and appropriately, in accordance with the legislation.

From: Jeff Williams < jwilliams@landcom.nsw.gov.au >

Sent: Tuesday, 4 October 2022 12:28 PM

To: subsidenceadvisory < <u>subsidenceadvisory@customerservice.nsw.gov.au</u>> **Subject:** 195 Fairway Drive Wilton (multiple properties) - North Wilton Project

Good morning,

My name is Jeff Williams and I am the Development Director for the North Wilton project for Landcom, a NSW Government State Owned Corporation.

Landcom is developing this site and is aware that the Mining Lease was surrendered by Illawarra Coal/South 32 in an agreement with Bradcorp.

We are about to commence sales of residential lots for the Project, with settlements on the first 150 – 199 lots proposed for May 2024.

As part of our sales process we will advise customers that the site is within a Mine Subsidence District. However, we are unable to determine which Guideline applies. The Planning Portal does not assist in this either.

Are you able to please advise which Guideline we should be referring our customers and future residents to?

Thank you

Jeff Williams Development Director 0436 636 796

Jeff Williams

Development Director

T: (02) 9841 8091 **M**: 0436636796

Level 14, 60 Station Street Parramatta NSW 2150





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Brad Mullard

Mineral Resource Consultant

32 Courigal Street Lake Haven 2263

Telephone: 0409828836

Email: bradm@basalt.com.au

26th September 2019

Bradcorp Holdings Pty Ltd

Level 29, Chifley Tower

2 Chifley Square, Sydney NSW 2000

Subsidence Management

South32 in a letter dated 13th April 2017 (Attachment 1), to Ms Carolyn McNally Secretary, NSW Department of Planning, confirmed that South32 and Bradcorp have agreed commercial terms in relation to Bradcorp's land at Wilton and Souths32's rights under that land and have entered into a confidential Deed.

Under the Deed South32 has agreed to relinquish rights under Bradcorp's land so that the land can be rezoned for residential purposes and residential development can take place without the potential impact from future underground mining.

Specifically, South32 will relinquish specific mining-related rights in the relevant areas by applying to have its lease cancelled in identified areas and to have its lease conditions varied in identified areas to restrict mining to methods which would not result in material subsidence.

In addition, South32 will support all relevant areas being removed from the mine subsidence district once the lease has been cancelled or varied in relation to those areas.

Following the agreement between South32 and Bradcorp the North Wilton Precinct was rezoned on the 20th November 2018.

On the 30th November 2018 the Department of Planning canceled South32 lease over the relevant areas(Attachment 2) and varied South32 lease conditions over a section of the remaining lease(Attachment 3) such that the leaseholder must not undertake any mining operations which would cause, or which a reasonable person in the leaseholder's position could have expected would cause, subsidence.

While the mining lease has been cancelled the subject area remains within the Wilton Mine Subsidence District (MSD) (Attachment 4).

While Bradcorp's intention is to seek the removal of the area from the MSD, currently the development would require an approval from Subsidence Advisory NSW prior to commencing work. Development applications can be lodged directly with Subsidence Advisory NSW or as an Integrated Development through Council.

Subsidence Advisory NSW operations are governed by the Coal Mine Subsidence Compensation Act 2017 and the Coal Mine Subsidence Compensation Regulation 2017. Part 3 of the Act deals with Development within mine subsidence districts.

To assist developers that want to build or subdivide within a district, Subsidence Advisory NSW has produced a set of development guidelines. The guidelines set out the requirements for building on or subdividing a property based on potential mine subsidence risks. Different guidelines may apply to different areas within a district.

While advice would need to be obtain from Subsidence Advisory NSW it would appear that Guideline 8 (Attachment 5), which provides guidance for development on properties not affected by active or non-active coal mine workings, may be appropriate.

Guideline 8 is applied to properties within mine subsidence districts assessed by Subsidence Advisory NSW as not being at risk from subsidence, including properties that are not undermined and where future mining is not likely.

Under Guideline 8 Subsidence Advisory NSW does not apply restrictions on development.

Brad Mullard PSM

Mineral Resource Consultant

B. W. Mulland



13 April 2017

Ms Carolyn McNally Secretary NSW Department of Planning & Environment Level 22, 320 Pitt St, Sydney South32 108 St Georges Terrace Perth WA 6000 Australia T +61 8 9324 9000 F +61 8 9324 9200 south32.net

Dear Ms McNally

Re: Agreement with Bradcorp Wilton Park Pty Limited

South32 acknowledges that the NSW government has identified lands at Wilton as part of its growth strategy and is aiming to enable the development of a substantial town there. In recognition of the government's priorities, and noting that South32 holds commercial interests under the relevant lands, South 32 and Bradcorp (a substantial land holder) has been engaged in a negotiation over recent months to remove any mining-related impediment to implementing the government's growth centre plan at Wilton.

We are pleased to confirm that South32 and Bradcorp have agreed commercial terms in relation to Bradcorp's land at Wilton and South32's rights under that land. That agreement is set out in a confidential Deed which has been executed by both parties.

We have set out below the key commercial terms contained in that Deed which we believe Government needs to be aware of in considering the rezoning applications for Bradcorp's land.

As a next step we propose that South32, Bradcorp, Planning NSW and relevant Government agencies meet to discuss the relevant step arising from the agreement reached with Bradcorp.

The key relevant commercial terms of an agreement reached between South32's subsidiary Illawarra Coal and Bradcorp Holdings Pty Ltd are:

- South32 has agreed to relinquish rights under Bradcorp's land so Bradcorp's land can be rezoned for residential purposes and residential development can take place without potential impact from future underground mining
- Bradcorp will, upon gazettal of rezoning and the relinquishment of relevant mining-related rights, pay South32 a confidential consideration
- South32 will relinquish specific mining-related rights (refer to annexed plan) in the relevant areas (viz):
 - South32 will apply to have its lease cancelled in the Area Marked A

- South32 will apply to have its lease conditions varied in the Area Marked B such that those areas can only be used for first workings such as access roads without causing material subsidence, thus allowing future mining to the west of the Nepean River.
- South32 supports Areas A and B being removed from the mine subsidence district once the lease has been cancelled or varied in relation to those areas.

We look forward to meeting with the appropriate NSW Government parties to progress this matter.

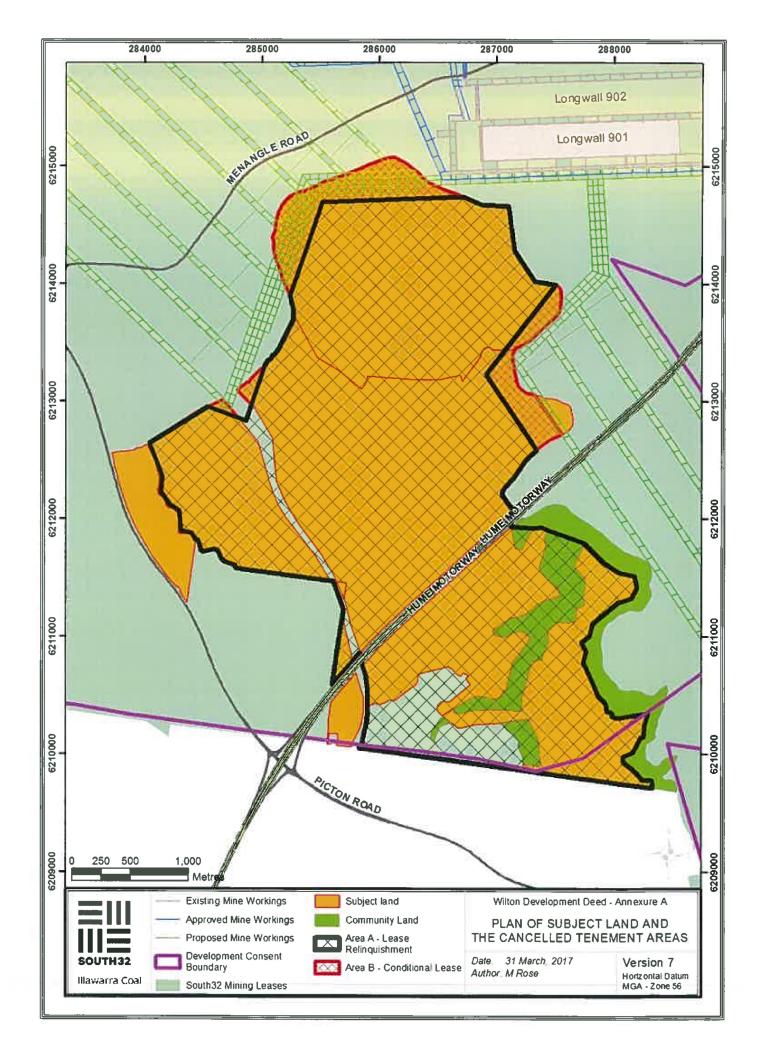
South32 is pleased to have been able to reach agreement in terms acceptable to all parties.

Yours sincerely

Robin Lees

Company Secretary - Endeavour Coal Pty Limited

[cc Katherine McInnes, Chief Executive Officer, Mine Subsidence Board] [cc Kylie Hargreaves, Deputy Secretary, Resources & Energy, NSW Department of Industry]





Reference: 10/5025

Endeavour Coal Pty Limited c/ Ms Narrelle Bevan Administrator Tenement Management PO Box Z5184 St Georges Terrace PERTH WA 6831

5 December 2018

Dear Sir

CONSOLIDATED COAL LEASE 767 (Act 1973)

I refer to your request for the part cancellation of this lease.

In accordance with the provisions of Section 125(1)(a) of the *Mining Act* 1992, the Deputy Secretary, Division of Resources and Geoscience under delegation has cancelled that part of the lease described in the application lodged with the Division on 23 November 2018.

Cancellation of this area took effect on 30 November 2018.

The attached Endorsement Schedule should be placed with the original lease document.

If you would like to discuss this matter, please do not hesitate to contact the undersigned on 4063 6741.

Yours faithfully

Eddie Love

A/Director Title Assessments

Mude

Resource Operations

Division of Resources and Geoscience

ENDORSEMENT SCHEDULE

Pursuant to Section 125(1)(a) of the *Mining Act 1992*, the Minister on the 30 November 2018 cancelled part of Consolidated Coal Lease 767 (Act 1973) pursuant to the application lodged with the Division on 23 November 2018.

The lease now embraces an approximate area of 196.5 square kilometres.

This part cancellation took effect on and from 30 November 2018.

Eddie Love

A/Director Title Assessments
Resource Operations

Mude

Division of Resources and Geoscience

INSTRUMENT OF VARIATION

1 Variation of conditions of Consolidated Coal Lease (CCL) 767

I, Michael Wright, Acting Deputy Secretary, Division of Resources and Geoscience, as delegate of the Minister for Resources, pursuant to clause 12(1) of Schedule 1B of the *Mining Act 1992*, hereby vary the conditions of Consolidated Coal Lease (CCL) 767 as set out in Schedule 1.

2 Commencement

This variation takes effect on 30 November 2018.

Dated: 30 November 2018

Michael Wright

Acting Deputy Secretary
Division of Resources and Geoscience
As delegate of the Minister for Resources

SCHEDULE 1

The conditions of CCL 767 are varied by inserting the following condition:

Restriction on mining operations

The intention of this condition is to prevent subsidence impacts on land marked as Areas 1, 2 and 3 on Annexure A ("**Areas**").

The leaseholder must not undertake any mining operations which:

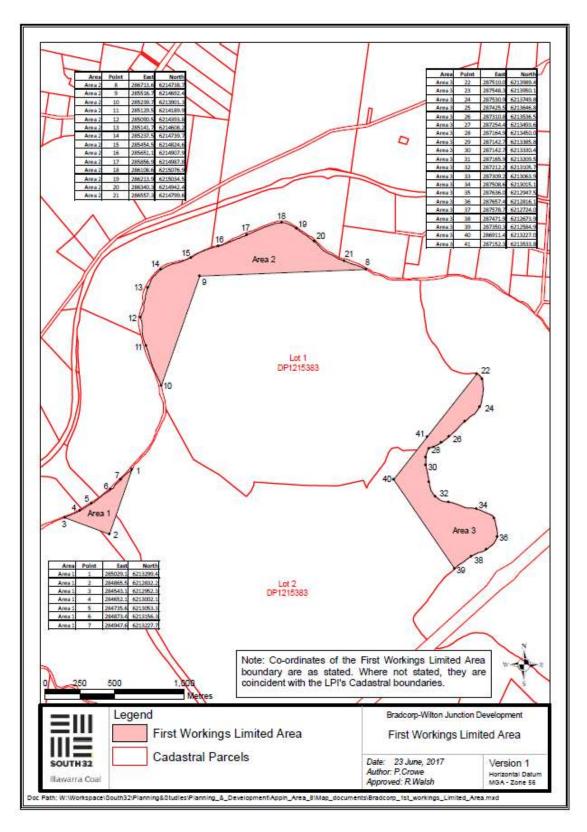
- a) cause, or which a reasonable person in the leaseholder's position could have expected would cause, subsidence within the Areas; or
- b) which involve Second Workings as defined in the project approval for the Bulli Seam Operations Project granted 22 December 2011, on, or under, the Areas.

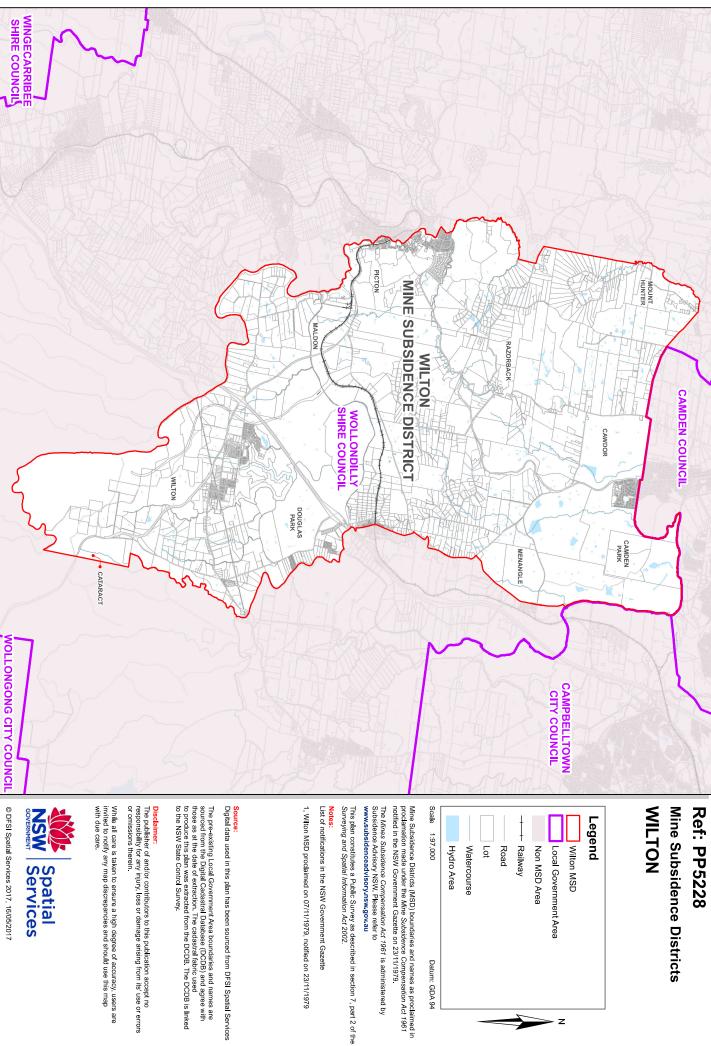
The leaseholder can only undertake mining operations on, within or under the Areas if a Coexistence Subsidence Impact Management Plan has been approved in writing by the Secretary having responsibility for supporting the administration of the *Mining Act* 1992.

A Co-existence Subsidence Impact Management Plan must:

- 1) be prepared by a suitably qualified and experienced person whose appointment has been approved by the Secretary;
- 2) includes all the matters required to be included in an Extraction Plan under the condition requiring an Extraction Plan, condition 5, for the project approval for the Bulli Seam Operations Project granted 22 December 2011; and
- 3) address such other matters as the Secretary reasonably requires.

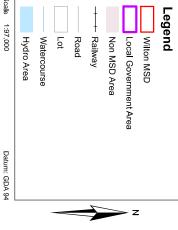
Annexure A





Ref: PP5228

WILTON Mine Subsidence Districts



Mine Subsidence Districts (MSD) boundaries and names as proclaimed in proclamation made under the Mine Subsidence Compensation Act 1961 notified in the NSW Government Gazette on 23/11/1979.

The Mines Subsidence Compensation Act 1961 is administered by Subsidence Advisory NSW. Please refer to www.subsidenceadvisory.nsw.gov.au

List of notifications in the NSW Government Gazette

1. Wilton MSD proclaimed on 07/11/1979, notified on 23/11/1979

Digital data used in this plan has been sourced from DFSI Spatial Services

The pre-existing Local Government Area boundaries and names are sourced from the Digital Cadastral Database (DCDB) and agree with those as at the date of extraction. The cadastral fabric used to produce this plan was extracted from the DCDB. The DCDB is linked to the NSW State Control Survey.

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Surface Development Guideline 8 – No restrictions

Requirements, information and guidance for development on properties not affected by active or non-active coal mine workings

SUBSIDENCE ADVISORY NSW

Contents

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1. Introduction

Subsidence Advisory NSW (SA NSW) is the NSW Government agency responsible for regulating and administering the mine subsidence compensation system in NSW.

SA NSW has developed and applied surface development guidelines (Guidelines) in accordance with the *Coal Mine Subsidence Compensation Act 2017*, to support, inform, and guide prospective home builders, property developers, local councils and other stakeholders to mitigate or eliminate damage to surface structures from mine subsidence within proclaimed mine subsidence districts.

In areas within active mining leases, the guidelines are designed to effectively balance the interests of property owners and coal mine proprietors, providing mitigation measures against subsidence damage without imposing unreasonable costs and restrictions on the landowner or unreasonably sterilising coal resources.

2. Surface Development Guidelines

One of eight guidelines has been applied to each property within a mine subsidence district. The guideline applied will depend on the subsidence risk at the property as detailed below:

Guideline 1. Guideline 2.	Non-active mine workings at risk of pothole subsidence Non-active mine workings possible subsidence risk
	5 1
Guideline 3.	Non-active mine workings remote subsidence risk
Guideline 4.	Active mining areas - high predicted subsidence impact
Guideline 5.	Active mining areas – moderate predicted subsidence impact
Guideline 6.	Active mining areas – minimal predicted subsidence impact
Guideline 7.	On Application
Guideline 8.	No Restrictions

3. Objective of Guideline 8

This guideline explains what home builders and property developers must do in relation to obtaining approval for their development under the:

- Coal Mine Subsidence Compensation Act 2017 (the Act)
- Coal Mine Subsidence Compensation Regulation 2017 (the Regulation)

The purpose of this guideline is to allow development to proceed without restriction where subsidence is not expected.

4. Areas where Guideline 8 applies

Areas subject to **Guideline 8** are identified on the NSW Planning Portal at www.planningportal.nsw.gov.au/find-a-property.

Guideline 8 is applied to properties within mine subsidence districts assessed by SA NSW as not being at risk from subsidence, including properties that are not undermined and where future mining is not likely.

5. Allowable construction

SA NSW does not apply restrictions on development for properties subject to Guideline 8.

