

Summary of Contamination Status

Watagan Park Residential Subdivision
35 McCullough Street, Cooranbong, NSW

Prepared for: Watagan Park Development Unit Trust Pty Ltd
EP3193.001 30 May 2023



QMS Certification Services



QMS Certification Services



QMS Certification Services



Summary of Contamination Status

Watagan Park Residential Subdivision

Precinct South

Watagan Park Development Unit Trust Pty Ltd
27 Patrick Drive
Cooranbong NSW 2265

30 May 2023

Our Ref: EP3193.001

LIMITATIONS

This Summary of Contamination Status was conducted on the behalf of Watagan Park Development Unit Trust Pty Ltd for the purpose/s stated in **Section 1**.

EP Risk has prepared this document in good faith, but is unable to provide certification outside of areas over which EP Risk had some control or were reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in a Summary of Contamination Status to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

All work conducted and reports produced by EP Risk are based on a specific scope and have been prepared for Watagan Park Development Unit Trust Pty Ltd and therefore cannot be relied upon by any other third parties unless agreed in writing by EP Risk.

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QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	N McGuire	30/05/2023	K Guenther	30/05/2023	K Guenther	30/05/2023

DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	30/05/2023	EP3193.001 Letter_v1	WPUT_Cooranbong_Summary Watagan Park Development Unit Trust Pty Ltd



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Summary of Contamination Status

Introduction

EP Risk Management Pty Ltd (EP Risk) was engaged by the Watagan Park Development Unit Trust (WPDUT) to provide a summary of the Contamination Status (the Assessment) for a Site located at 35 McCullough Street, Cooranbong, New South Wales (NSW). The Site is approximately 17 hectares (ha) in area and is legally identified as Lots 8450 in deposited plan (DP) 1250919 and Lot 82 in DP1237780 (refer **Attachment A - Figure 1**). The proposed subdivision plans are provided in **Attachment B**.

Objective

The objective of the Assessment was to review previous investigations undertaken at the Site to assess the potential for contamination from current or historical activities.

Previous Investigations

The following environmental investigations have been undertaken on various allotments at the Site and the reports have been provided for our review for the Assessment:

- Douglas Partners Pty Ltd (2011a) *Phase 1 Contamination Assessment, 119 Avondale Road, Cooranbong*, Project No 75250.00, October 2011.
- Douglas Partners Pty Ltd (2012a) *Phase 2 Contamination Assessment, 119 Avondale Road, Cooranbong*, Project No 75250.01, July 2012.
- Douglas Partners Pty Ltd (2012b) *Remediation Action Plan, 119 Avondale Road, Cooranbong*, Project No 75250.02, November 2012.
- Douglas Partners Pty Ltd (2014) *Remediation and Validation Assessment, 119 Avondale Road, Cooranbong*, Project No 75250.03, November 2014.
- Environmental Strategies (2015), Site Audit Report, Lots 1, 2 and 3, 119 Avondale Road, Cooranbong, NSW. Audit Statement Number TNC014, January 2015.
- EP Risk (2017) Preliminary Site Investigation, 9 Courin Drive, Cooranbong, NSW August 2017, project EP0600.001.
- EP Risk (2022a) Assessment of Contamination, 35 McCullough Street, Cooranbong, NSW July 2022, project EP2743.002.
- EP Risk (2022b) Supplementary PFAS Assessment, 35 McCullough Street, Cooranbong, NSW July 2022, project EP2743.001.

A summary of the results of the Assessment relevant to the Site are provided below. And a summary of the figures referred to in the previous reports is provided in **Appendix C**.

Douglas Partners (2011)

The Douglas Partners 2011 investigation comprised a desktop study and site inspection of a proposed residential subdivision located at 119 Avondale Road, Cooranbong, NSW. The Site subject to the investigation comprises a majority of the Site pertinent to this report including the area around the former runway, the aviation centre and associated buildings.

The investigation findings indicated there was a low to medium risk of contamination across the Site broadly however with areas of environmental concern (AECs) presenting a higher risk. AECs identified within the Site included the two former hangars and existing and former refuelling infrastructure. The location of these AECs was on the southeastern boundary of the Site adjacent the former runway. The report recommended a Phase 2 Contamination Assessment be undertaken to address the identified AECs.

A figure showing the site location and AECs is presented in **Figure 1** in **Appendix C**.

Douglas Partners (2012a)

The Douglas Partners 2011 Assessment comprised a sampling and analysis of the identified AECs within the proposed residential subdivision located at 119 Avondale Road, Cooranbong, NSW.

A total of 28 boreholes were undertaken in the former airport, a further 47 boreholes were undertaken in and around the former runway. Evidence of filling was observed around the former runway, the fill comprised sandy clay or clayey silt with asphalt inclusions as well as minor quantities of brick and concrete. A fragment of asbestos was observed in one of the test pits adjacent the former runway however no buried asbestos fragments were identified and asbestos wasn't considered to be present within fill materials at the Site. Additionally, one sample exceeded the adopted ecological criteria for benzo(a)pyrene however the sample was subsequently tested for leachable concentrations and testing showed low leachability. It is likely associated with asphalt inclusions within the fill at the Site and not considered to present a risk to onsite ecological receptors.

Two areas of fly tipping were also observed in the northern portion of the Site adjacent the former runway.

The Assessment recommended the following be undertaken to address the potential contamination in relation to the Site:

- Decommissioning of the existing refuelling infrastructure.
- Excavation and disposal of the benzo(a)pyrene contamination identified in one of the test pits.

Figures showing the updated AECs and sampling locations within the relevant AECs is presented as **Figures 1, 2, 3 and 7** in **Appendix C**.

Douglas Partners (2012b)

The Douglas Partners 2012 Remediation Action Plan comprised a review of the potential remediation options to address the contamination identified in the previous assessments. Relevant to this Site the report refers to AECs named Area A (fly tipping), Area B (fly tipping), Area D (existing refuelling facilities) and Area F (imported filling).

The proposed remediation strategy for the areas included decommissioning of the refuelling infrastructure, excavation of contaminated soils and validation of the remaining excavation footprint prior to backfilling and removal of the anthropogenic material in the fly tipping areas.

Douglas Partners (2014)

The Douglas Partners 2014 Remediation and Validation Report comprised a review of the remediation activities and details of the validation sampling results. A summary of the remediation and validation of each of the AECs is presented below:

Area A – The 'fly tipping' material comprised asbestos contaminated fill covering an area of approximately 1,200 m² that was excavated and removed from the Site between 28 February 2013 and 5 March 2013. A total of 39 validation samples were collected from the Site and the results were below the adopted remediation criteria and considered acceptable.

Area B – Soils that were previously identified within as being impacted by PAH. These soils were excavated and stockpiled on site. The excavated spoil was pre-classified as ‘General Solid Waste’ and removed from the Site, eight validation samples were collected from the excavation walls and base and the results of the testing were below the adopted remediation criteria.

Area D – The refuelling infrastructure was excavated and removed from site on 7th and 8th January 2013. The refuelling infrastructure included a 20,000 L fiberglass storage tank, a bowser and interconnecting fuel/vent lines. The excavated spoil comprising clay and granular bedding material were used to backfill the excavation area once all validation samples had been collected. A total of 15 validation samples were collected and the results of the testing were below the adopted remediation criteria.

Area F – Visual inspection identified an area understood to comprise an estimated 60,000 m³ of imported Virgin Excavated Natural Material (VENM). Test pitting, soil sampling, screening and subsequent laboratory testing for the contaminants of concern was undertaken with respect to the recommendations of the RAP. The results of the validation/verification testing were below the adopted remediation criteria.