6. Who can assess development on properties subject to Guideline 8

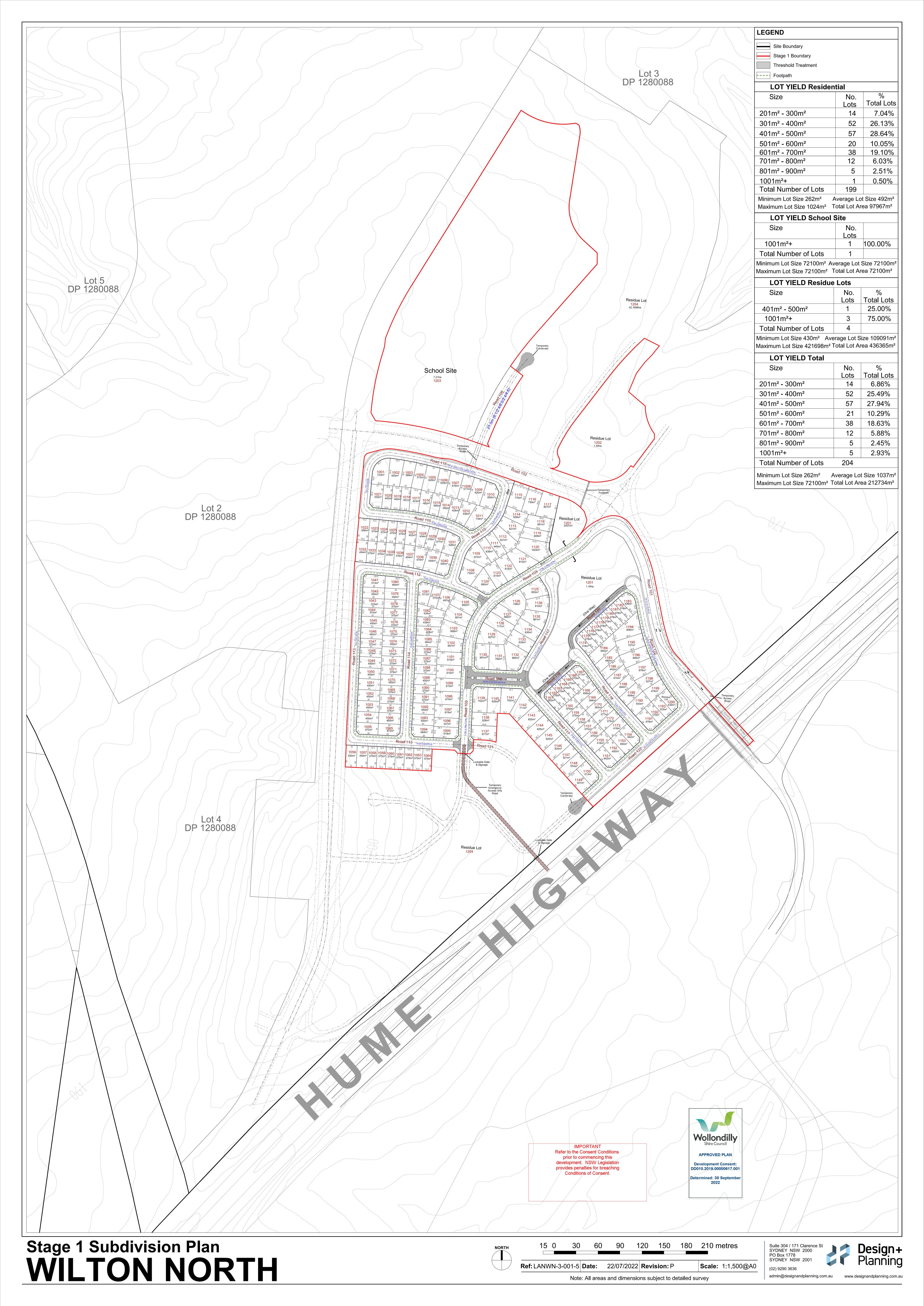
The relevant council or an accredited certifier as defined in the *Environmental Planning and Assessment Act 1979* can assess development applications on properties subject to **Guideline 8**.

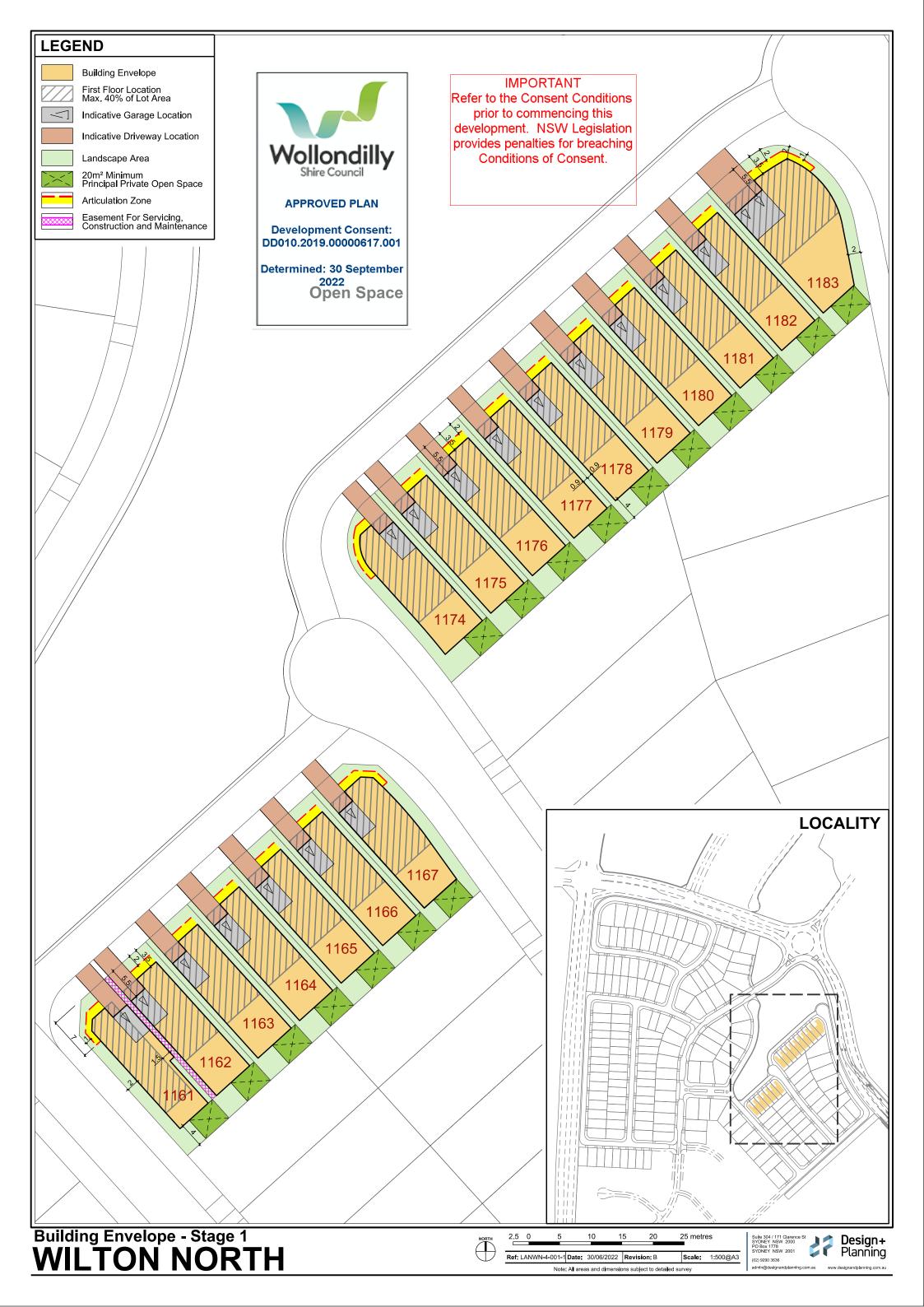
7. How this guideline was developed

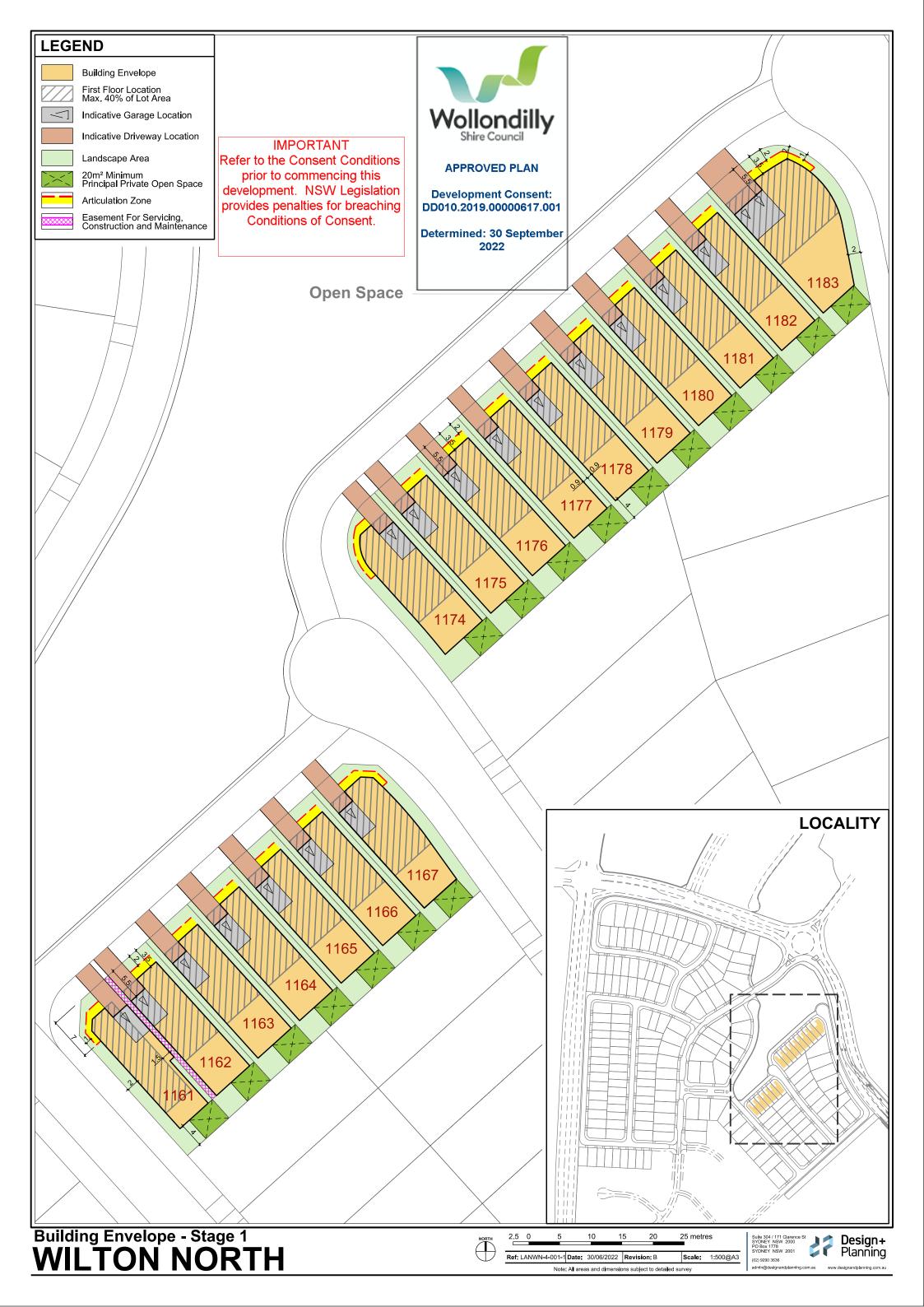
SA NSW's development guidelines were developed by SA NSW in consultation with an expert reference group comprising of structural engineers, mining experts and key mining and development industry stakeholders.

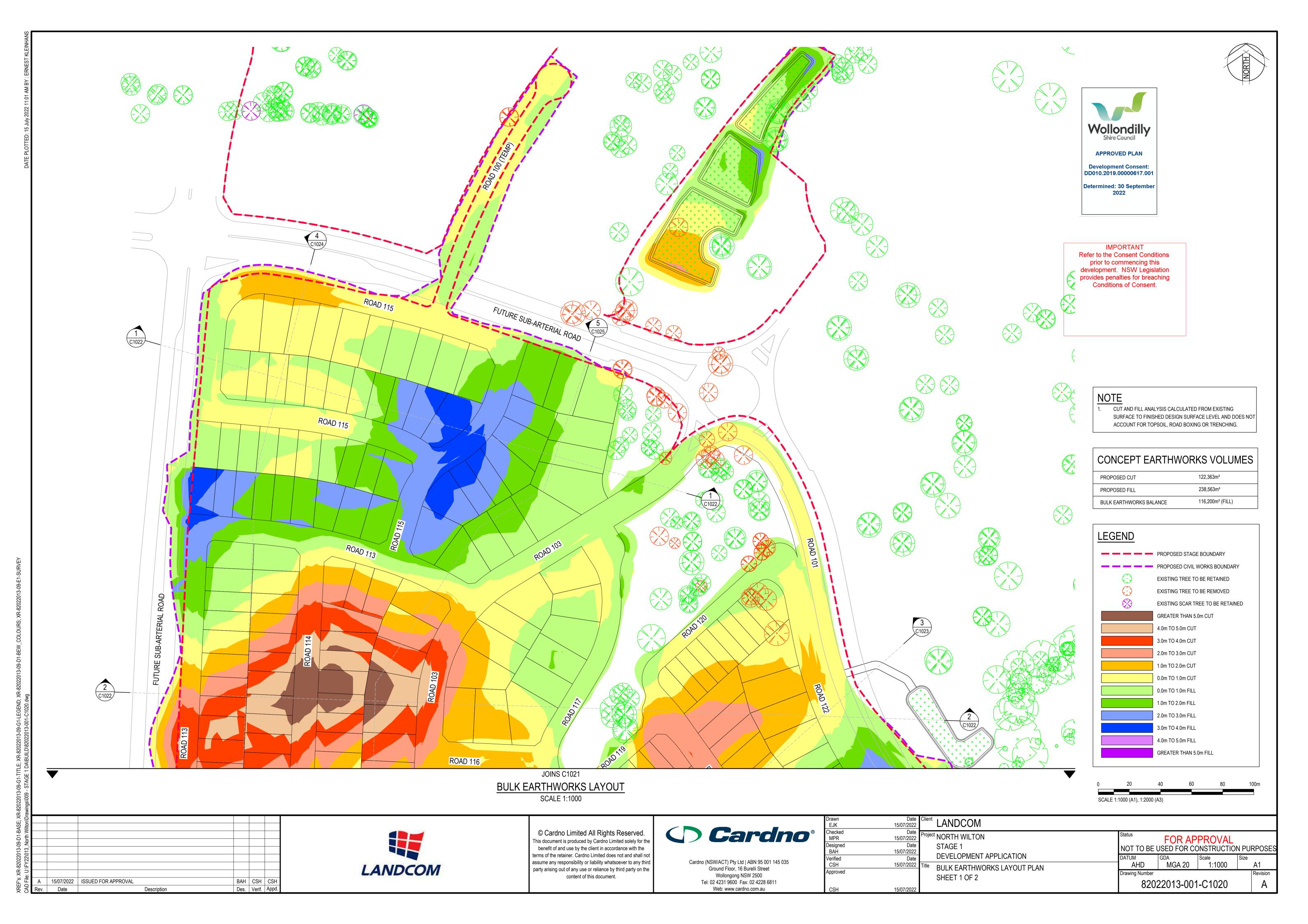
8. Disclaimer

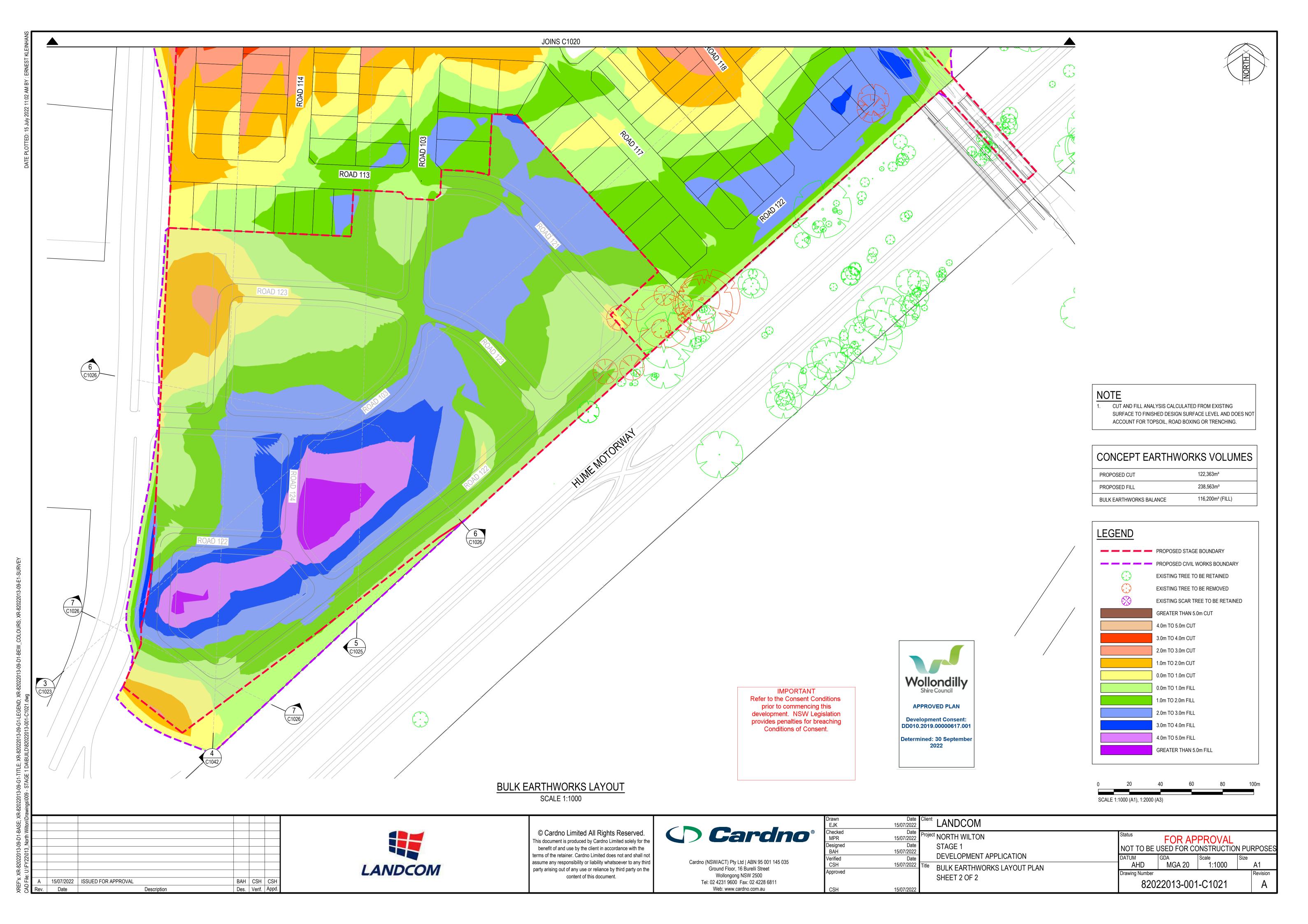
Please note SA NSW's surface development guidelines are subject to change.

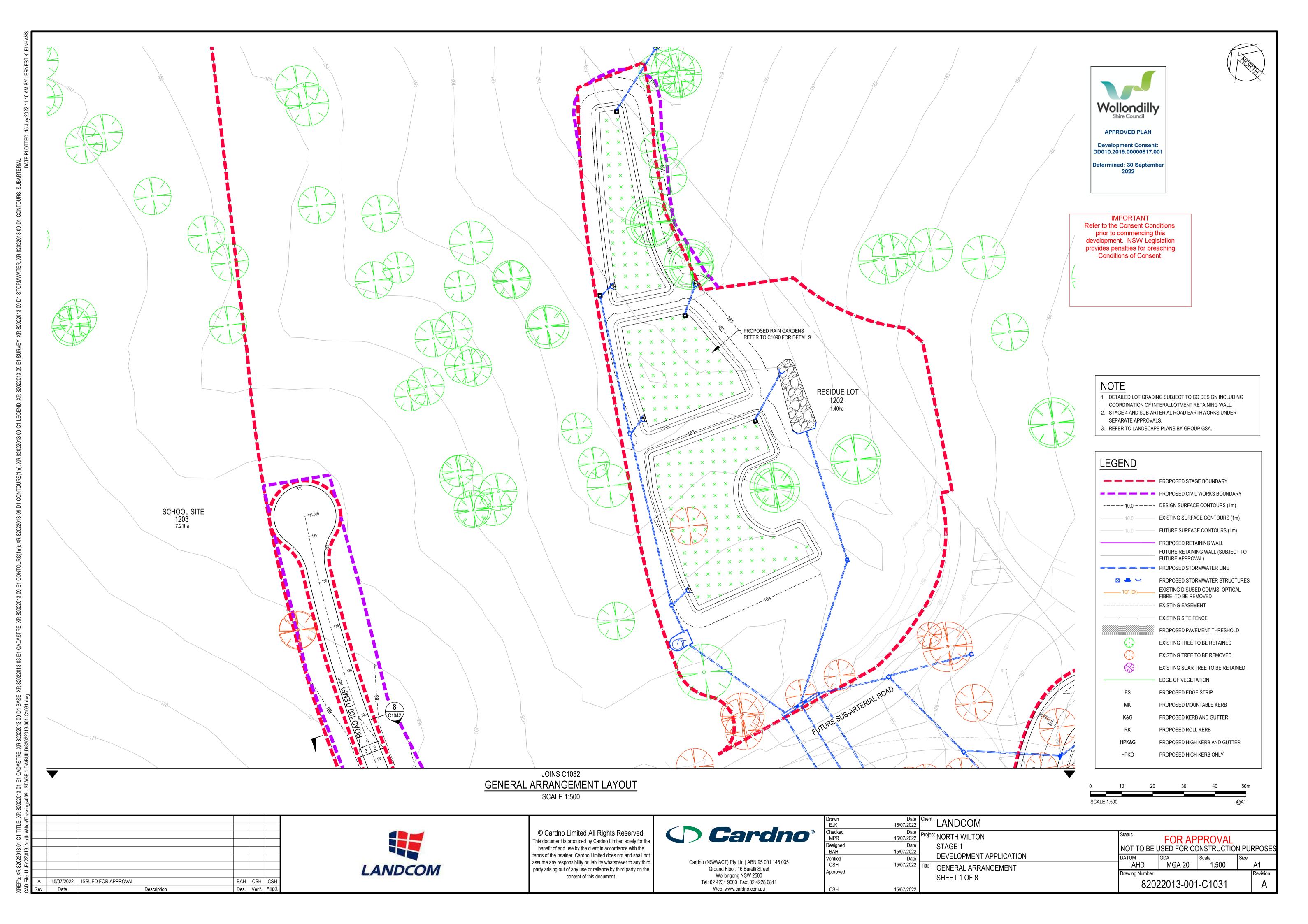


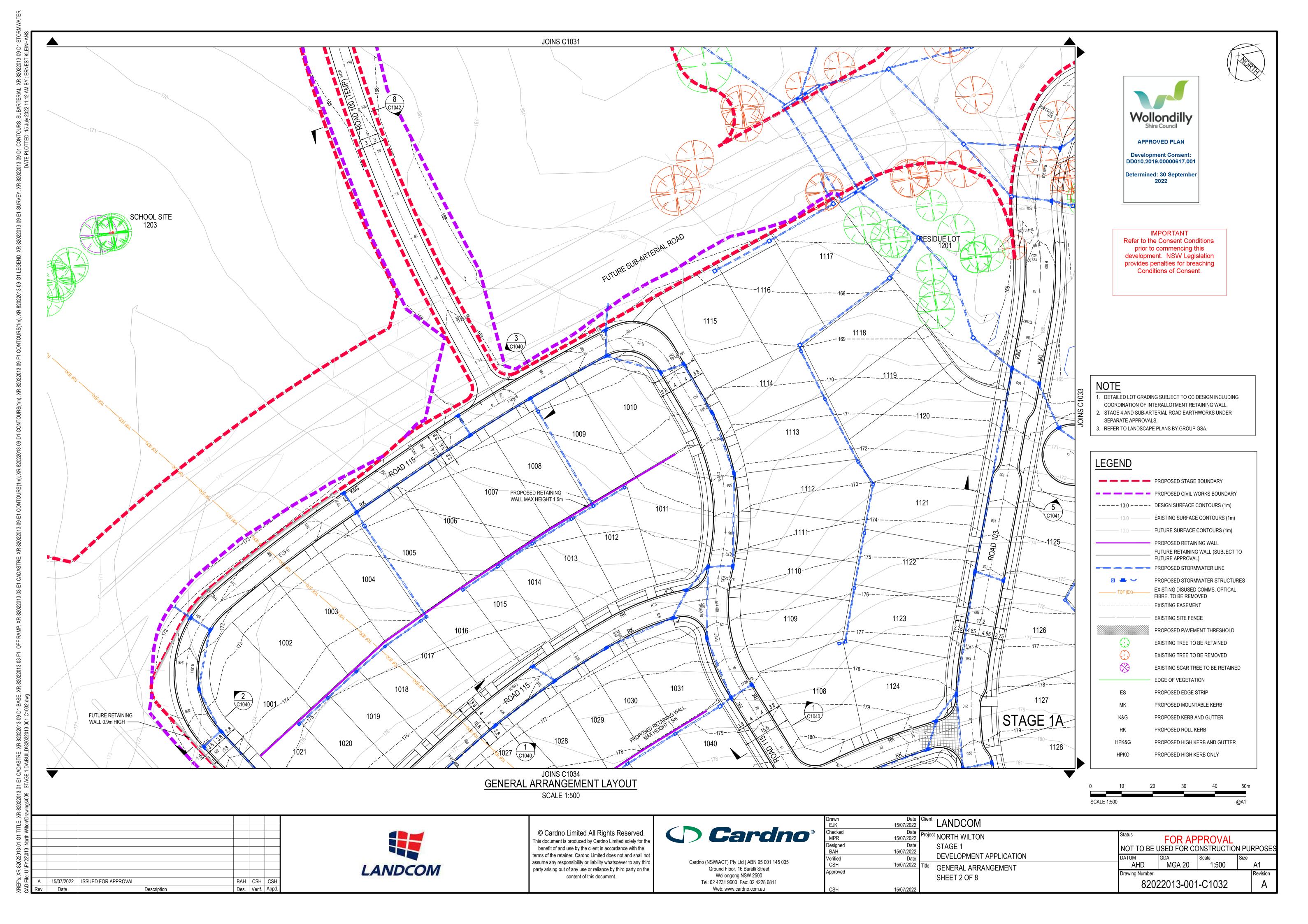


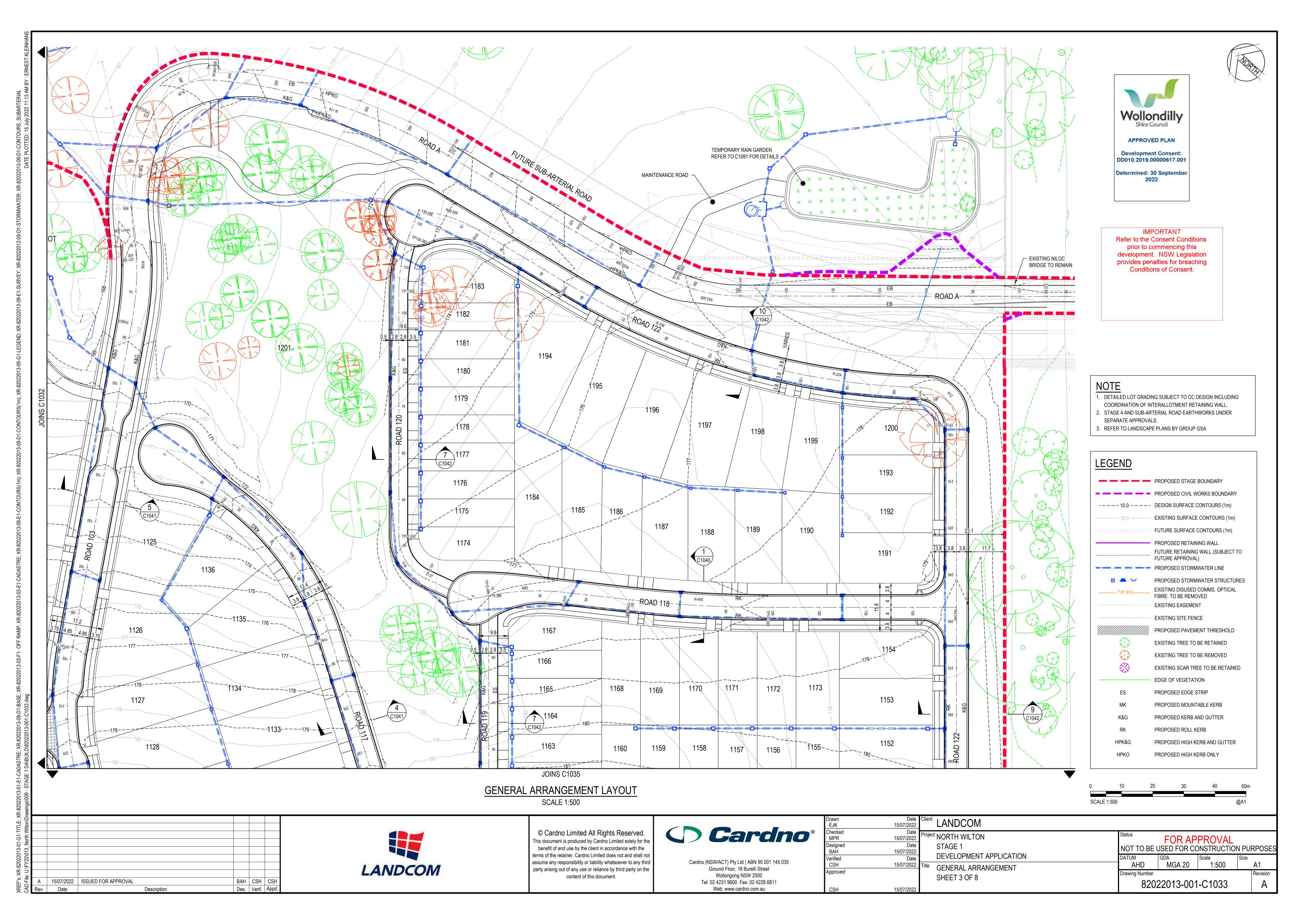


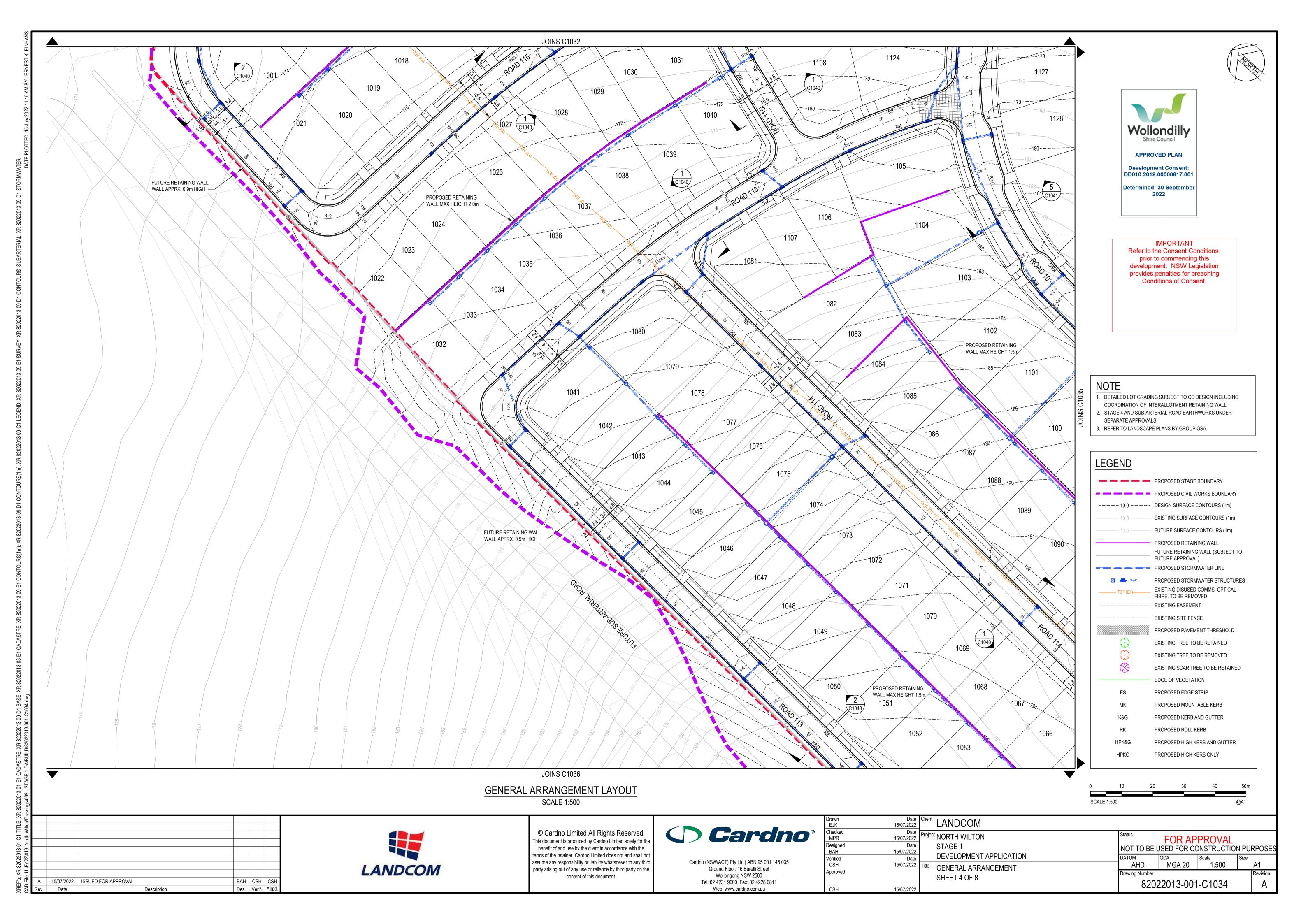


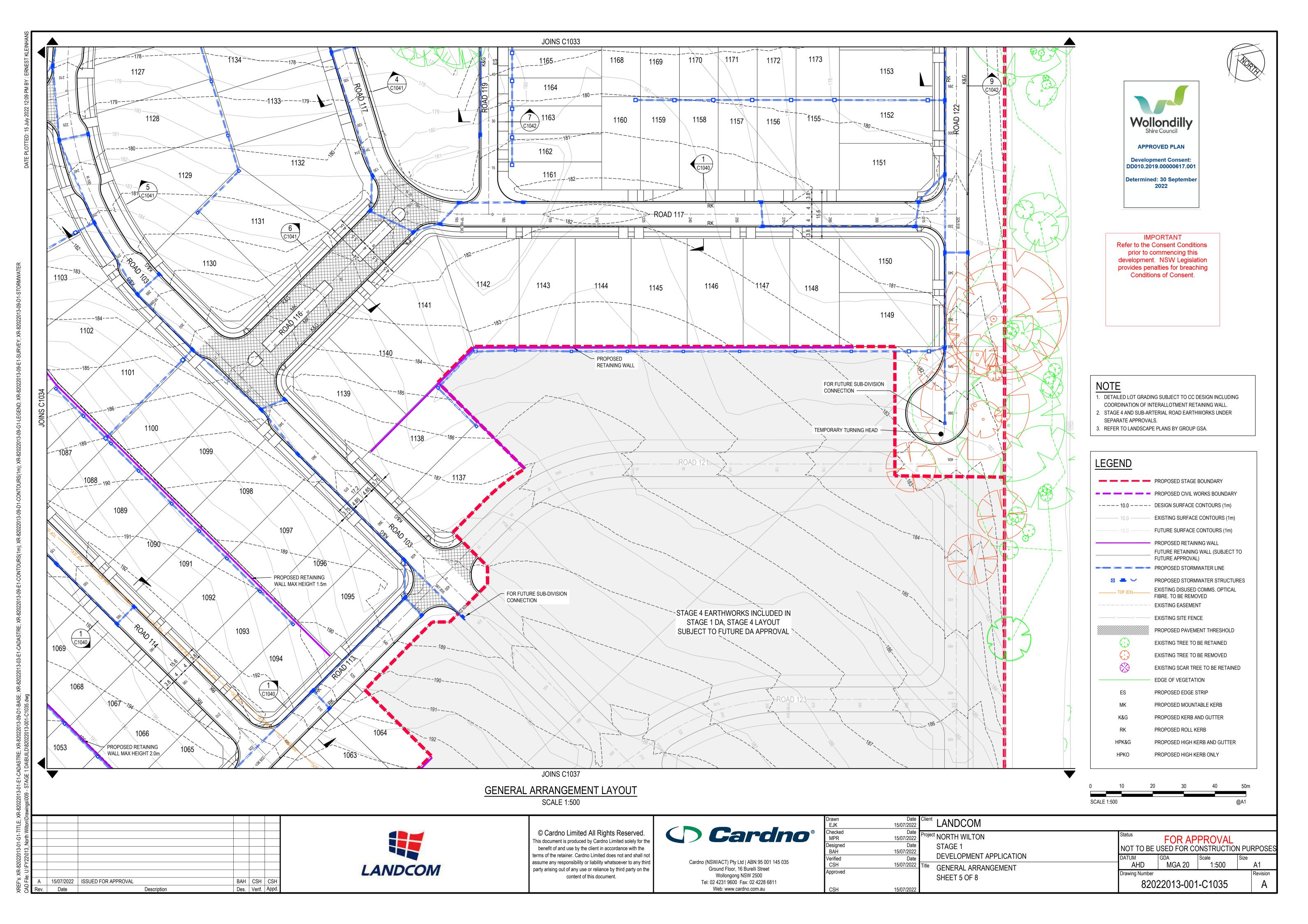


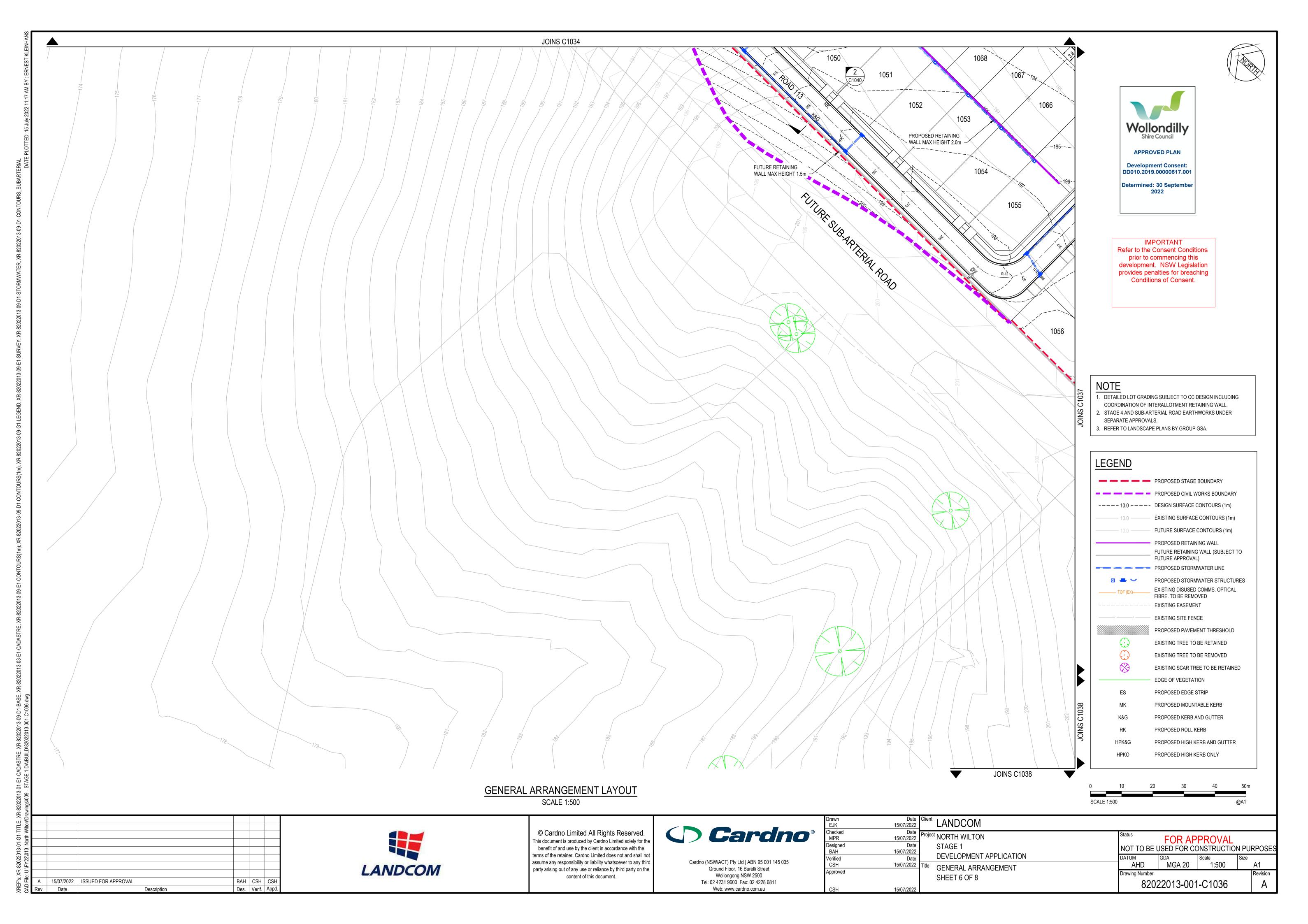


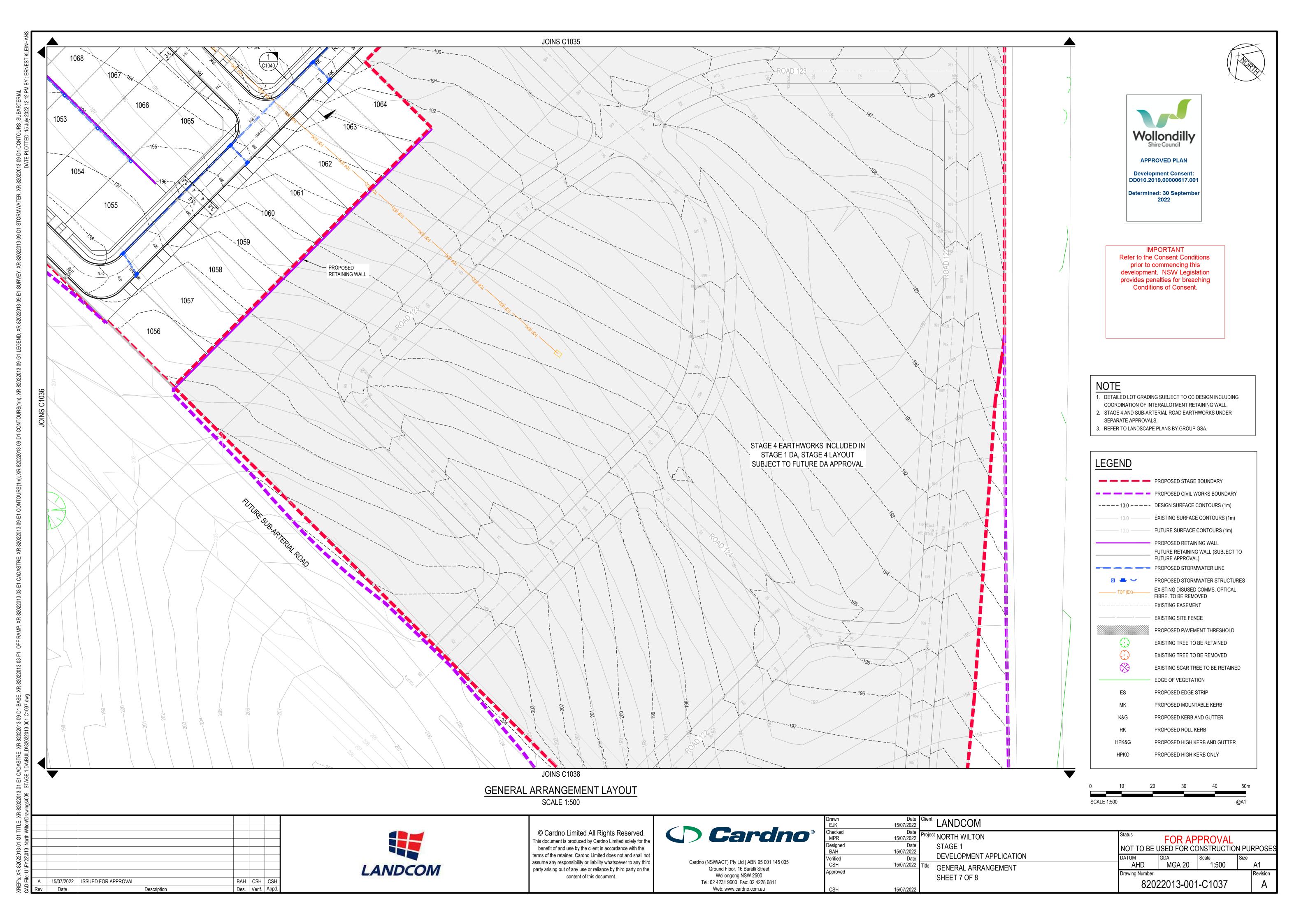


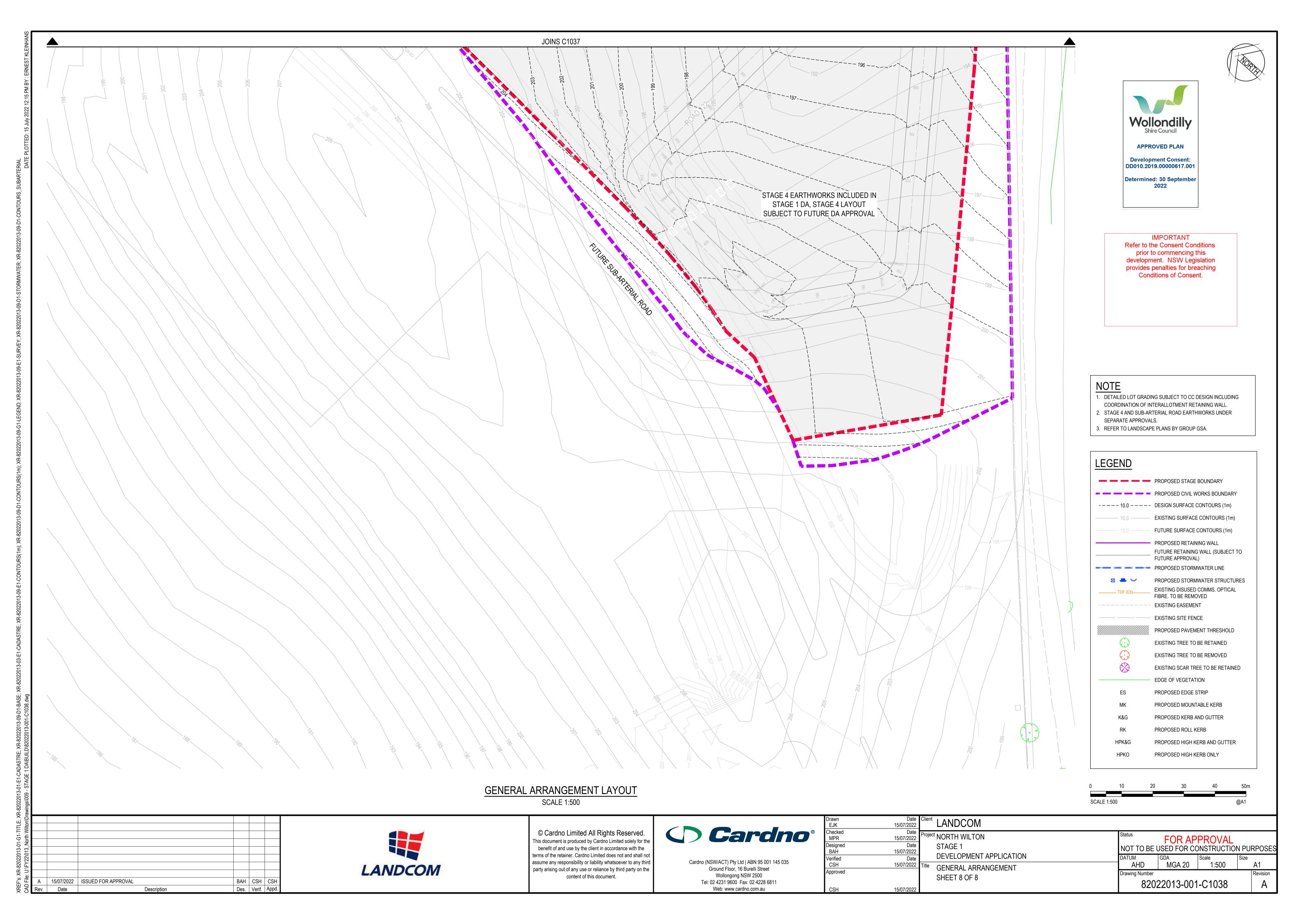


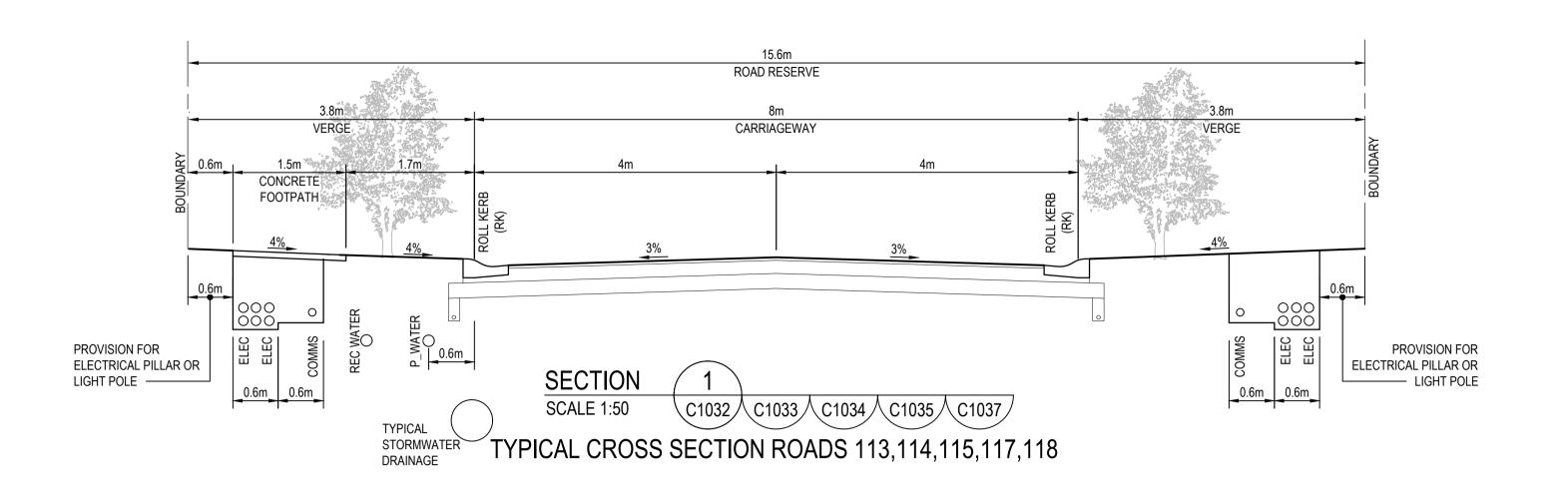






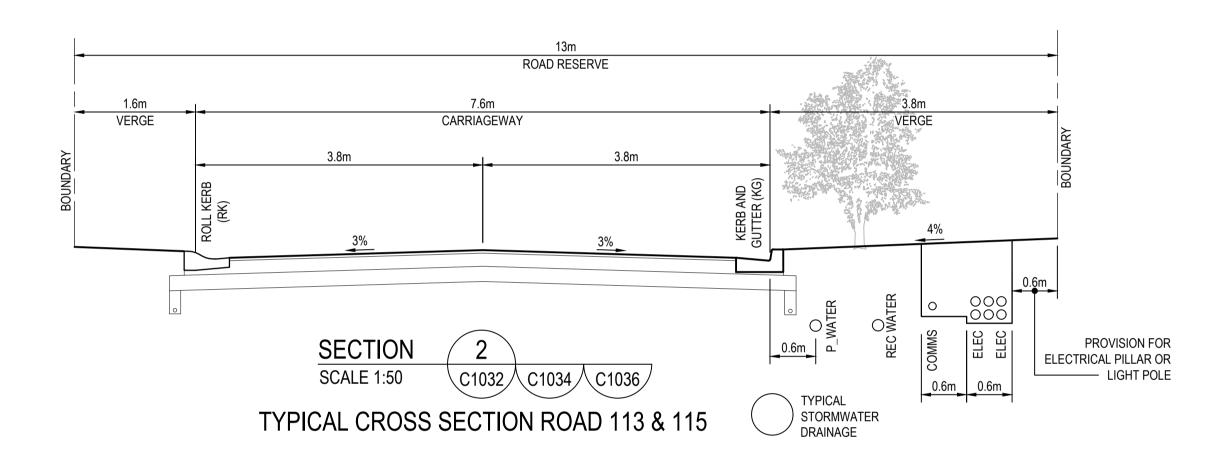


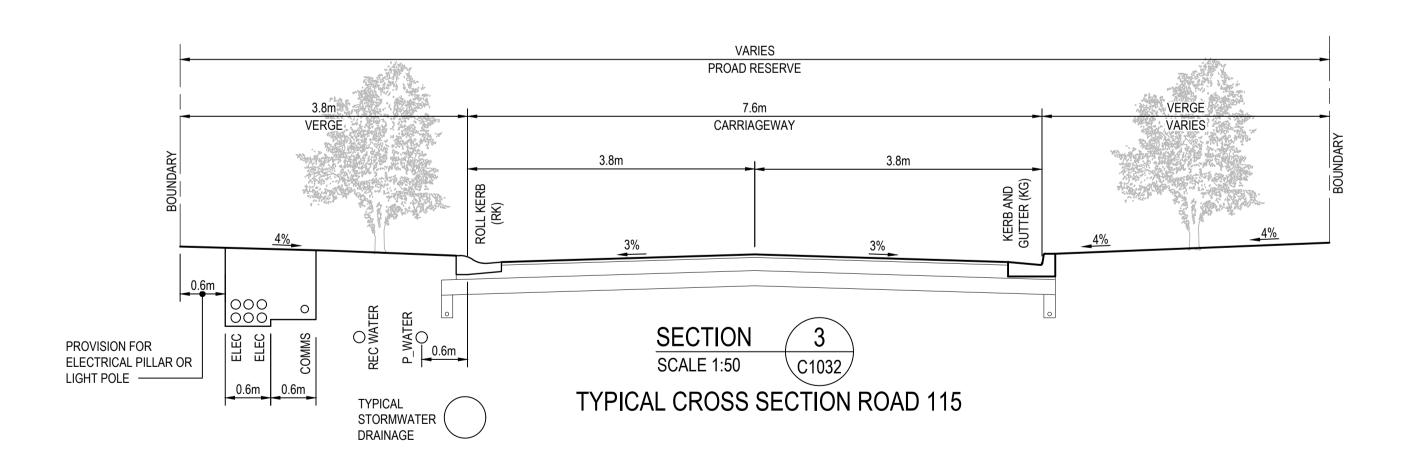


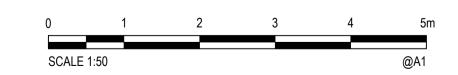




IMPORTANT
Refer to the Consent Conditions
prior to commencing this
development. NSW Legislation
provides penalties for breaching
Conditions of Consent.







Α	15/07/2022	ISSUED FOR APPROVAL	BAH	CSH	CSH
Rev.	Date	Description	Des.	Verif.	Appd.



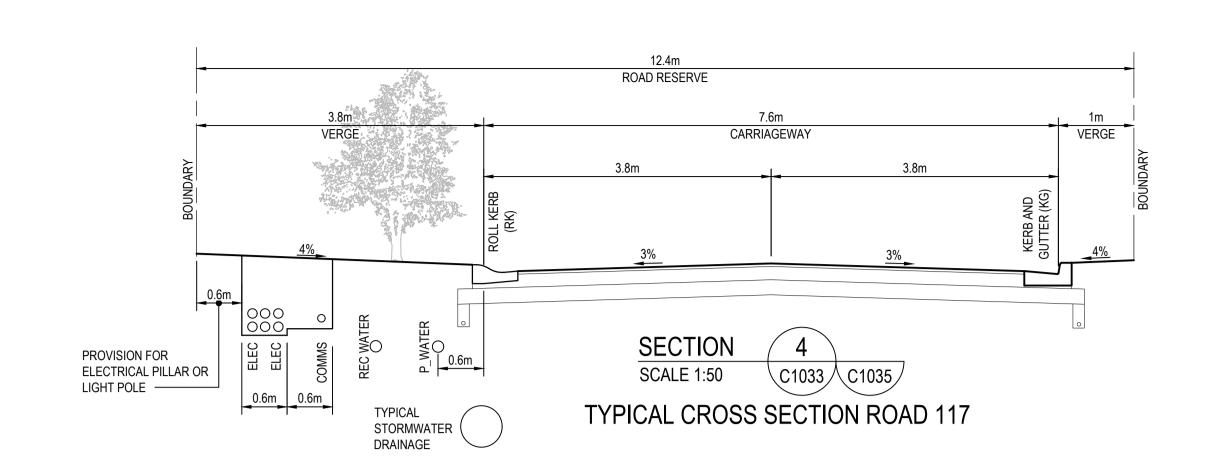