Figures showing the Validation sampling locations within the remediation areas is presented as **Figures 2, 3, 5 and 6 in Appendix C**.

Environmental Strategies (2015)

Environmental Strategies prepared a Site Audit Report (SAR) for the Site which comprised a review of the remediation and validation assessment. The SAR concluded that the proposed Lot 2 was suitable for the proposed residential land use.

The SAR refers to part of the Site namely the eastern portion around the former runway and aviation centre. A survey plan showing the location of the Site referred to in the SAR is presented in **Appendix C**.

EP Risk (2017)

EP Risk was engaged by JPG to undertake a PSI for a property located at 9 Courin Drive, Cooranbong, NSW.

The Site history review indicated that the Site was used for recreational aviation activities since the mid 1950s. The site inspection identified a fly-tipping area in the northwest of the Site and ACM fragments on the surface of the Site in the northeast.

Based on the findings of the PSI, EP Risk recommended the following:

- All stored anthropogenic materials from the fly-tipping areas should be removed from the Site during redevelopment.
- Removal, off-site disposal and clearance of the ACM fragments in the northeast of the Site.
- Prepare and implement an unexpected finds protocol during redevelopment.

EP Risk (2022a)

To assess whether any contaminating activities occurred since the EP Risk (2017) report, an updated site history search (Lotsearch report) and site inspection was undertaken on 18 July 2022. A summary of the findings of the site inspection and review of aerial photographs revealed the following:

- No significant changes to the Site were observed with the exception of some stockpiling of topsoil and mulch in the northern portion.

- EP Risk spoke to the construction contractor (Daracon), and it was understood the stockpiles comprise topsoil and mulch from other stages of the Watagan Park Residential Development.
- The northern portion of the Site is being used to store these materials during the staged development of Watagan Park.
- All previous stages of the Watagan Park development have been assessed for contamination as required by the relevant planning consent conditions from Lake Macquarie City Council.

The Site inspection revealed the anthropogenic materials and ACM fragments noted in the EP Risk (2017) report had been removed from the Site.

EP Risk (2022b)

A supplementary PFAS Assessment was prepared to address concerns that the Site formerly contained the Cooranbong Recreational Aviation Centre which may have stored or used PFAS. The PFAS Assessment revealed no observed source of PFAS contamination and no detection of PFAS in soil at the Site.

Conclusion

Based on the information provided above, EP Risk considers the Site to present a low risk of contamination with respect to the Proposed Development which has been addressed through a site audit statement and subsequent assessments. Although no additional assessment is considered warranted, the below recommended works should be undertaken during redevelopment.

- Prepare and implement an unexpected finds protocol.

Attachments

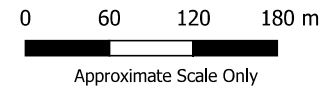
- A Figure 1 – Site Location
- B Proposed Development Plans
- C Previous Investigation Figures

Attachment A – Figure 1



Summary of Contamination Status
35 McCullough Street, Cooranbong, NSW

Job No: EP2408.005
Date: 26/05/2023
Version No: v1



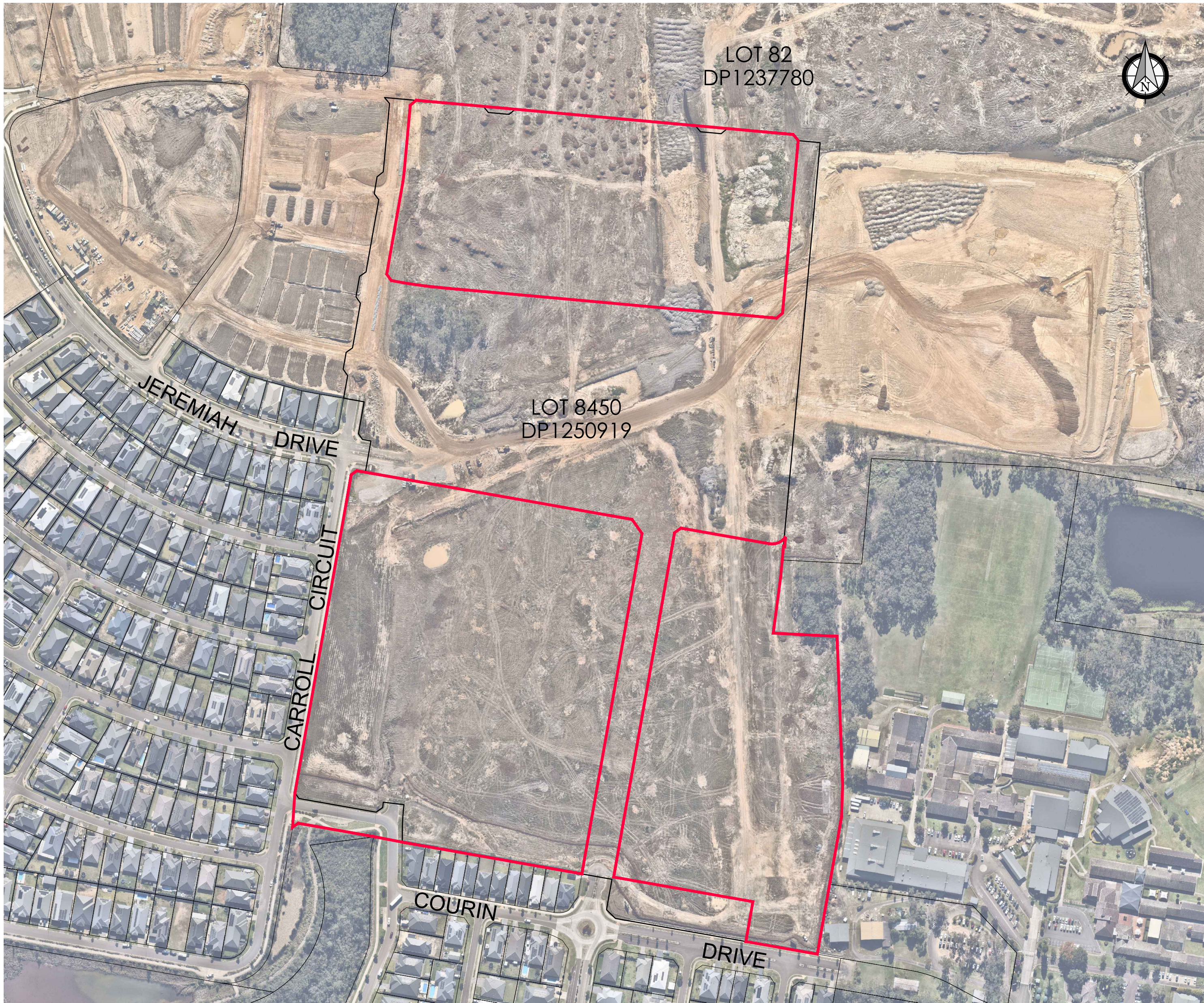
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Drawn by: NM Checked by: PS
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Source: Nearmaps

Figure 1 - Site Location

Attachment B – Proposed Development Plans

DEVELOPMENT APPLICATION

LOT 8450 DP1250919 & LOT 82 DP1237780
35 McCULLOUGH STREET, COORANBONG



INDEX OF DRAWINGS	
DRAWING No.	TITLE NAME
DA-101	COVER SHEET, DRAWING INDEX & LOCATION DIAGRAM
DA-102	LEP ZONING PLAN
DA-103	OVERALL SITE MASTER PLAN
DA-104	OVERALL SITE STAGING PLAN
DA-105	STAGE 1 OVERVIEW PLAN
DA-106	STAGE 1 DETAIL PLAN
DA-107	STAGE 2 DETAIL PLAN
DA-108	STAGE 3 DETAIL PLAN
DA-109	STAGE 5 DETAIL PLAN
DA-110	STAGE 6 DETAIL PLAN
DA-111	STAGE 7 DETAIL PLAN
DA-112	STAGE 8 DETAIL PLAN
DA-113	STAGE 9 DETAIL PLAN
DA-114	STAGE 10 DETAIL PLAN
DA-115	STAGE 11 DETAIL PLAN
DA-116	PATHWAY NETWORK PLAN