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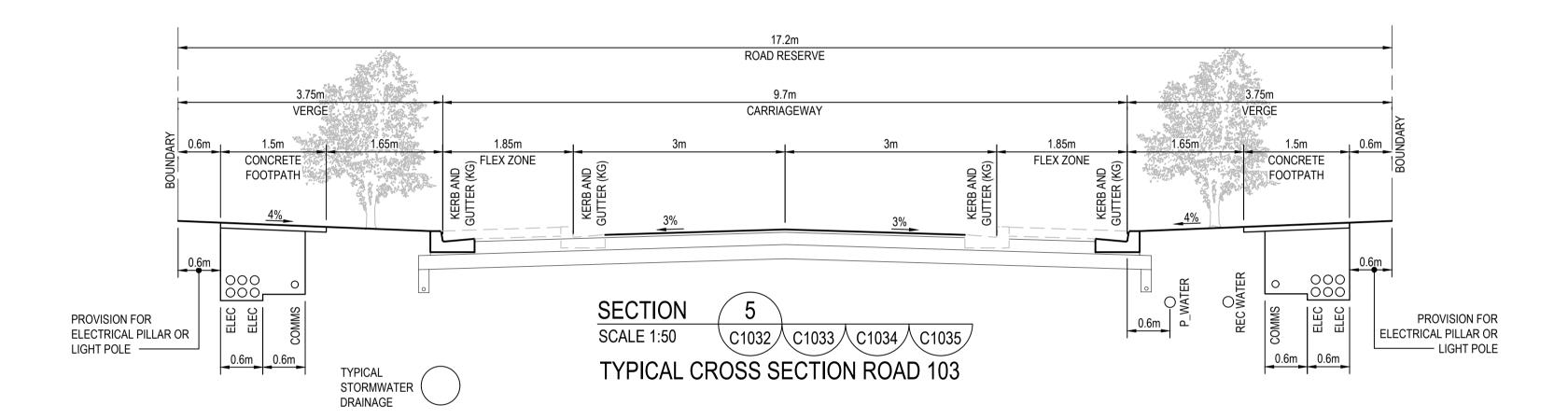
Cardno (NSW/ACT) Pty Ltd ABN 95 001 145 035
Ground Floor, 16 Burelli Street
Wollongong NSW 2500
Tel: 02 4231 9600 Fax: 02 4228 6811
Web: www.cardno.com.au

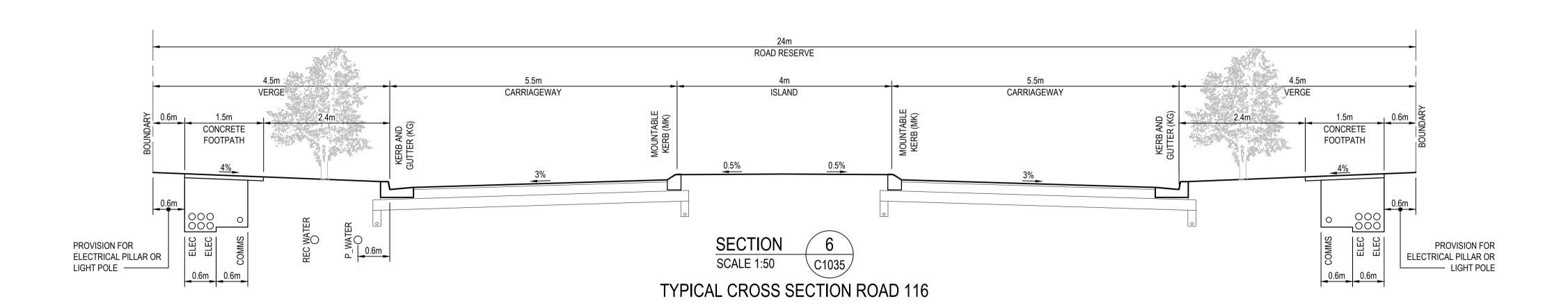
Orawn EJK	Date 15/07/2022	Client LANDCOM					
Checked MPR	Date 15/07/2022	Project NORTH WILTON	Status	FOR AF	PROVAL		
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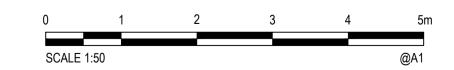




IMPORTANT
Refer to the Consent Conditions
prior to commencing this
development. NSW Legislation
provides penalties for breaching
Conditions of Consent.







Wilton\Dr						
North						
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) File:	Α	15/07/2022	ISSUED FOR APPROVAL	BAH	CSH	CSH
CAD	Rev.	Date	Description	Des.	Verif.	Appd.



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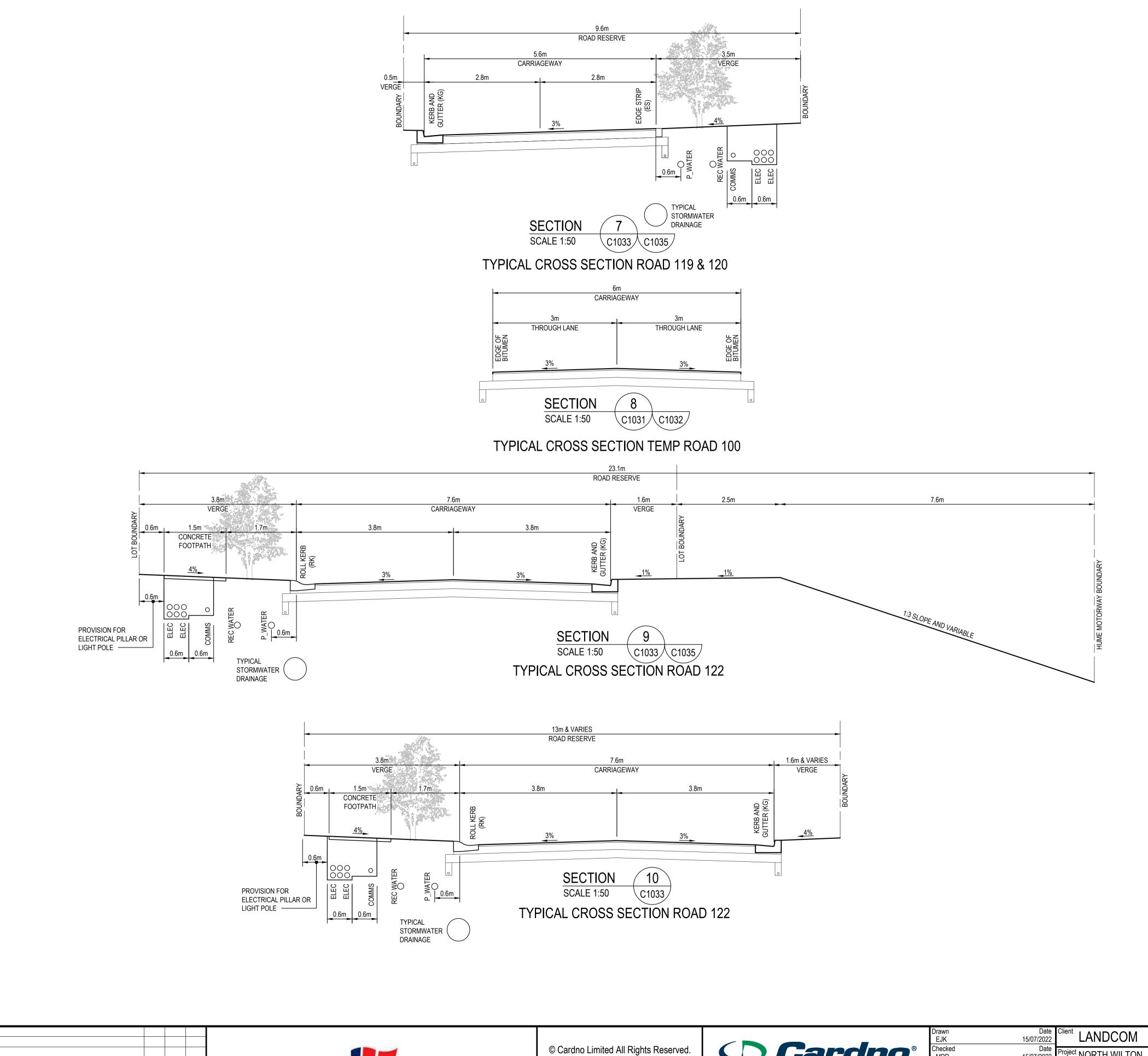


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Drawn	Date	Cli
EJK	15/07/2022	
Checked	Date	Pr
MPR	15/07/2022	FI
Designed	Date	
BAH	15/07/2022	
Verified	Date	
CSH	15/07/2022	Tit
Approved		

Client	LANDCOM
Project	NORTH WILTON
	STAGE 1
	DEVELOPMENT APPLICATION
Title	TYPICAL ROAD CROSS SECTION
	SHEET 2 OF 3

Status	FOR AP	PROVAL	
NOT TO BE U	JSED FOR CO	ONSTRUCTION	N PURPOSI
DATUM	GDA	Scale	Size
AHD	MGA 20	1:50	A1
Drawing Number			Revision
8202	22013-001	-C1041	В



Wollondilly Shire Council APPROVED PLAN Development Consent: DD010.2019.00000617.001 Determined: 30 September 2022

IMPORTANT Refer to the Consent Conditions prior to commencing this development. NSW Legislation provides penalties for breaching Conditions of Consent.



Des. Verif. Appd.

Description

Date



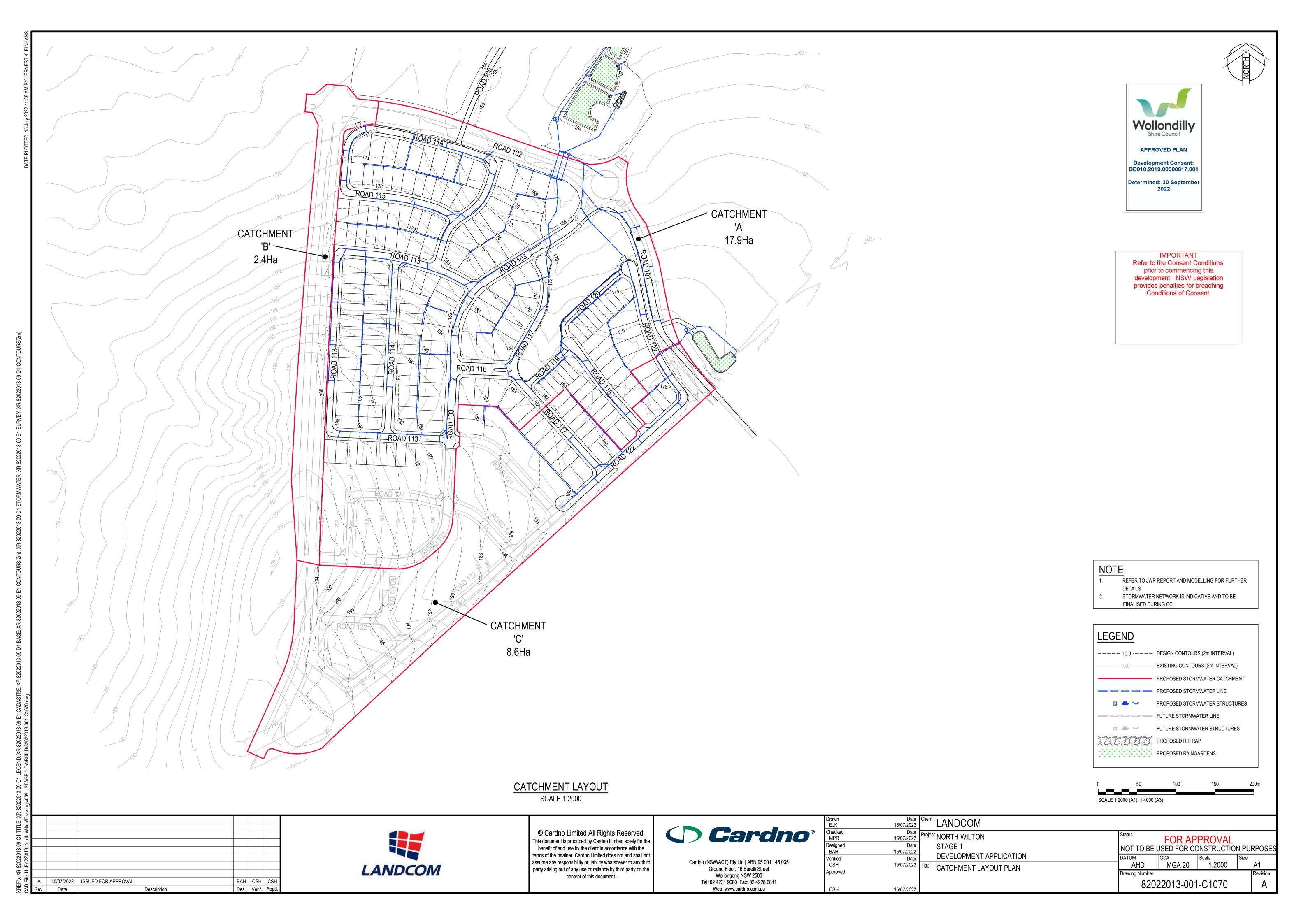
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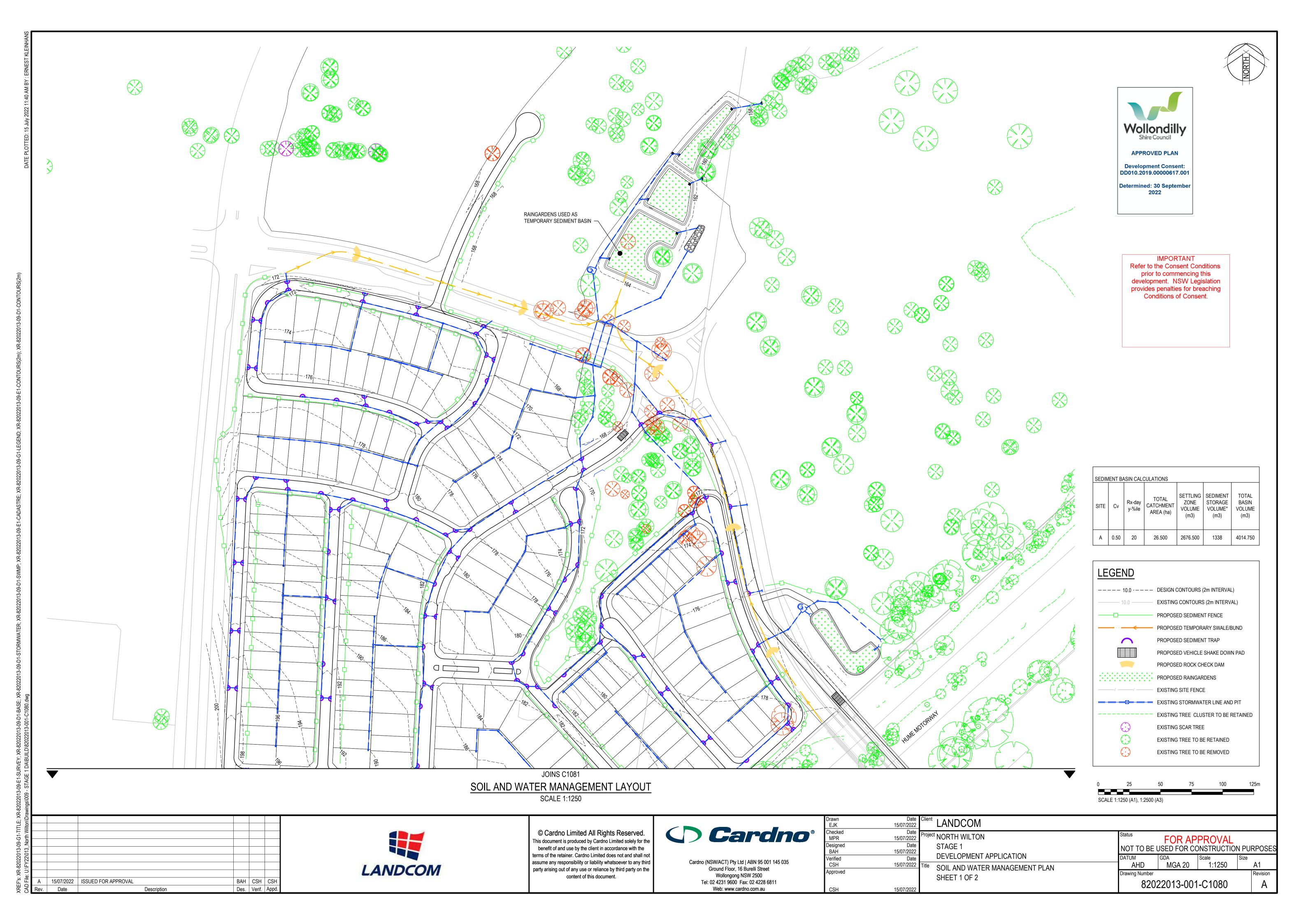


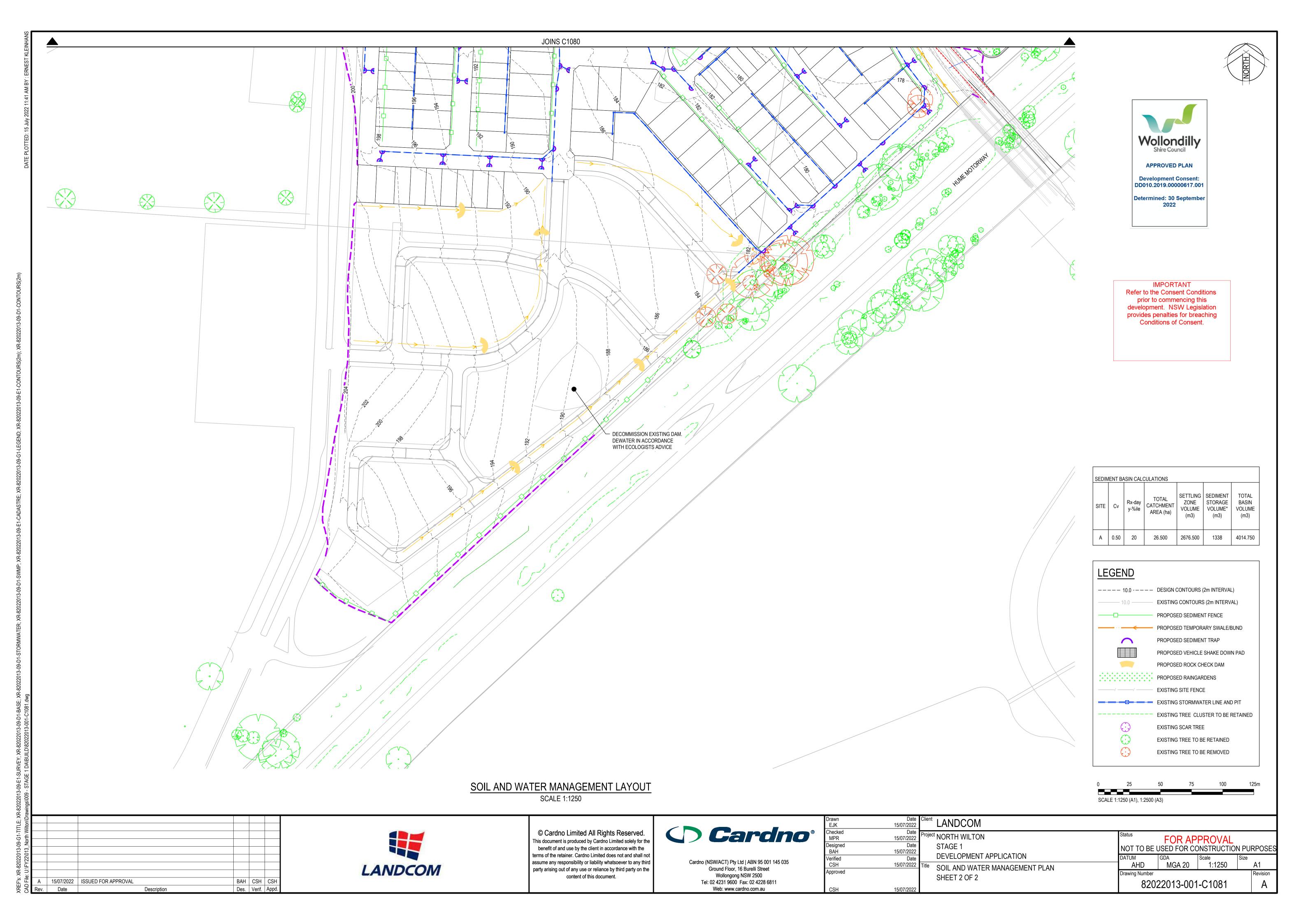
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Approved	

Client	LANDCOM						
Projec	t NORTH WILTON STAGE 1	Status NOT TO BE	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES				
	DEVELOPMENT APPLICATION	DATUM	GDA	Scale	Size		
Title	TYPICAL ROAD CROSS SECTION	AHD	MGA 20	1:50		A1	
	SHEET 3 OF 3	Drawing Numbe	r			Revision	
		820	82022013-001-C1042				



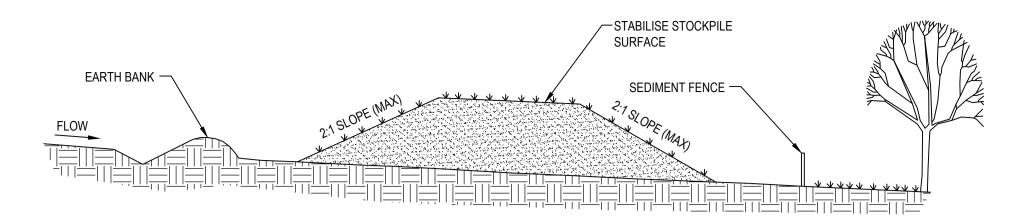




THE VEGETATION IS ESTABLISHED. 2. MEASURES USED TO MANAGE EROSION AND SEDIMENT CONTROL WILL INCLUDE: a. OSD BASIN TO POND DIRTY RUNOFF FROM DISTURBED AREAS AND EXISTING UPSTREAM CATCHMENT. SEDIMENT WILL SETTLE OUT OF SUSPENSION IN THESE PONDS. b. SEDIMENT CONTROL FENCES TO FILTER RUNOFF FROM DISTURBED AREAS AND STOCKPILES.

c. CHECK DAMS TO FILTER LARGER FLOWS OF SEDIMENT LADEN RUNOFF TO TRAP SEDIMENT.

- 3. ALL SITE RUNOFF SHOULD BE DISCHARGED INTO GRASSED FIELDS, SEDIMENTATION TRAPS, OR CHECK DAMS DOWN SLOPE OF DISTURBED AREAS TO COLLECT, CONVEY AND TREAT SEDIMENT-LADEN RUNOFF.
- 4. SILT FENCES SHOULD BE INSTALLED ON THE DOWNSLOPE SIDE OF ALL STOCKPILES.
- 5. MEASURES SHALL BE TAKEN TO MINIMISE THE RISK OF EROSION TO DISTURBED AREAS. BARE AREAS SHOULD BE STABILISED WITHIN 14 DAYS OF THE COMPLETION OF CONSTRUCTION ACTIVITIES. TEMPORARY STABILISATION TECHNIQUES SUCH AS EROSION MATTING, SEDIMENT SCREENS, HAY BALE ENERGY DISSIPATERS, MULCHING, HYDROSEEDING AND GRASS SPECIES ESTABLISHMENT SHOULD BE IMPLEMENTED ON DISTURBED AREAS AS REQUIRED.
- 6. WEEKLY INSPECTION AND MAINTENANCE OF ALL WORKS AND REHABILITATED AREAS SHALL BE
- 7. FOLLOWING SUCCESSFUL REVEGETATION AND AFTER INSPECTION BY THE SUPERINTENDENT'S WATER QUALITY REPRESENTATIVE, TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED. THIS MAY INVOLVE CLEANING AND REMOVAL OF DIVERSION WORKS, SEDIMENT TRAPS AND CHECK DAMS.
- EROSION AND SEDIMENT CONTROL STRUCTURES TO BE INSPECTED WEEKLY AND IMMEDIATELY AFTER EVERY STORM AND RUNOFF EVENT TO CHECK THEY ARE OPERATING SATISFACTORILY AND TO SCHEDULE ANY MAINTENANCE WORK AND REPAIRS THAT MAY BE REQUIRED. WEEKLY MAINTENANCE WILL INCLUDE:
- a. SEDIMENT REMOVAL FROM DRAINS AND CHECK DAMS.
- b. REPLACEMENT AS REQUIRED.
- 9. DUST SUPPRESSION EQUIPMENT TO BE AVAILABLE AT ALL TIMES (INCLUDING WEEKENDS, ROSTER DAYS AND PUBLIC HOLIDAYS) TO REDUCE THE EMISSION OF DUST FROM SITE.
- 10. ANY INCIDENTS ON SITE LIKELY TO CAUSE POLLUTION (FUEL, CHEMICALS, STORMWATER ETC) MUST BE REPORTED IMMEDIATELY TO THE SUPERINTENDENT.
- 11. ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH "MANAGING STORMWATER, SOIL & CONSTRUCTION" PRODUCED BY THE NSW DEPARTMENT OF HOUSING. (THE BLUE BOOK)
- 12. THIS PLAN SHOWS TYPICAL SOIL & WATER MANAGEMENT MEASURES THAT WILL BE REQUIRED BUT IS NOT INTENDED TO LIMIT THE CONTRACTOR TO ANY PARTICULAR CONSTRUCTION METHODOLOGY. ANY CHANGES ARE TO BE APPROVED BY COUNCIL OR PCA.
- 13. PERMANENT BATTERS TO BE TOPSOILED (MIN. 300mm) AND HYDROSEEDED WITH APPROVED SEED
- 14. ALL DISTURBED AREAS TO BE HYDROSEEDED IMMEDIATELY UPON COMPLETION WITH APPROVED SEED MIX.
- 15. HYDROSEEDED AREAS TO BE REGULARLY WATERED TO PROMOTE RAPID GROWTH.
- 16. ANY REVEGETATED AREAS WHICH FAIL TO ESTABLISH WITHIN THREE MONTHS MUST BE RE-SOWN. 17. EARTHWORKS AND TRENCHING TO BE STAGED TO KEEP WORK AREAS TO A MANAGEABLE SIZE
- 18. EXCAVATED MATERIAL FROM TRENCHES TO BE STOCKPILED UPHILL OF TRENCH UNTIL BACKFILLING CAN OCCUR.
- 19. PUBLIC ROADS TO BE KEPT CLEAR OF DEBRIS AT ALL TIMES. CONTRACTOR TO PROVIDE SHAKE DOWN PAD FOR VEHICLES ENTERING/LEAVING SITE.
- 20. HAULAGE VEHICLES TO REMAIN ON SEALED ROADS OR DEFINED TRACKS AT ALL TIMES WITHIN THE SITE.
- 21. SEDIMENT TRAPS ARE TO BE PROVIDED AROUND ALL PITS DURING AND FOLLOWING CONSTRUCTION. BARRIERS AND TRAPS CAN BE REMOVED UPON SUCCESSFUL REVEGETATION UPSTREAM AS DIRECTED BY THE SUPERINTENDENT.
- 22. ALL WORKS ENCLOSED AT ALL TIMES BY 1800mm HIGH CHAIN WIRE FENCE.

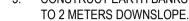


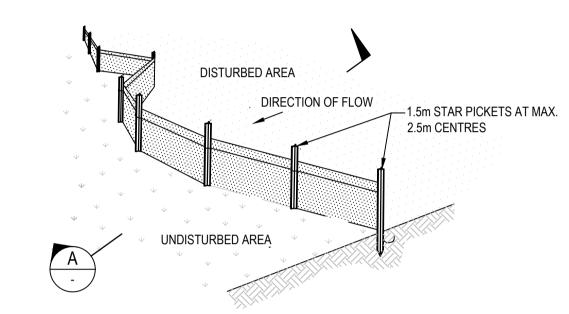
TYPICAL STOCKPILE DETAIL SD 4-1

SCALE: N.T.S.