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes												
B	31/05/2023	DA ISSUE	AM	JB	DATUM: N/A CONTOUR INTERVAL: N/A														
● project management		● civil engineering		● infrastructure		● superintendency		● social impact		● town planning		● surveying		● development feasibility		● visualisation		● urban design	



AERIAL IMAGE TAKEN FROM NEARMAP
DATED: 15TH JANUARY 2023
(USED IN ACCORDANCE WITH
COMMERCIAL LICENCE)

drawing title:
COVER SHEET,
DRAWING INDEX &
LOCATION DIAGRAM

location: 35 McCULLOUGH STREET,
COORANBONG

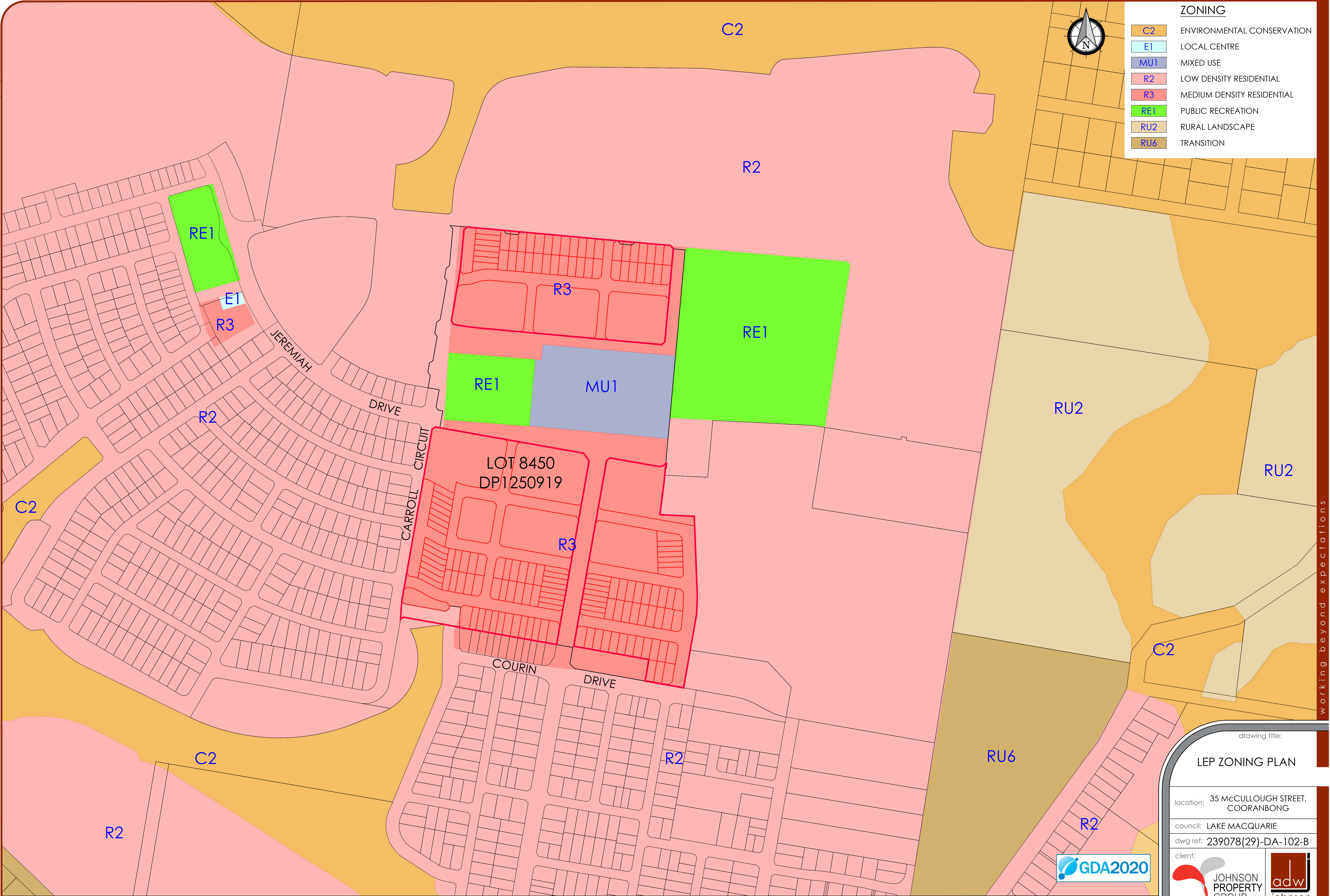
council: LAKE MACQUARIE

dwg ref: 239078(29)-DA-101-B

client:



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ZONING	
C2	ENVIRONMENTAL CONSERVATION
E1	LOCAL CENTRE
MU1	MIXED USE
R2	LOW DENSITY RESIDENTIAL
R3	MEDIUM DENSITY RESIDENTIAL
RE1	PUBLIC RECREATION
RU2	RURAL LANDSCAPE
RU6	TRANSITION

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes
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SHEET 2 OF 16							
• project management • civil engineering • infrastructure • superintendency • social impact • town planning • surveying • development feasibility • visualisation • urban design							

drawing title:

LEP ZONING PLAN

location:

35 McCULLOUGH STREET,
COORANBONG

council:

LAKE MACQUARIE

dwg ref:

239078(29)-DA-102-B

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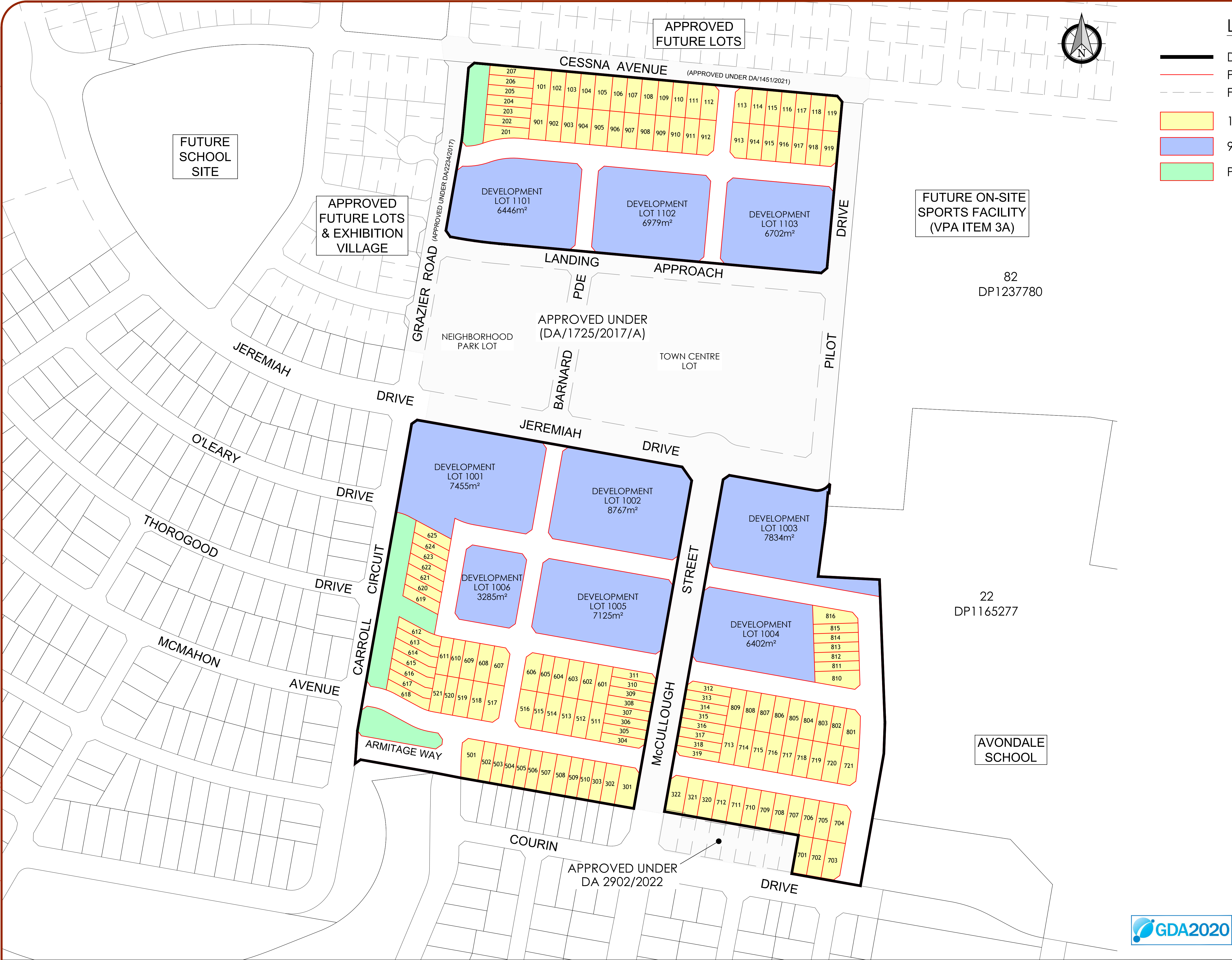
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LEGEND