CONSTRUCTION NOTES

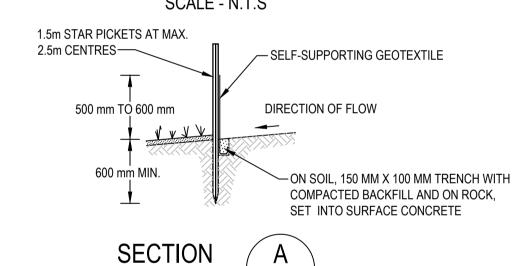
- PLACE STOCKPILES MORE THAN 2 (PREFERABLE 5) METERS FROM EXISTING VEGETATION, CONCENTRATED FLOW, ROAD AND HAZARD AREAS.
- CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METERS IN HEIGHT
- WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
- CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1

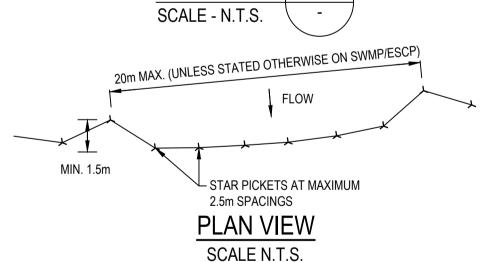




TYPICAL SEDIMENT FENCE DETAIL SD 6-8

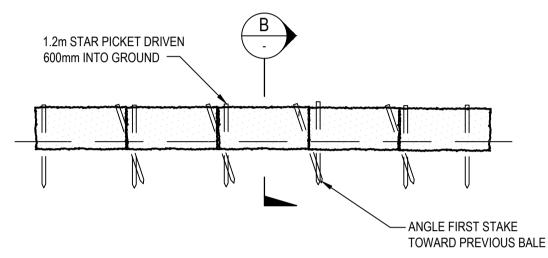
SCALE - N.T.S





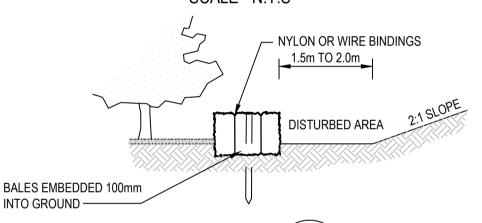
CONSTRUCTION NOTES

- 1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT
- ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT. 2. CUT A 150-MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
- 3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
- 4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
- JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150-MM OVERLAP.
- BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



TYPICAL STRAW BALE FILTER DETAIL SD 6-7

SCALE - N.T.S

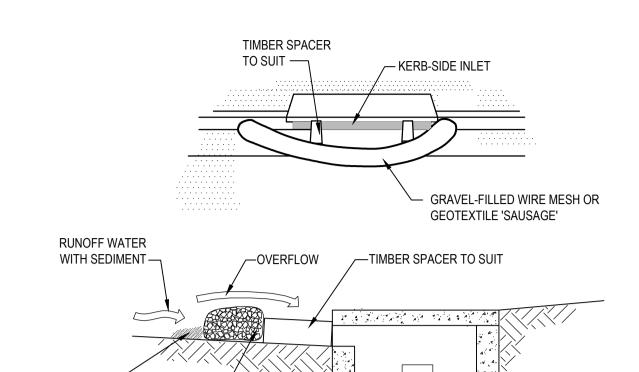


SECTION SCALE - N.T.S. 20 METRES MAX. (UNLESS STATED OTHERWISE ON SWMP/ESCP) STRAW BALES TIGHTLY ABUTTING TOGETHER -

PLAN VIEW SCALE N.T.S.

CONSTRUCTION NOTES

- 1. CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS
- OF THE SITE. 2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS
- BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND. 3. ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
- 4. EMBED EACH BALE IN THE GROUND 75 MM TO 100 MM AND ANCHOR WITH TWO 1.2 METRE STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE THEM 600 MM INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
- 5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE
- THE BALES ARE PLACED 1 TO 2 METRES DOWNSLOPE FROM THE TOE. 6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED -THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.





IMPORTANT Refer to the Consent Conditions prior to commencing this development. NSW Legislation provides penalties for breaching Conditions of Consent.

NOTE:

SEDIMENT -

TYPICAL MESH AND GRAVEL INLET FILTER DETAIL SD-11 SCALE N.T.S.

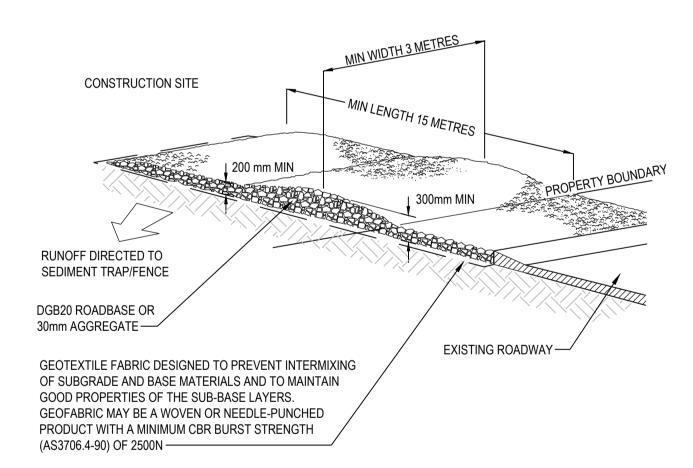
FILTERED WATER

CONSTRUCTION NOTES

GRAVEL-FILLED WIRE MESH OR

GEOTEXTILE 'SAUSAGE' -

- INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS
- FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE
- INLET PIT AND FILL IT WITH 25 MM TO 50 MM GRAVEL
- FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150 MM HIGH X 400 MM WIDE. 4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100-MM SPACE BETWEEN IT AND THE KERB
- INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
- FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER
- 6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.



TYPICAL STABILISED SITE ACCESS DETAIL SD 6-14 SCALE - N.T.S

CONSTRUCTION NOTES

- 1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
- 2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
- 3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
- 4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT
- LEAST 3 METRES WIDE.
- 5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.

15/07/2022 | ISSUED FOR APPROVAL BAH | CSH | CSH Date Des. Verif. Appd. Description



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Drawn EJK	Date 15/07/2022	Client LANDCOM					
Checked MPR	Date 15/07/2022	Project NORTH WILTON	Status	FOR AF	PROVAL		
Designed BAH	Date 15/07/2022	STAGE 1	NOT TO BE		ONSTRUCTION	N PUR	₹POSE
Verified CSH	Date 15/07/2022	DEVELOPMENT APPLICATION	DATUM AHD	GDA MGA 20	Scale AS SHOWN	Size	A1
Approved	13/07/2022	SOIL AND WATER MANAGEMENT DETAILS SHEET 1 OF 2	Drawing Number		AS SHOWN		Revision
CSH	15/07/2022	SHEET TOF 2	820)22013-00	1-C1082		Α

- 1. CONSTRUCT STABILISED SITE ACCESS & SHAKE DOWN PAD.
- 2. INSTALLATION OF BARRIER & SEDIMENT FENCE TO PERIMETER OF SITE AND AS INDICATED ON SWMP.
- 3. CONSTRUCTION OF TEMPORARY SEDIMENT CONTROL STRUCTURES DOWNSTREAM OF THE SEDIMENT BASINS.
- 4. CONSTRUCTION OF THE SEDIMENT BASINS.
- 5. CONSTRUCTION OF DIVERSION DRAINS AND ROCK CHECK DAMS UPSTREAM OF THE SEDIMENT

REMOVAL

- 1. ENSURE ALL SOILS ARE STABILISED TO THE SATISFACTION OF THE SUPERINTENDENT.
- 2. COMMISSION PIPED STORMWATER SYSTEM.
- 3. REMOVE REMAINING TEMPORARY DIVERSION DRAINS AND ROCK CHECK DAMS. 4. REMOVE SEDIMENT FROM THE SEDIMENT BASINS, FILL IN AND RESTABILISE TO THE SATISFACTION OF
- THE SUPERINTENDENT. 5. DECOMMISSION OTHER TEMPORARY SOIL CONSERVATION WORKS.

FLOCCULATION

TREATMENT.

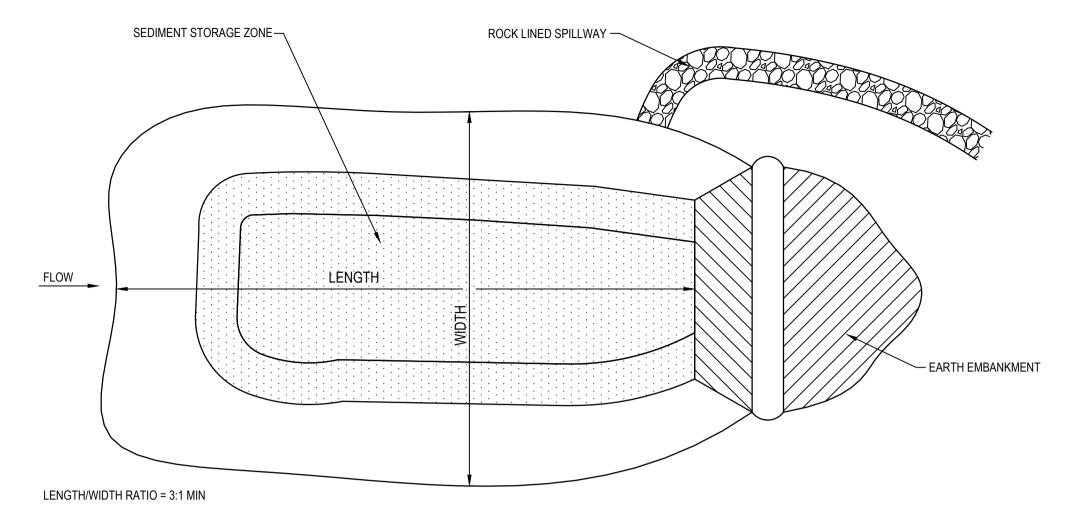
- 1. WATERS IN THE SEDIMENT BASINS SHALL BE FLOCCULATED AND DISCHARGED WHEN ONE QUARTER OF THE BASIN IS OCCUPIED.
- 2. BASIN STORAGE CAPACITY IS TO BE MAINTAINED AT ALL TIMES WITHIN 5 DAYS OF A RAINFALL EVENT. 3. WATER IS TO BE TESTED BY FILLING A CLEAR PLASTIC 65mm DIAMETER SOFT DRINK BOTTLE WITH THE WATER AND HELD UP TO THE LIGHT. IF SEEING VERY CLEARLY THROUGH THE SAMPLE IS NOT

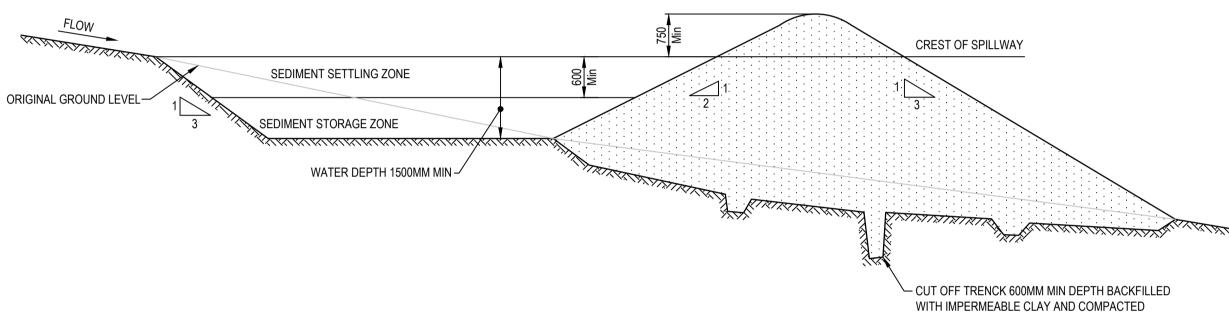
POSSIBLE, IT IS PROBABLY ABOVE 50mg/I OF SUSPENDED SOLIDS AND THEREFORE REQUIRES

- 4. WATERS WILL BE TREATED WITH GYPSUM WHERE THEY CONTAIN MORE THAN 50mg/l OF SUSPENDED
- 5. DOSE WATER IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. TYPICALLY 30kg PER 100m3 OF WATER.
- 6. FOLLOWING FLOCCULATION, ANOTHER CLEAR BOTTLE TEST AND APPROVAL FROM THE SUPERINTENDENT, WATER IS TO BE PUMPED OUT OF THE SEDIMENT BASIN INTO A ROCK CHECK DAM IMMEDIATELY DOWNSTREAM OF THE SEDIMENT BASIN.

EARTH SEDIMENT BASIN CONSTRUCTION NOTES

- 1. REMOVE ALL VEGETATION AND TOPSOIL FROM UNDER THE DAM WALL AND FROM WITHIN THE STORAGE AREA.
- 2. CONSTRUCT A CUT-OFF TRENCH 500mm DEEP AND 1200mm WIDE ALONG THE CENTRELINE OF THE
- EMBANKMENT EXTENDING TO A POINT ON THE GULLY WALL LEVEL WITH THE RISER CREST. 3. MAINTAIN THE TRENCH FREE OF WATER AND RECOMPACT THE MATERIALS WITH EQUIPMENT
- SPECIFIED IN THE SWMP TO 95% STANDARD PROCTOR DENSITY.
- 4. SELECT FILL ACCORDING TO THE DIRECTIONS OF THE SWMP THAT IS FREE OF ROOTS, WOOD, ROCK, LARGE STONE OR FOREIGN MATERIAL.
- 5. PREPARE THE SITE UNDER THE EMBANKMENT BY RIPPING AT LEAST 100mm DEEP TO HELP BOND COMPACT FILL TO EXISTING SUBSTRATE.
- 6. SPREAD FILL IN 100mm TO 150mm LAYERS AND COMPACT AT OPTIMUM MOISTURE CONTENT IN
- ACCORDANCE WITH SWMP. 7. CONSTRUCT EMERGENCY SPILLWAY.
- 8. REHABILITATE STRUCTURE IN ACCORDANCE WITH THE SWMP.
- 9. PLACE A "FULL OF SEDIMENT" MARKER TO SHOW WHEN LESS THAN DESIGN CAPACITY OCCURS AND SEDIMENT REMOVAL IS REQUIRED.
- 10. SPILLWAY MAXIMUM BATTER SLOPE SHALL BE 5(H): 1(V).

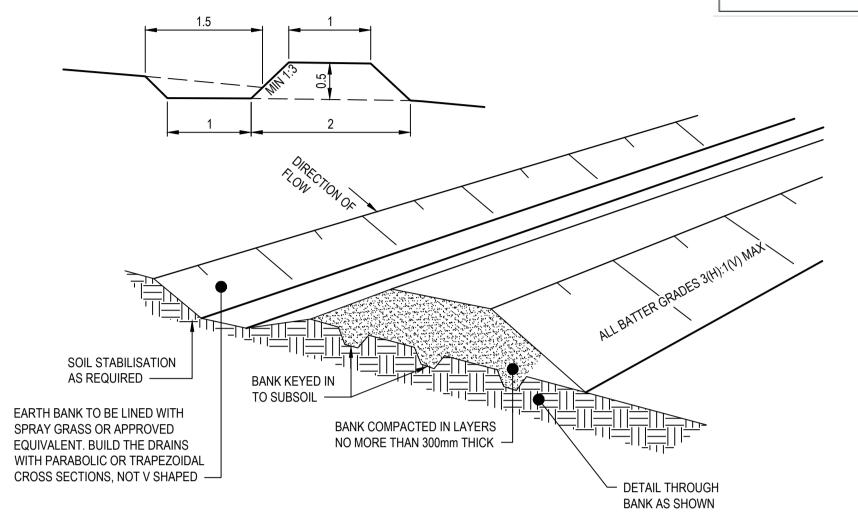




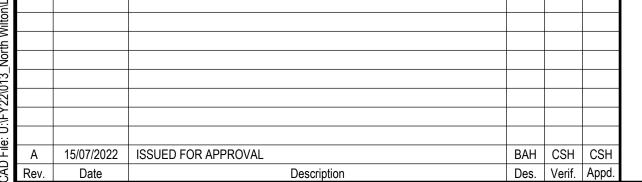
TYPICAL EARTH SEDIMENT BASIN DETAIL N.T.S

IMPORTANT Refer to the Consent Conditions prior to commencing this development. NSW Legislation provides penalties for breaching Conditions of Consent.





TYPICAL EARTH BANK DETAIL (HIGH FLOWS) SCALE: N.T.S



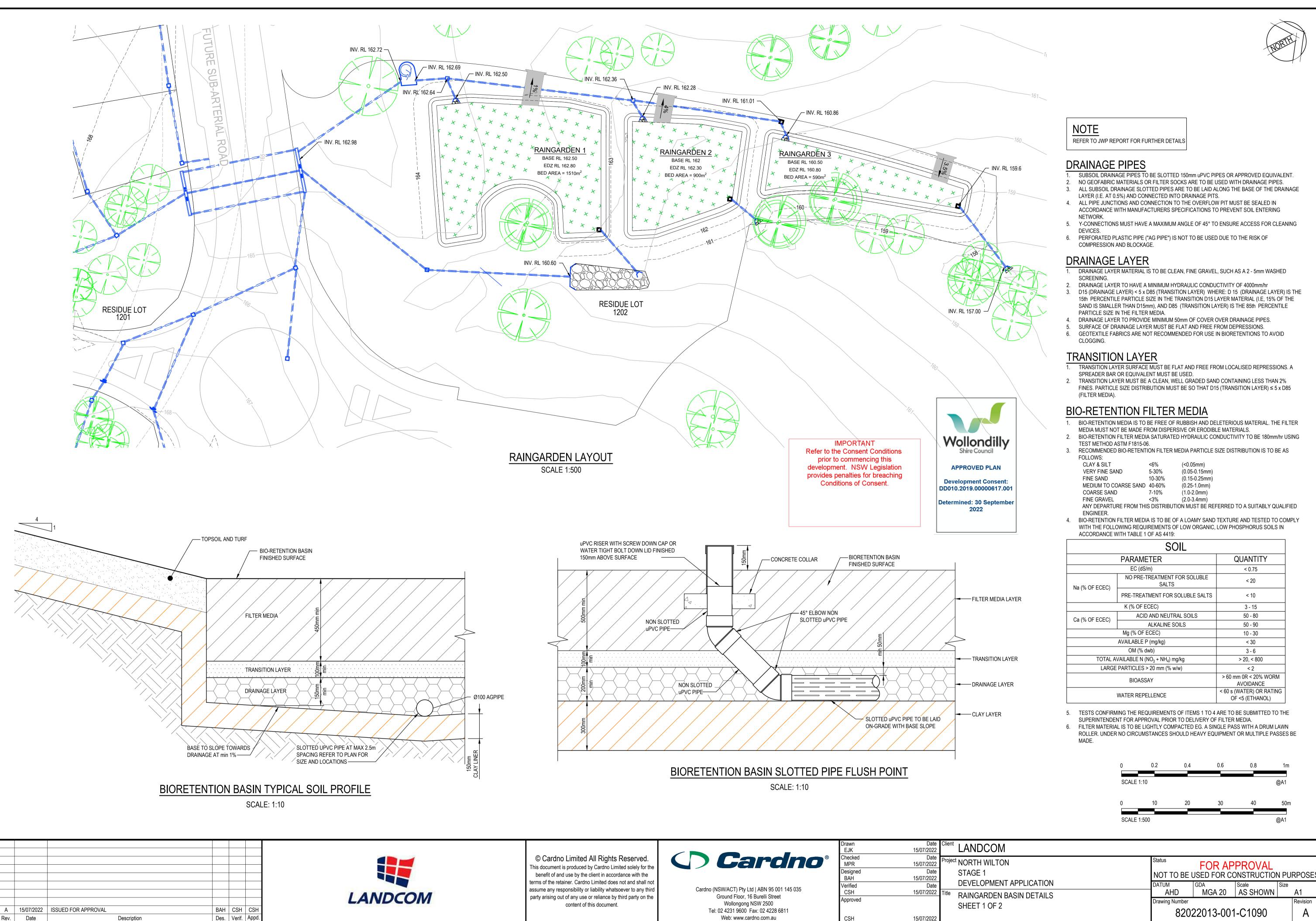


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EJK 15/07/2022	Client LANDCOM					
	Project NORTH WILTON	Status	FOR AF	PROVAL		
Designed Date BAH 15/07/2022	STAGE 1		USED FOR C		ON PUR	₹POSE
Verified Date CSH 15/07/2022		DATUM AHD	GDA MGA 20	Scale NTS	Size	A1
Approved	SHEET 2 OF 2	Drawing Number			Ţ.	Revision
CSH 15/07/2022		820	22013-00 ⁻	1-C1083		Α