- DEVELOPMENT BOUNDARY
- PROPOSED BOUNDARIES
- FUTURE BOUNDARIES
- 150 RESIDENTIAL LOTS
- 9 DEVELOPMENT LOTS
- PROPOSED ROAD RESERVE

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes
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project managementcivil engineeringinfrastructuresuperintendencysocial impacttown planningsurveyingdevelopment feasibilityvisualisationurban design							



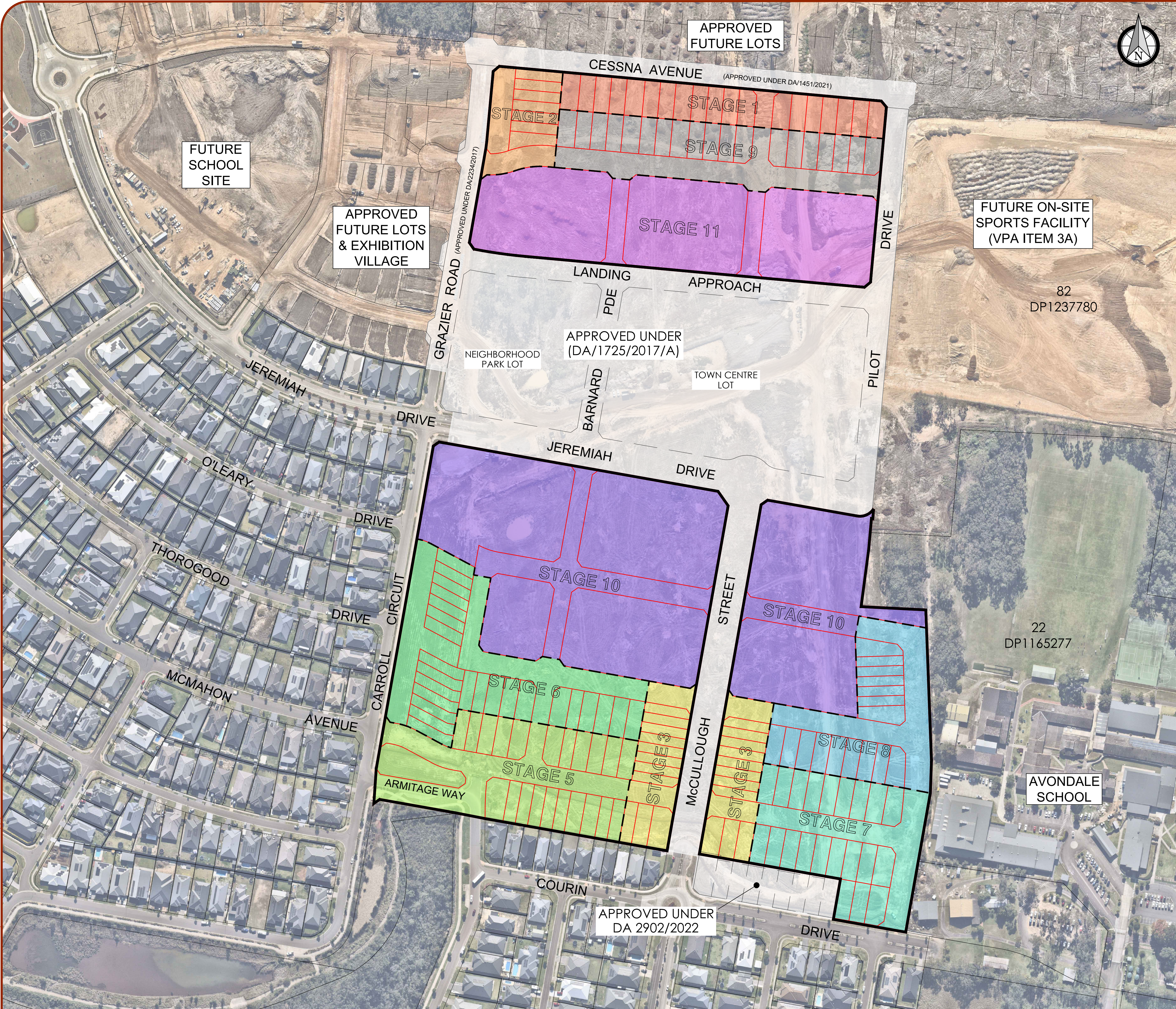
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council: LAKE MACQUARIE

dwg ref: 239078(29)-DA-103-B

client: JOHNSON PROPERTY GROUP

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STAGING

- STAGE 1 - 19 LOTS + 11 RESIDUE LOTS (REFER TO SHEET 105 FOR DETAILS)
- STAGE 2 - 7 LOTS + 1 RESERVE
- STAGE 3 - 20 LOTS
- STAGE 5 - 21 LOTS + 1 RESERVE
- STAGE 6 - 25 LOTS + 1 RESERVE
- STAGE 7 - 21 LOTS + 1 RESERVE
- STAGE 8 - 16 LOTS
- STAGE 9 - 19 LOTS
- STAGE 10 - 6 DEVELOPMENT LOTS
- STAGE 11 - 3 DEVELOPMENT LOTS

NOTE:

STAGE NUMBERING IS INDICATIVE ONLY, AND CONSTRUCTION MAY BE UNDERTAKEN OUT OF SEQUENCE, SUBJECT TO AGREEMENT BETWEEN THE APPLICANT AND COUNCIL.

LEGEND

- DEVELOPMENT BOUNDARY
- PROPOSED BOUNDARIES
- STAGE BOUNDARIES
- FUTURE BOUNDARIES



AERIAL IMAGE TAKEN FROM NEARMAP
DATED: 15TH JANUARY 2023
(USED IN ACCORDANCE WITH COMMERCIAL LICENCE)

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes
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- project management
- civil engineering
- infrastructure
- superintendency
- social impact
- town planning
- surveying
- development feasibility
- visualisation
- urban design

drawing title:

OVERALL SITE STAGING PLAN

location: 35 McCULLOUGH STREET, COORANBONG

council: LAKE MACQUARIE

dwg ref: 239078(29)-DA-104-B

client:



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LEGEND

DEVELOPMENT BOUNDARY

PROPOSED BOUNDARIES

EXISTING BOUNDARIES

FUTURE BOUNDARIES



AERIAL IMAGE TAKEN FROM NEARMAP
DATED: 15TH JANUARY 2023
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SHEET 5 OF 16

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes
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- project management
- civil engineering
- infrastructure
- superintendency
- social impact
- town planning
- surveying
- development feasibility
- visualisation
- urban design

drawing title:

STAGE 1
OVERVIEW PLAN

location: 35 McCULLOUGH STREET,
COORANBONG

council: LAKE MACQUARIE

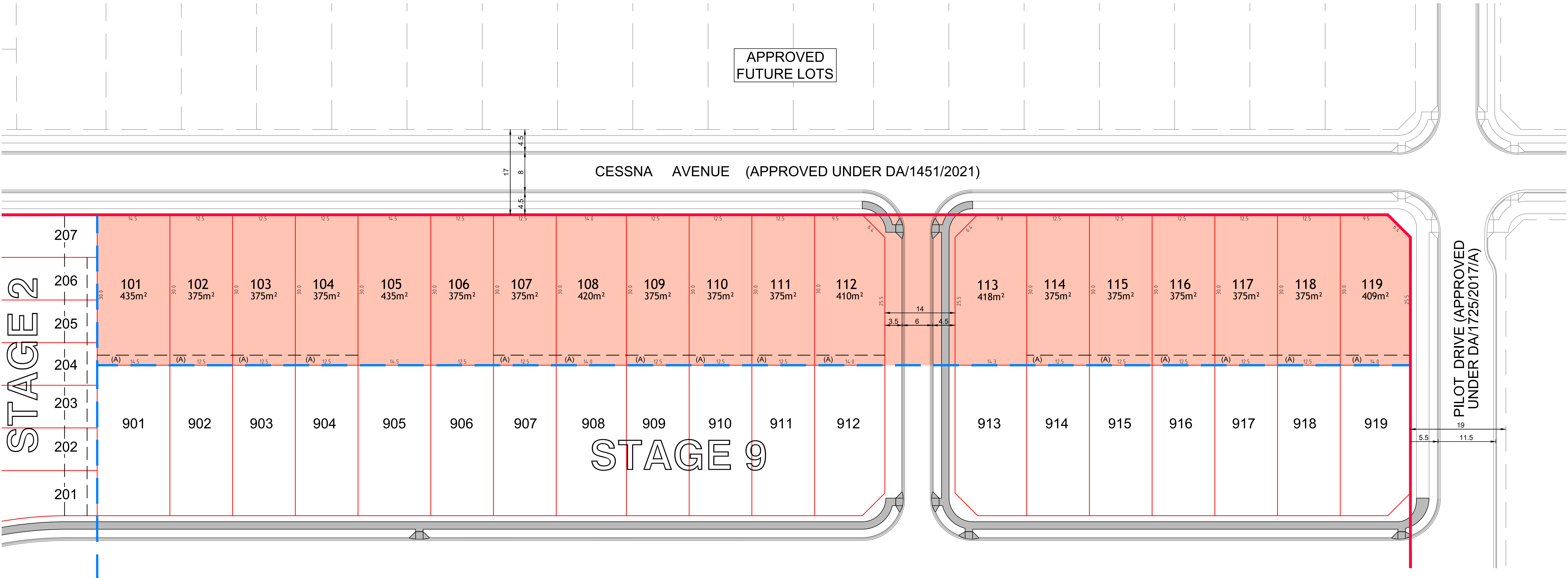
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LEGEND

- DEVELOPMENT BOUNDARY
- PROPOSED BOUNDARIES
- STAGE BOUNDARIES
- FUTURE BOUNDARIES
- PROPOSED EASEMENT

(A) EASEMENT TO DRAIN WATER 2 WIDE

NOTE:
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ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes
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SHEET 6 OF 16

- project management
- civil engineering
- infrastructure
- superintendency
- social impact
- town planning
- surveying
- development feasibility
- visualisation
- urban design



STAGE 1
DETAIL PLAN

location: 35 McCULLOUGH STREET,
COORANBONG

council: LAKE MACQUARIE

dwg ref: 239078(29)-DA-106-B

client:

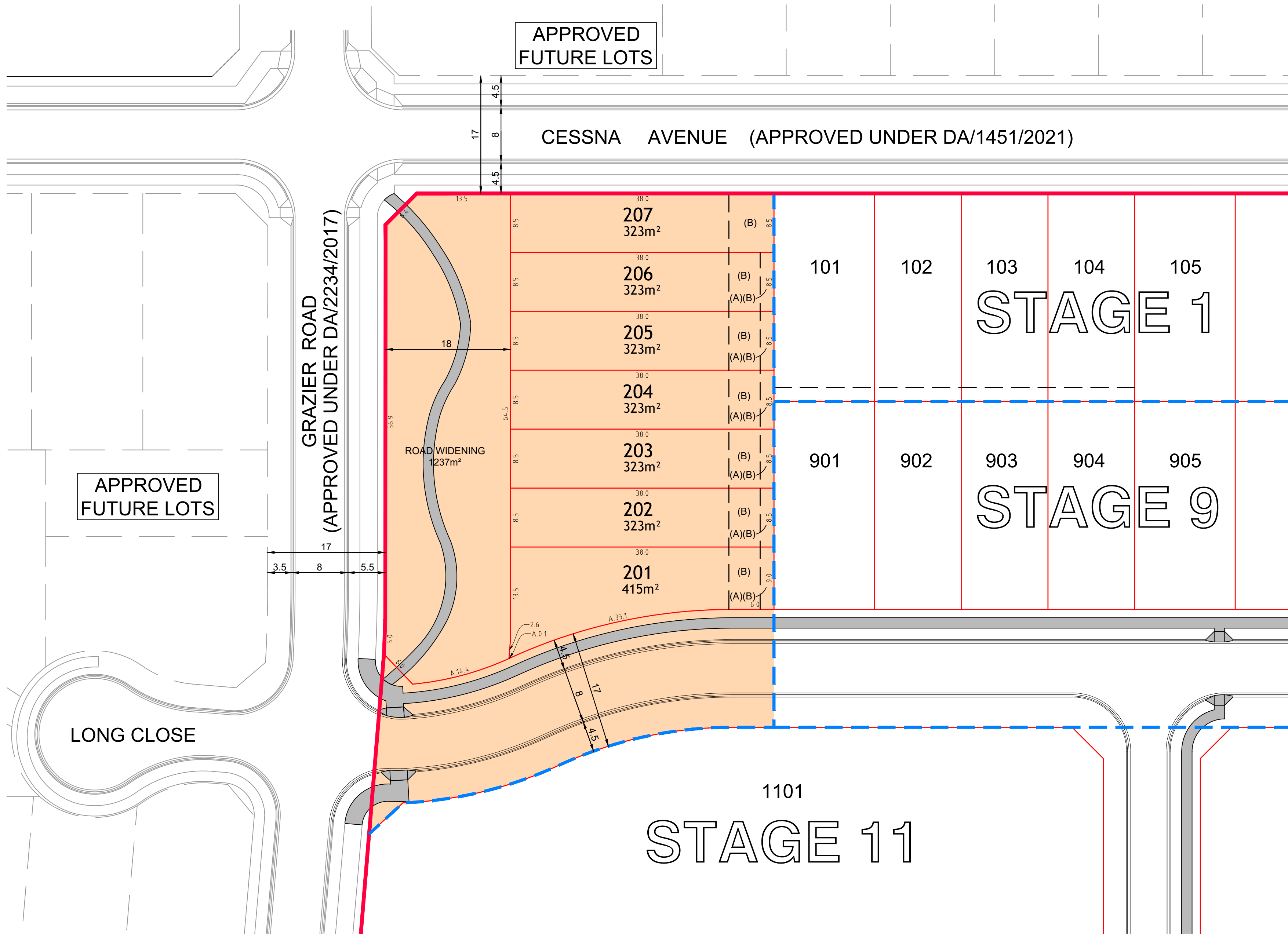
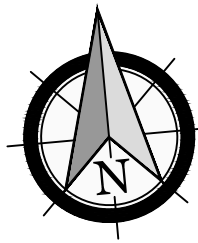
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LEGEND