Date

Description

- SUBSOIL DRAINAGE PIPES TO BE SLOTTED 150mm uPVC PIPES OR APPROVED EQUIVALENT.
- 3. ALL SUBSOIL DRAINAGE SLOTTED PIPES ARE TO BE LAID ALONG THE BASE OF THE DRAINAGE
- ALL PIPE JUNCTIONS AND CONNECTION TO THE OVERFLOW PIT MUST BE SEALED IN
- 5. Y-CONNECTIONS MUST HAVE A MAXIMUM ANGLE OF 45° TO ENSURE ACCESS FOR CLEANING
- 6. PERFORATED PLASTIC PIPE ("AG PIPE") IS NOT TO BE USED DUE TO THE RISK OF
- 1. DRAINAGE LAYER MATERIAL IS TO BE CLEAN, FINE GRAVEL, SUCH AS A 2 5mm WASHED
- DRAINAGE LAYER TO HAVE A MINIMUM HYDRAULIC CONDUCTIVITY OF 4000mm/hr
- D15 (DRAINAGE LAYER) < 5 x D85 (TRANSITION LAYER) WHERE: D 15 (DRAINAGE LAYER) IS THE 15th PERCENTILE PARTICLE SIZE IN THE TRANSITION D15 LAYER MATERIAL (I.E, 15% OF THE SAND IS SMALLER THAN D15mm), AND D85 (TRANSITION LAYER) IS THE 85th PERCENTILE
- 5. SURFACE OF DRAINAGE LAYER MUST BE FLAT AND FREE FROM DEPRESSIONS.
- 1. TRANSITION LAYER SURFACE MUST BE FLAT AND FREE FROM LOCALISED REPRESSIONS. A
- 2. TRANSITION LAYER MUST BE A CLEAN, WELL GRADED SAND CONTAINING LESS THAN 2%
- FINES. PARTICLE SIZE DISTRIBUTION MUST BE SO THAT D15 (TRANSITION LAYER) ≤ 5 x D85

- 1. BIO-RETENTION MEDIA IS TO BE FREE OF RUBBISH AND DELETERIOUS MATERIAL. THE FILTER MEDIA MUST NOT BE MADE FROM DISPERSIVE OR ERODIBLE MATERIALS.
- BIO-RETENTION FILTER MEDIA SATURATED HYDRAULIC CONDUCTIVITY TO BE 180mm/hr USING
- 3. RECOMMENDED BIO-RETENTION FILTER MEDIA PARTICLE SIZE DISTRIBUTION IS TO BE AS

(0.05-0.15mm)

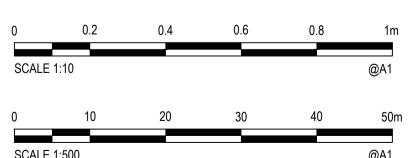
(0.15-0.25mm) (0.25-1.0mm)

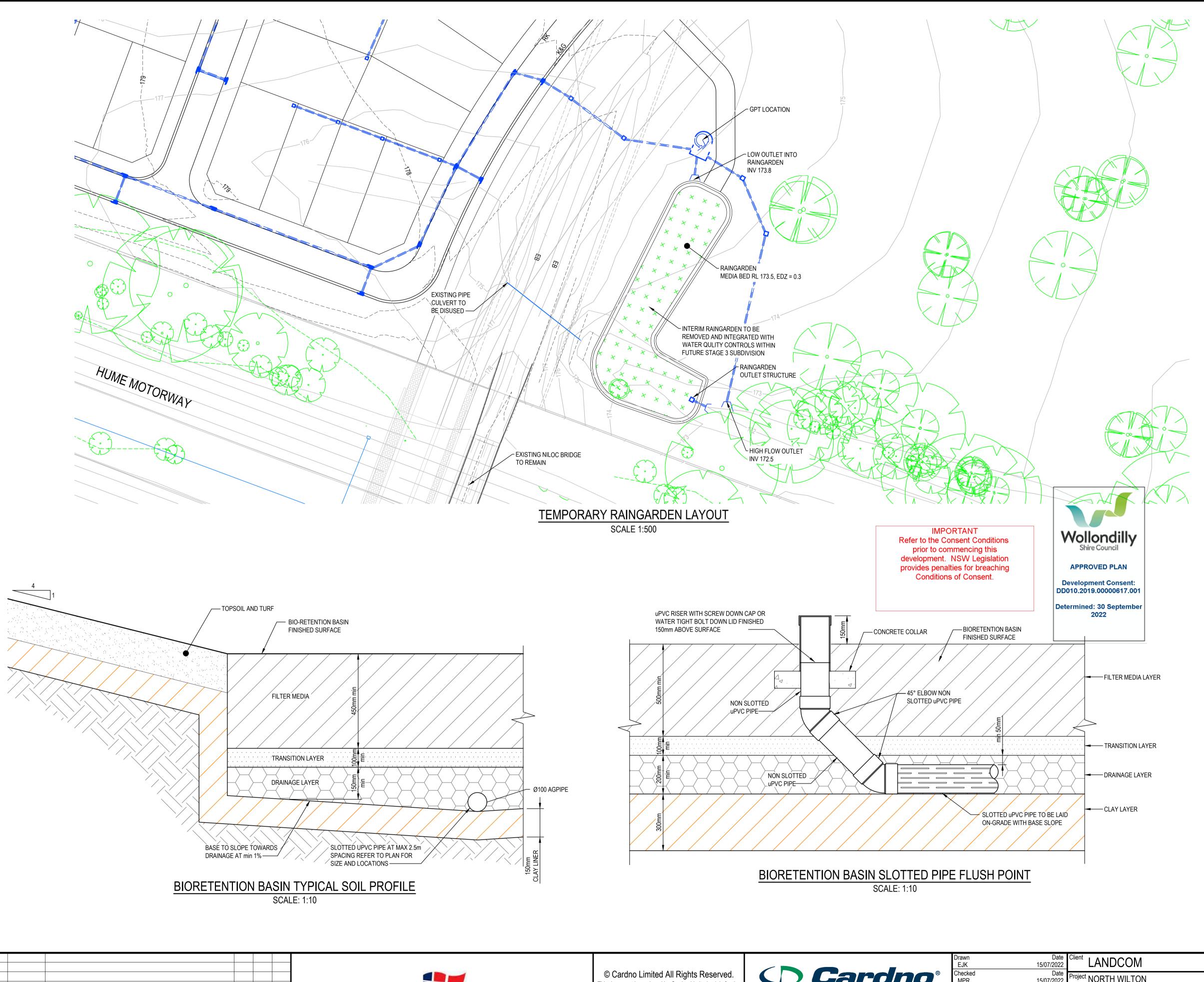
(1.0-2.0mm)

4. BIO-RETENTION FILTER MEDIA IS TO BE OF A LOAMY SAND TEXTURE AND TESTED TO COMPLY WITH THE FOLLOWING REQUIREMENTS OF LOW ORGANIC, LOW PHOSPHORUS SOILS IN

SOIL					
	PARAMETER	QUANTITY			
	EC (dS/m)	< 0.75			
Na (% OF ECEC)	NO PRE-TREATMENT FOR SOLUBLE SALTS	< 20			
114 (70 01 2020)	PRE-TREATMENT FOR SOLUBLE SALTS	< 10			
	3 - 15				
Ca (% OF ECEC)	ACID AND NEUTRAL SOILS	50 - 80			
Od (70 OF LOLO)	ALKALINE SOILS	50 - 90			
	10 - 30				
	< 30				
	3 - 6				
TOTAL A	> 20, < 800				
LARGE	< 2				
	BIOASSAY	> 60 mm 0R < 20% WORM AVOIDANCE			
	WATER REPELLENCE	< 60 s (WATER) OR RATING OF <5 (ETHANOL)			

- 5. TESTS CONFIRMING THE REQUIREMENTS OF ITEMS 1 TO 4 ARE TO BE SUBMITTED TO THE
- 6. FILTER MATERIAL IS TO BE LIGHTLY COMPACTED EG. A SINGLE PASS WITH A DRUM LAWN ROLLER. UNDER NO CIRCUMSTANCES SHOULD HEAVY EQUIPMENT OR MULTIPLE PASSES BE







REFER TO JWP REPORT FOR FURTHER DETAILS

DRAINAGE PIPES

- SUBSOIL DRAINAGE PIPES TO BE SLOTTED 150mm uPVC PIPES OR APPROVED EQUIVALENT.
- NO GEOFABRIC MATERIALS OR FILTER SOCKS ARE TO BE USED WITH DRAINAGE PIPES. 3. ALL SUBSOIL DRAINAGE SLOTTED PIPES ARE TO BE LAID ALONG THE BASE OF THE DRAINAGE
- LAYER (I.E. AT 0.5%) AND CONNECTED INTO DRAINAGE PITS. 4. ALL PIPE JUNCTIONS AND CONNECTION TO THE OVERFLOW PIT MUST BE SEALED IN
- ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS TO PREVENT SOIL ENTERING
- 5. Y-CONNECTIONS MUST HAVE A MAXIMUM ANGLE OF 45° TO ENSURE ACCESS FOR CLEANING DEVICES.
- 6. PERFORATED PLASTIC PIPE ("AG PIPE") IS NOT TO BE USED DUE TO THE RISK OF
- COMPRESSION AND BLOCKAGE.

DRAINAGE LAYER

- 1. DRAINAGE LAYER MATERIAL IS TO BE CLEAN, FINE GRAVEL, SUCH AS A 2 5mm WASHED
- 2. DRAINAGE LAYER TO HAVE A MINIMUM HYDRAULIC CONDUCTIVITY OF 4000mm/hr
- 3. D15 (DRAINAGE LAYER) < 5 x D85 (TRANSITION LAYER) WHERE: D 15 (DRAINAGE LAYER) IS THE 15th PERCENTILE PARTICLE SIZE IN THE TRANSITION D15 LAYER MATERIAL (I.E, 15% OF THE SAND IS SMALLER THAN D15mm), AND D85 (TRANSITION LAYER) IS THE 85th PERCENTILE
- PARTICLE SIZE IN THE FILTER MEDIA. 4. DRAINAGE LAYER TO PROVIDE MINIMUM 50mm OF COVER OVER DRAINAGE PIPES.
- SURFACE OF DRAINAGE LAYER MUST BE FLAT AND FREE FROM DEPRESSIONS. 6. GEOTEXTILE FABRICS ARE NOT RECOMMENDED FOR USE IN BIORETENTIONS TO AVOID
- CLOGGING.

TRANSITION LAYER

- 1. TRANSITION LAYER SURFACE MUST BE FLAT AND FREE FROM LOCALISED REPRESSIONS. A SPREADER BAR OR EQUIVALENT MUST BE USED.
- TRANSITION LAYER MUST BE A CLEAN, WELL GRADED SAND CONTAINING LESS THAN 2%
- FINES. PARTICLE SIZE DISTRIBUTION MUST BE SO THAT D15 (TRANSITION LAYER) ≤ 5 x D85 (FILTER MEDIA).

BIO-RETENTION FILTER MEDIA

- BIO-RETENTION MEDIA IS TO BE FREE OF RUBBISH AND DELETERIOUS MATERIAL. THE FILTER MEDIA MUST NOT BE MADE FROM DISPERSIVE OR ERODIBLE MATERIALS.
- BIO-RETENTION FILTER MEDIA SATURATED HYDRAULIC CONDUCTIVITY TO BE 180mm/hr USING
- TEST METHOD ASTM F1815-06. RECOMMENDED BIO-RETENTION FILTER MEDIA PARTICLE SIZE DISTRIBUTION IS TO BE AS
 - FOLLOWS: CLAY & SILT VERY FINE SAND

5-30% (0.05-0.15mm) (0.15-0.25mm)

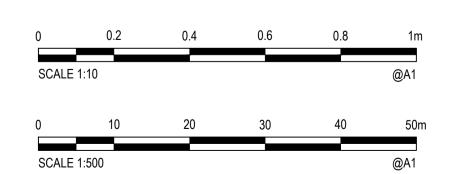
MEDIUM TO COARSE SAND 40-60% (0.25-1.0mm) COARSE SAND 7-10% (1.0-2.0mm)

ANY DEPARTURE FROM THIS DISTRIBUTION MUST BE REFERRED TO A SUITABLY QUALIFIED

4. BIO-RETENTION FILTER MEDIA IS TO BE OF A LOAMY SAND TEXTURE AND TESTED TO COMPLY WITH THE FOLLOWING REQUIREMENTS OF LOW ORGANIC, LOW PHOSPHORUS SOILS IN ACCORDANCE WITH TABLE 1 OF AS 4419:

	SOIL	
	PARAMETER	QUANTITY
	EC (dS/m)	< 0.75
Na (% OF ECEC)	NO PRE-TREATMENT FOR SOLUBLE SALTS	< 20
Na (70 OF EOLO)	PRE-TREATMENT FOR SOLUBLE SALTS	< 10
	K (% OF ECEC)	3 - 15
Ca (% OF ECEC)	ACID AND NEUTRAL SOILS	50 - 80
Ca (% Of LOLO)	ALKALINE SOILS	50 - 90
	Mg (% OF ECEC)	10 - 30
	AVAILABLE P (mg/kg)	< 30
	3 - 6	
TOTAL A	> 20, < 800	
LARGE	< 2	
	BIOASSAY	> 60 mm 0R < 20% WORM AVOIDANCE
	WATER REPELLENCE	< 60 s (WATER) OR RATING OF <5 (ETHANOL)

- 5. TESTS CONFIRMING THE REQUIREMENTS OF ITEMS 1 TO 4 ARE TO BE SUBMITTED TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO DELIVERY OF FILTER MEDIA.
- 6. FILTER MATERIAL IS TO BE LIGHTLY COMPACTED EG. A SINGLE PASS WITH A DRUM LAWN ROLLER. UNDER NO CIRCUMSTANCES SHOULD HEAVY EQUIPMENT OR MULTIPLE PASSES BE



15/07/2022 ISSUED FOR APPROVAL BAH | CSH | CSH Des. Verif. Appd. Date Description



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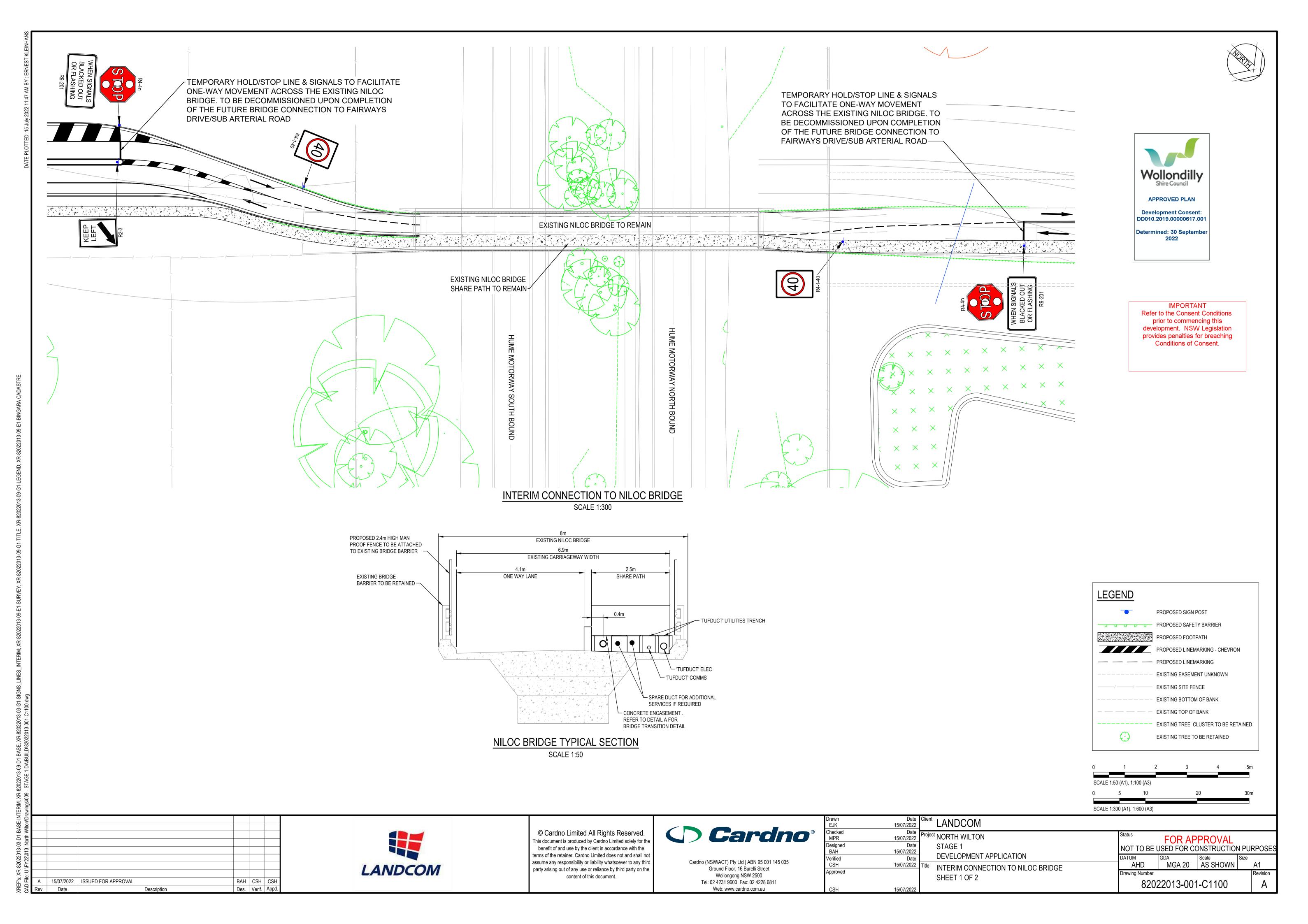
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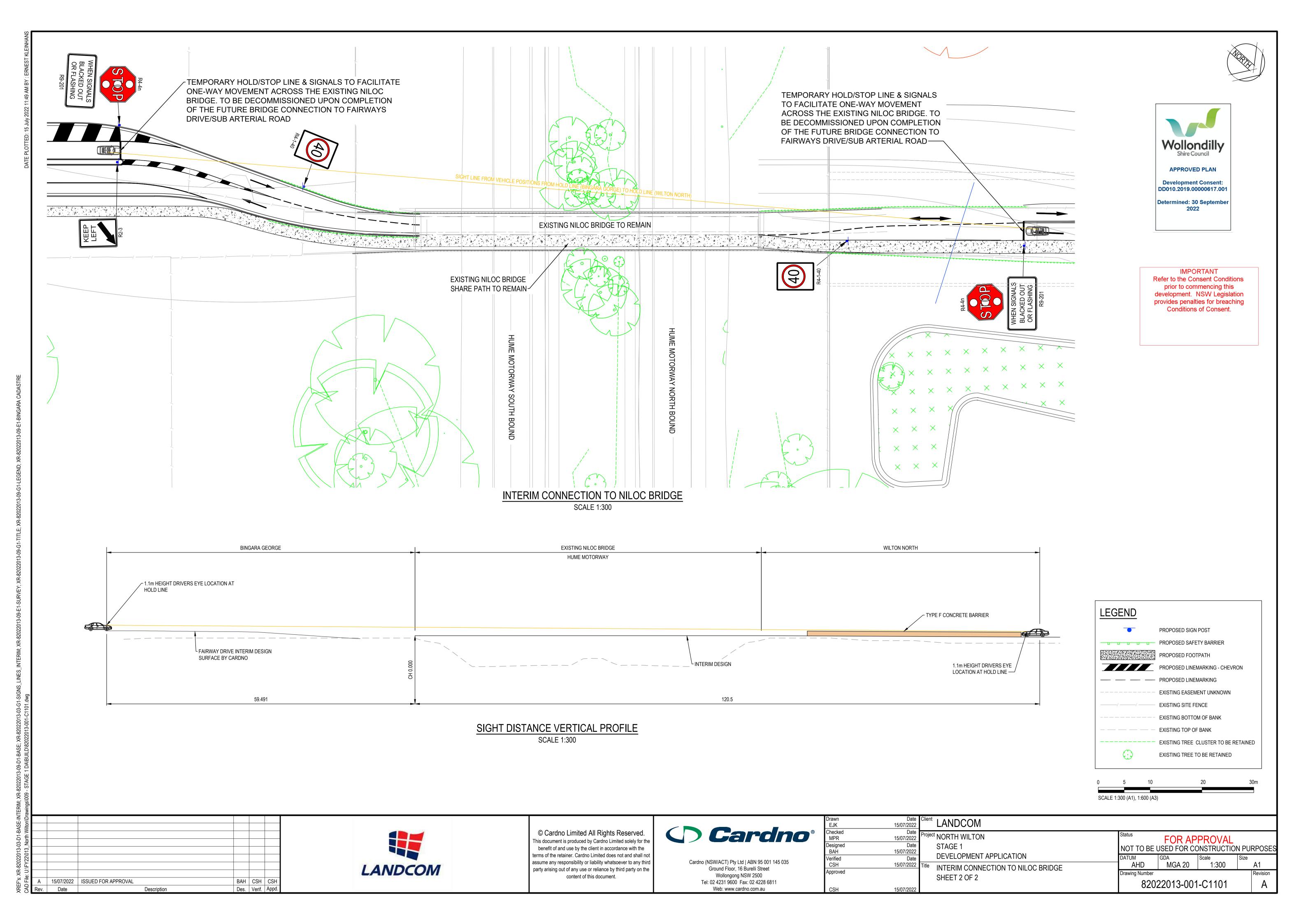
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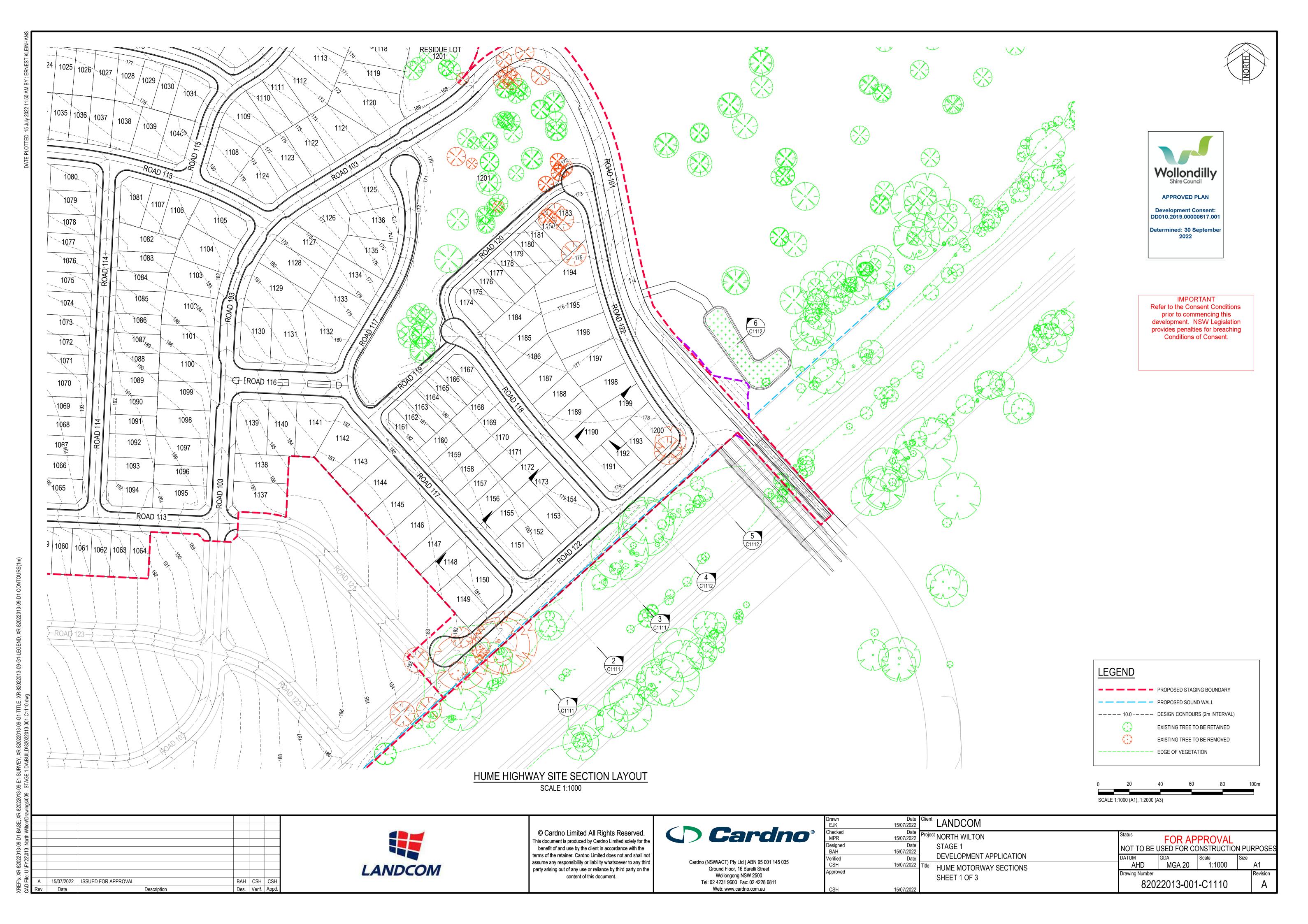
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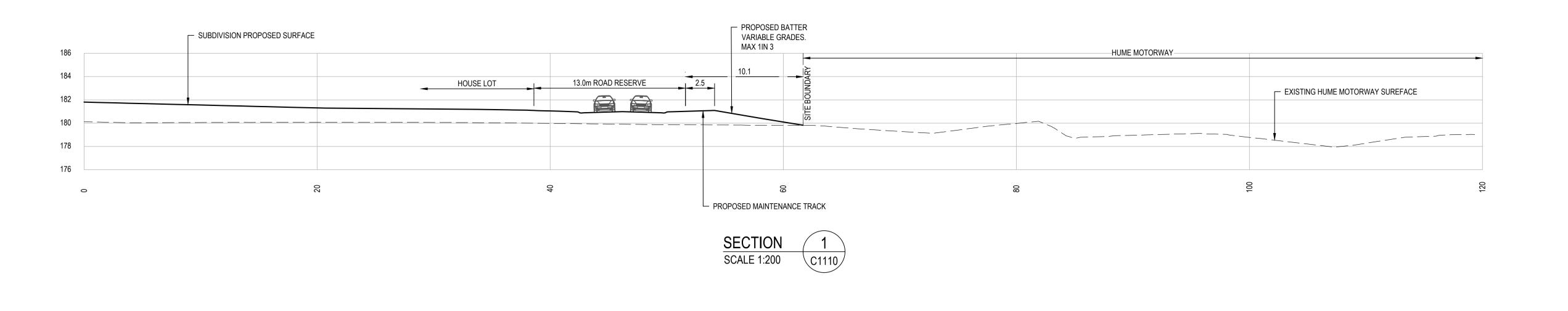
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Proje	ect NORTH WILTON
	STAGE 1
	DEVELOPMENT APPLICATION
Title	RAINGARDEN BASIN DETAILS
	SHEET 2 OF 2

FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES MGA 20 | AS SHOWN | AHD 82022013-001-C1091









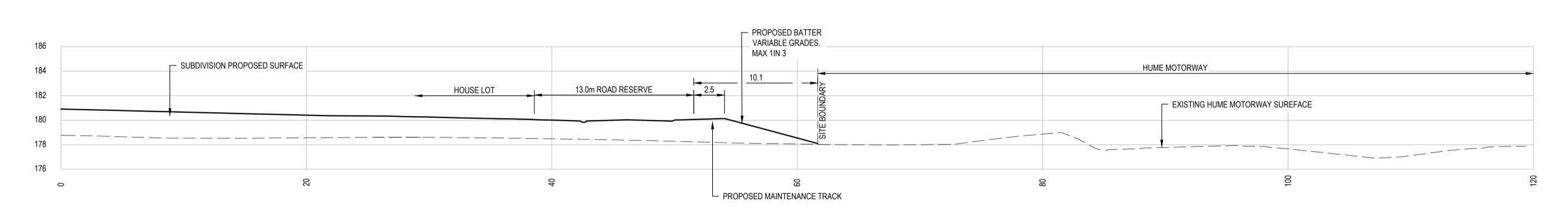
Wollondilly
Shire Council

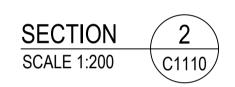
APPROVED PLAN

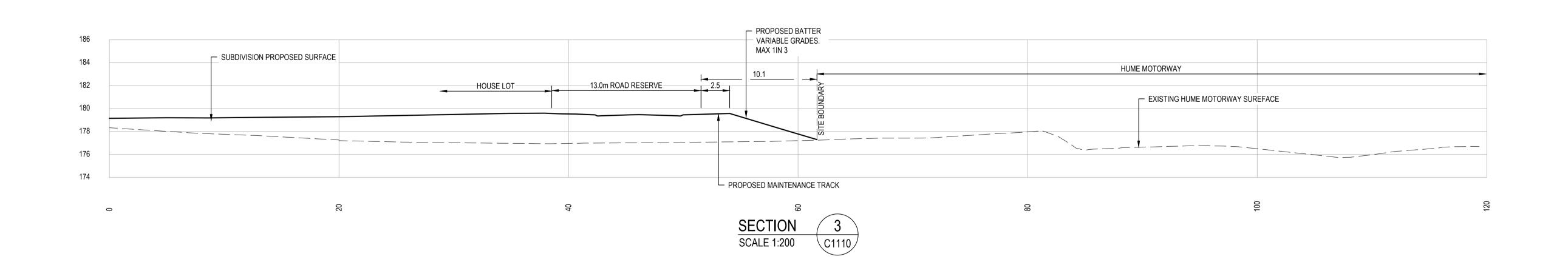
Development Consent:
DD010.2019.00000617.001

Determined: 30 September 2022

IMPORTANT
Refer to the Consent Conditions
prior to commencing this
development. NSW Legislation
provides penalties for breaching
Conditions of Consent.







0 5 10 15 20m SCALE 1:200 (A1), 1:400 (A3)

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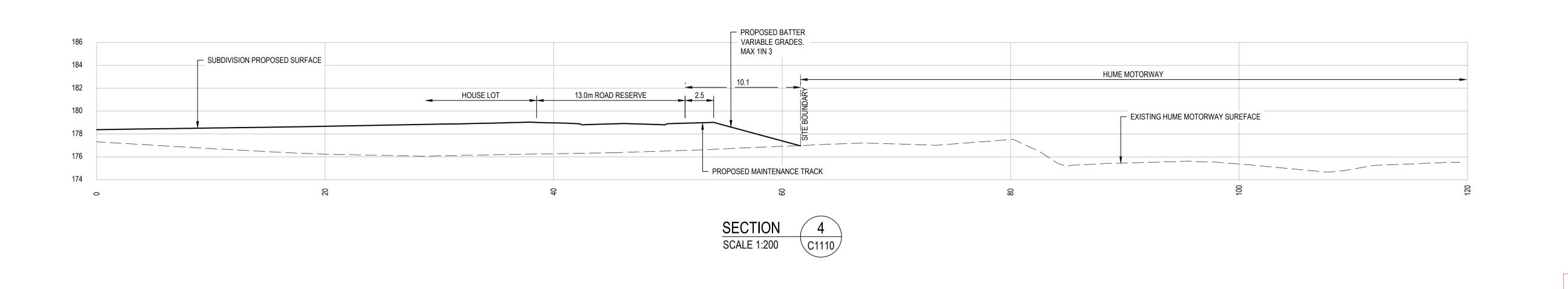
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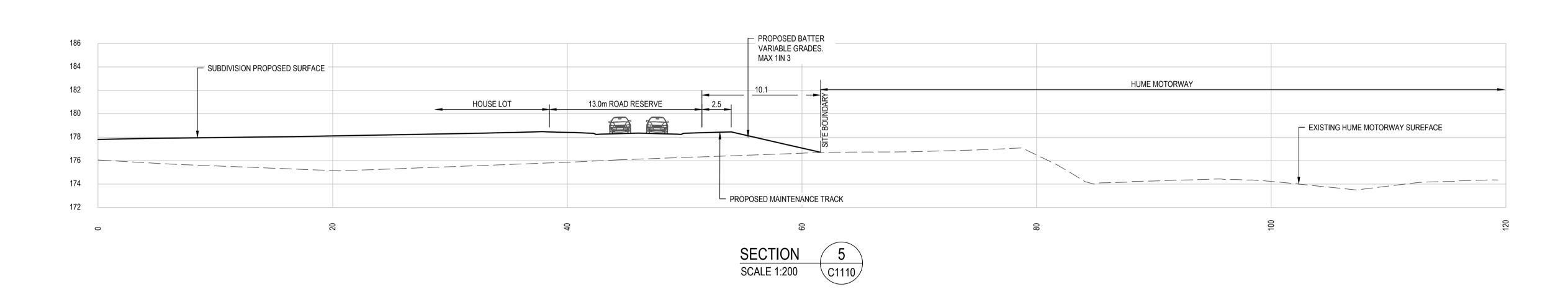
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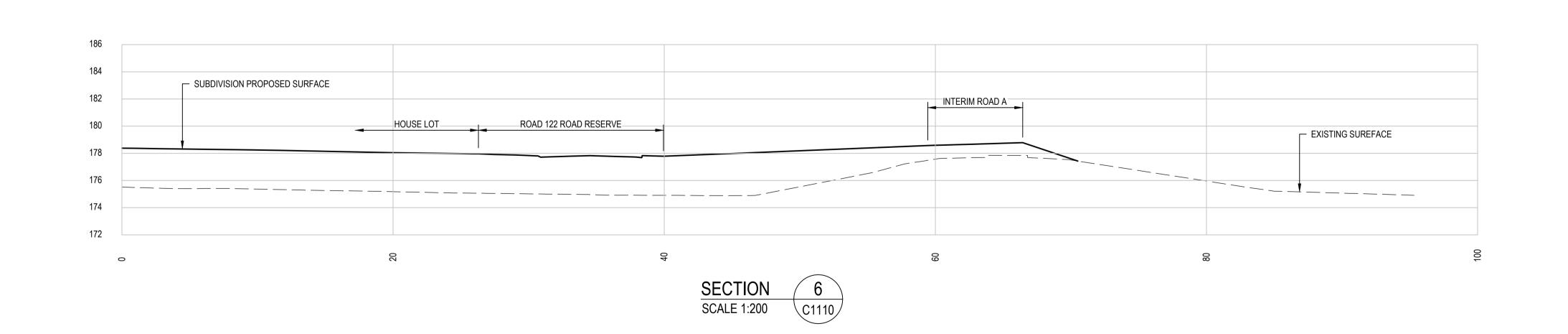
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Checked MPR	Date 15/07/2022	Project NORTH WILTON	Status FOR APPROVAL
Designed BAH	Date 15/07/2022	STAGE 1	NOT TO BE USED FOR CONSTRUCTION PURP
Verified CSH	Date 15/07/2022	DEVELOPMENT APPLICATION Title HUME MOTORWAY SECTIONS	DATUM GDA Scale Size AHD MGA 20 1:200 A1
Approved		SHEET 2 OF 3	Drawing Number 82022013-001-C1111
CSH	15/07/2022		02022010 001 01111



Wollondilly Shire Council APPROVED PLAN Development Consent: DD010.2019.00000617.001 Determined: 30 September 2022

IMPORTANT Refer to the Consent Conditions prior to commencing this development. NSW Legislation provides penalties for breaching Conditions of Consent.





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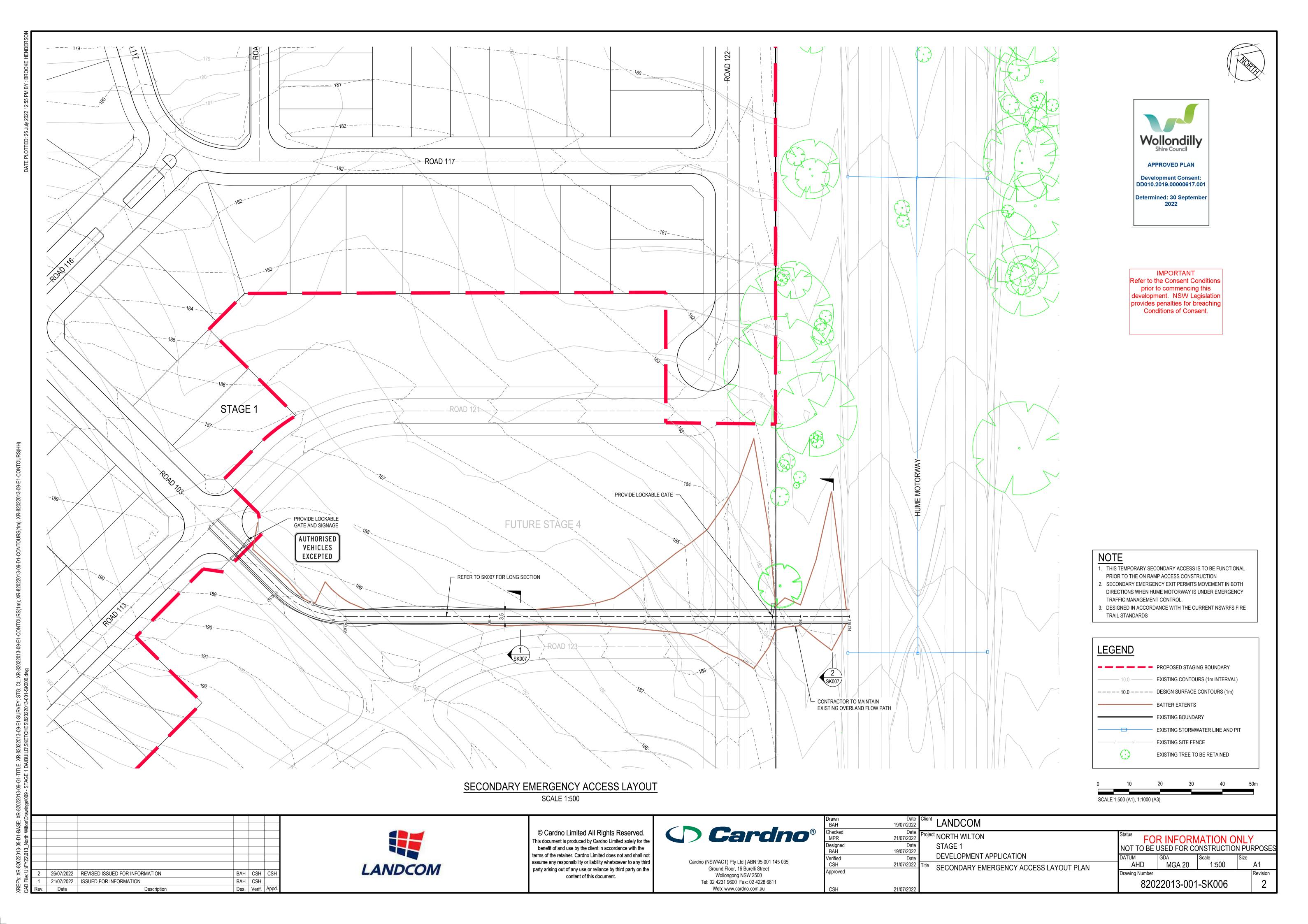
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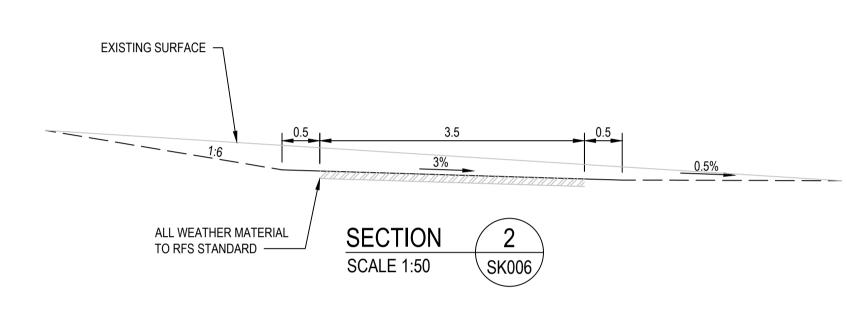
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Date 07/2022	Client LANDCOM
Date 07/2022	Project NORTH WILTON
Date 07/2022	STAGE 1
Date	DEVELOPMENT APPLICATION
07/2022	Title HUME MOTORWAY SECTIONS
	SHEET 3 OF 3

Status FOR APPROVAL				
NOT TO BE USED FOR CONSTRUCTION P				
DATUM	GDA	Scale	Siz	
AHD	MGA 20	1:200		
Drawing Number				
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ALL WEATHER MATERIAL TO RFS STANDARD



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50.00ģm VC

PROPOSED STAGE 4
FINISHED SURFACE

-7.000%

PROPOSED ACCESS SURFACE

CONTRACTOR TO MAINTAIN
EXISTING OVERLAND FLOW PATH

EXISTING DISH DRAIN



20.000m VC

-2.200%

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Drawn	Date	Client
BAH	19/07/2022	
Checked MPR	Date 21/07/202221/07/2022	Projec
Designed BAH	Date 19/07/2022	
Verified	Date	
CSH	21/07/2022	Title
Approved		
CSH	21/07/2022	

Client	LANDCOM
Project	NORTH WILTON
	STAGE 1
	DEVELOPMENT APPLICATION
Title	EMERGENCY ACCESS LONG SECTI AND TYPICAL CROSS SECTIONS

Status FOF	R INFORM	ATION O	NLY	/
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DATUM	GDA	Scale	Size	
AHD	MGA 20	AS SHOWN		A1
Drawing Number				Revision
82022013-001-SK007				1

21/07/2022 ISSUED FOR INFORMATION BAH CSH Date Description Des. Verif. Appd.

SCALES: HORIZ 1:500 VERTICAL 1:100

DATUM RL 175

DESIGN LEVELS

DESIGN STAGE 4

EXISTING LEVELS _ _ _ _

CHAINAGE

-30m

LONGITUDINAL SECTION - SECONDARY EMERGENCY ACCESS

2.358%

50.00¢m VC

LANDCOM

EXISTING SURFACE

-3.600%