- DEVELOPMENT BOUNDARY
- PROPOSED BOUNDARIES
- STAGE BOUNDARIES
- FUTURE BOUNDARIES
- PROPOSED EASEMENT

(A) EASEMENT TO DRAIN WATER 2 WIDE
(B) EASEMENT FOR ACCESS AND DRAINAGE 6 WIDE

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ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes	SHEET 7 OF 16									
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STAGE 2
DETAIL PLAN

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COORANBONG

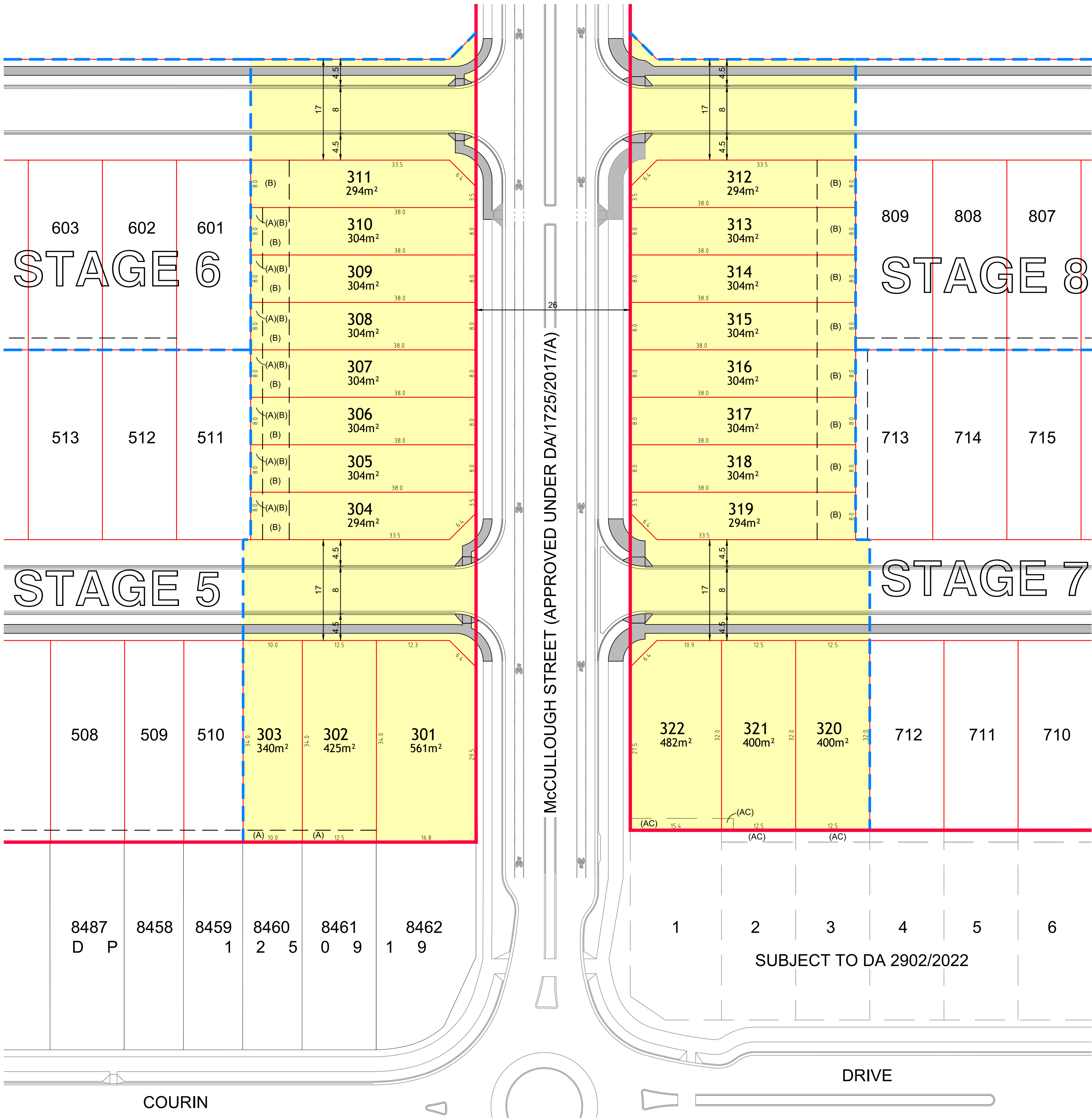
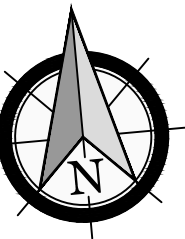
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LEGEND

- DEVELOPMENT BOUNDARY
- PROPOSED BOUNDARIES
- STAGE BOUNDARIES
- FUTURE BOUNDARIES
- PROPOSED EASEMENT

- (A) EASEMENT TO DRAIN WATER 2 WIDE
- (B) EASEMENT FOR ACCESS AND DRAINAGE 6 WIDE
- (AC) EASEMENT FOR DRAINAGE 2 WIDE

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SHEET 8 OF 16

- project management
- civil engineering
- infrastructure
- superintendency
- social impact
- town planning
- surveying
- development feasibility
- visualisation
- urban design



STAGE 3
DETAIL PLAN

location: 35 McCULLOUGH STREET,
COORANBONG

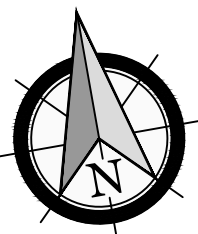
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- DEVELOPMENT BOUNDARY
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- PROPOSED EASEMENT

(A) EASEMENT TO DRAIN WATER 2 WIDE

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ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes	SHEET 9 OF 16	
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project management		civil engineering		infrastructure		superintendency		social impact	
town planning		surveying		development feasibility		visualisation		urban design	



STAGE 5
DETAIL PLAN

location: 35 McCULLOUGH STREET,
COORANBONG

council: LAKE MACQUARIE

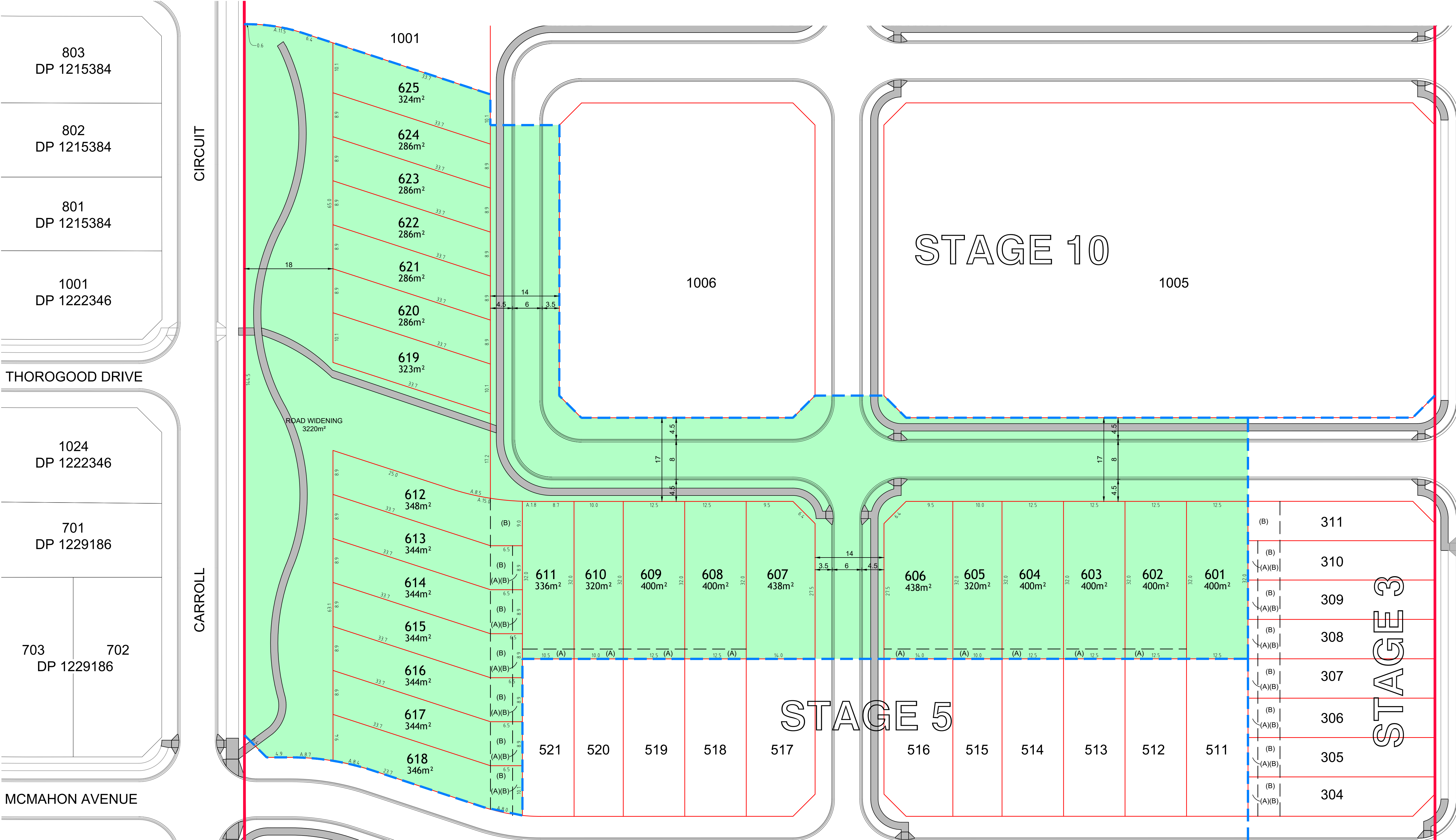
dwg ref: 239078(29)-DA-109-B

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LEGEND

- DEVELOPMENT BOUNDARY
- PROPOSED BOUNDARIES
- STAGE BOUNDARIES
- FUTURE BOUNDARIES
- PROPOSED EASEMENT

(A) EASEMENT TO DRAIN WATER 2 WIDE
(B) EASEMENT FOR ACCESS AND DRAINAGE 6 WIDE



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STAGE NUMBERING IS INDICATIVE ONLY, AND CONSTRUCTION MAY BE UNDERTAKEN OUT OF SEQUENCE, SUBJECT TO AGREEMENT BETWEEN THE APPLICANT AND COUNCIL.

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes
B	31/05/2023	DA ISSUE	AM	JB	DATUM: N/A CONTOUR INTERVAL: N/A	0 10.0 20.0m SCALE: 1:400 (FULL)	

SHEET 10 OF 16

- project management
- civil engineering
- infrastructure
- superintendency
- social impact
- town planning
- surveying
- development feasibility
- visualisation
- urban design

STAGE 6
DETAIL PLAN

location: 35 McCULLOUGH STREET,
COORANBONG

council: LAKE MACQUARIE

dwg ref: 239078(29)-DA-110-B

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hunter office ph: (02) 4978 5100
sydney office ph: (02) 8046 7411

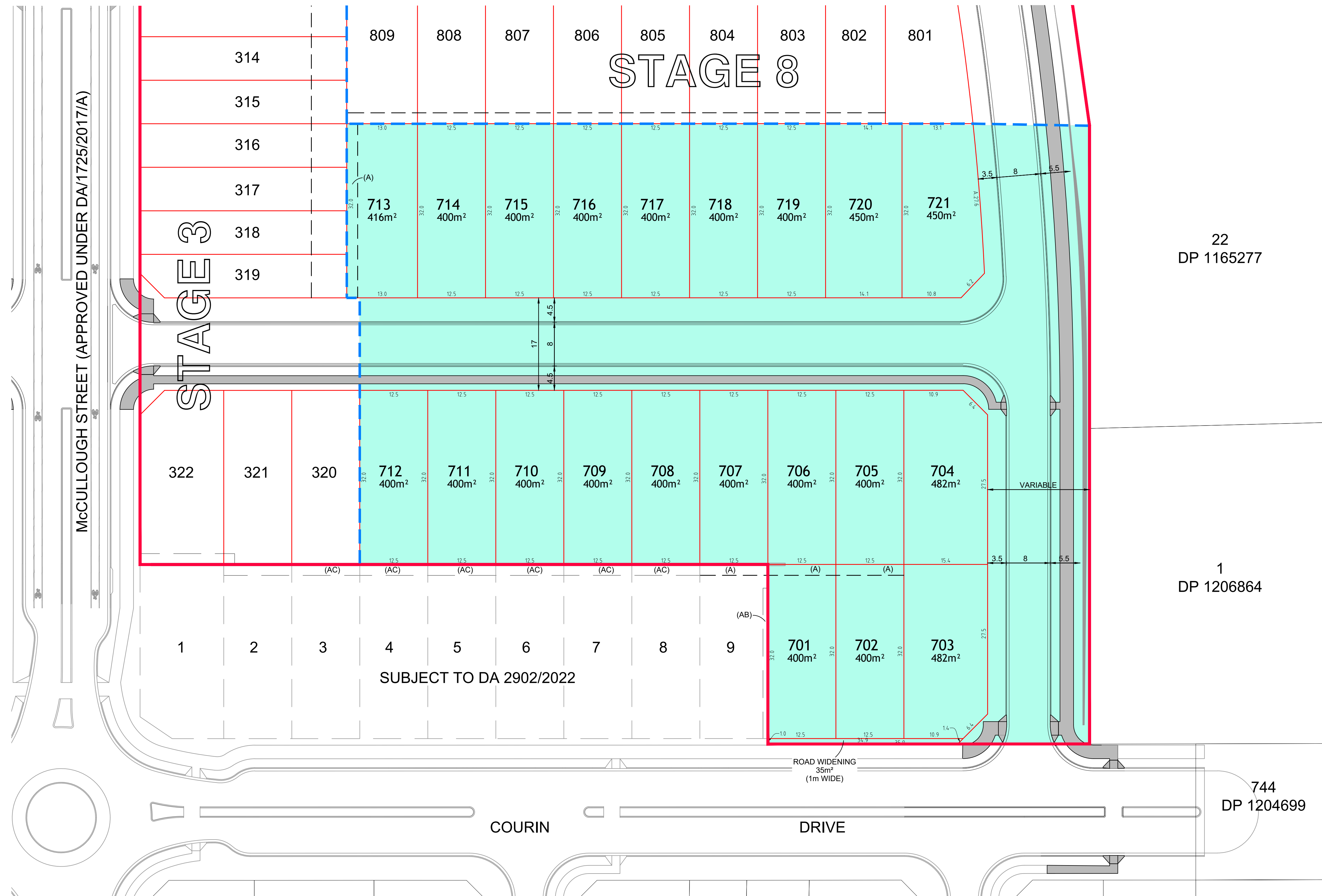
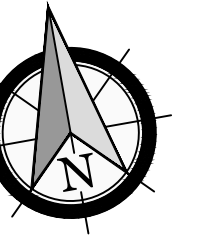
www.adwjohanson.com.au

drawing title:






McCULLOUGH STREET (APPROVED UNDER DA/1725/2017/A)

working beyond expectations



LEGEND

- DEVELOPMENT BOUNDARY
 PROPOSED BOUNDARIES
 STAGE BOUNDARIES
 FUTURE BOUNDARIES
 PROPOSED EASEMENT

- (A) EASEMENT TO DRAIN WATER 2 WIDE
(AB) EASEMENT FOR ACCESS, WORKS AND MAINTENANCE 0.9 WIDE
(AC) EASEMENT FOR DRAINAGE 2 WIDE

NOTE:

STAGE NUMBERING IS INDICATIVE ONLY, AND CONSTRUCTION MAY BE UNDERTAKEN OUT OF SEQUENCE, SUBJECT TO AGREEMENT BETWEEN THE APPLICANT AND COUNCIL.

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes	SHEET 11 OF 16			
B	31/05/2023	DA ISSUE	AM	JB	DATUM: N/A CONTOUR INTERVAL: N/A						
<div> <div>● project management</div> <div>● civil engineering</div> <div>● infrastructure</div> <div>● superintendency</div> <div>● social impact</div> <div>● town planning</div> <div>● surveying</div> <div>● development feasibility</div> <div>● visualisation</div> <div>● urban design</div> </div>											



Drawing title:

STAGE 7 DETAIL PLAN

location: 35 McCULLOUGH STREET,
COORANBONG

council: LAKE MACQUARIE

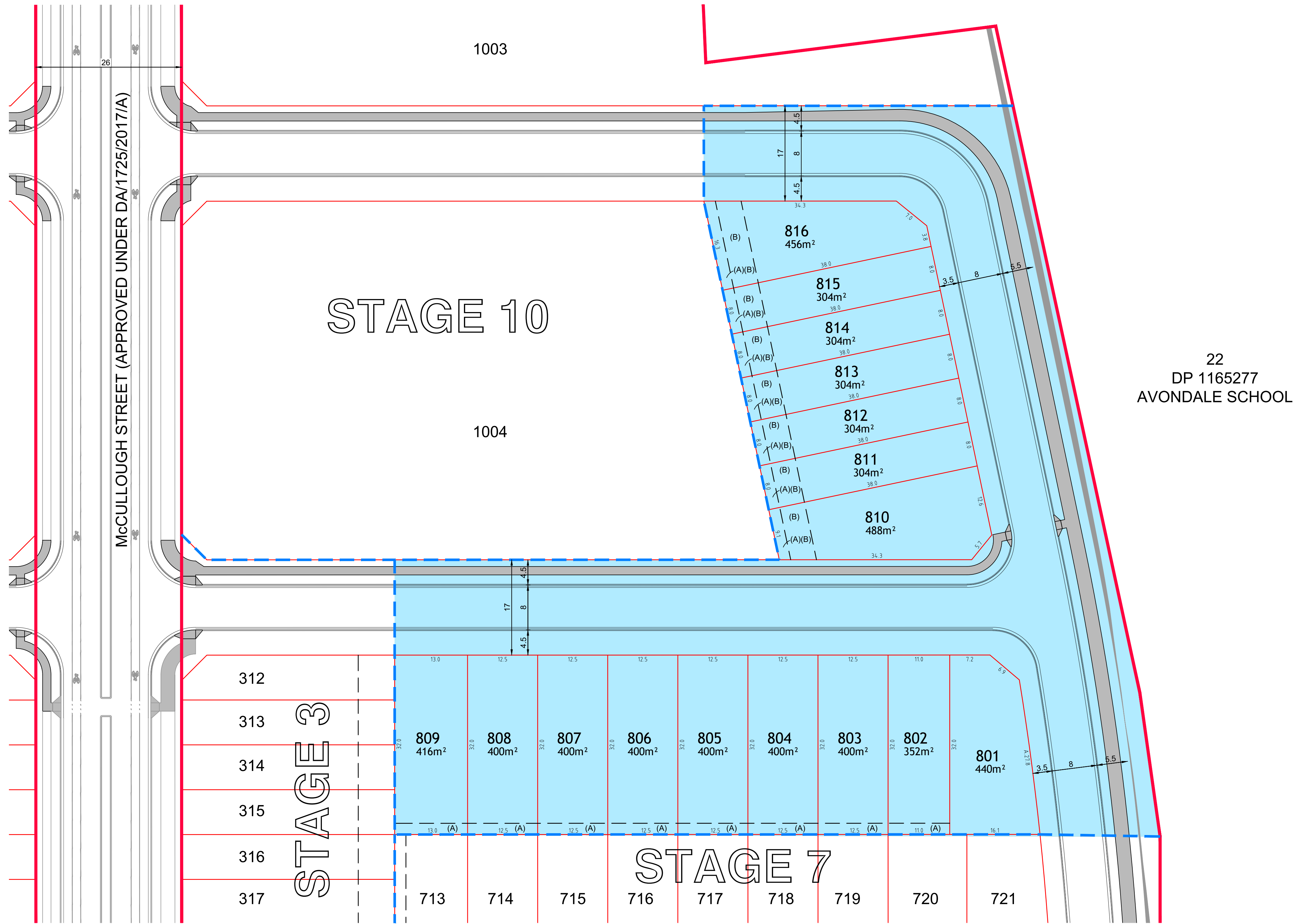
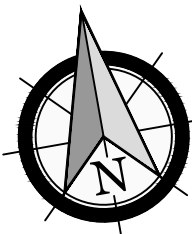
dwg ref: 239078(29)-DA-111-B

client:

 **JOHNSON
PROPERTY
GROUP**

 **adw**
johnson

central coast office ph: (02) 4305 4300
hunter office ph: (02) 4978 5100
sydney office ph: (02) 8046 7411
www.adwjohnson.com.au



22
DP 1165277
AVONDALE SCHOOL

LEGEND

- DEVELOPMENT BOUNDARY
- PROPOSED BOUNDARIES
- STAGE BOUNDARIES
- FUTURE BOUNDARIES
- PROPOSED EASEMENT

(A) EASEMENT TO DRAIN WATER 2 WIDE
(B) EASEMENT FOR ACCESS AND DRAINAGE 6 WIDE

NOTE:
STAGE NUMBERING IS INDICATIVE ONLY, AND
CONSTRUCTION MAY BE UNDERTAKEN OUT OF
SEQUENCE, SUBJECT TO AGREEMENT BETWEEN
THE APPLICANT AND COUNCIL.

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes	SHEET 12 OF 16
B	31/05/2023	DA ISSUE	AM	JB	DATUM: N/A CONTOUR INTERVAL: N/A	0 10.0 20.0m SCALE: 1:400 (FULL)		
project managementcivil engineeringinfrastructuresuperintendencysocial impacttown planningsurveyingdevelopment feasibilityvisualisationurban design								



STAGE 8
DETAIL PLAN

location: 35 McCULLOUGH STREET,
COORANBONG

council: LAKE MACQUARIE

dwg ref: 239078(29)-DA-112-B

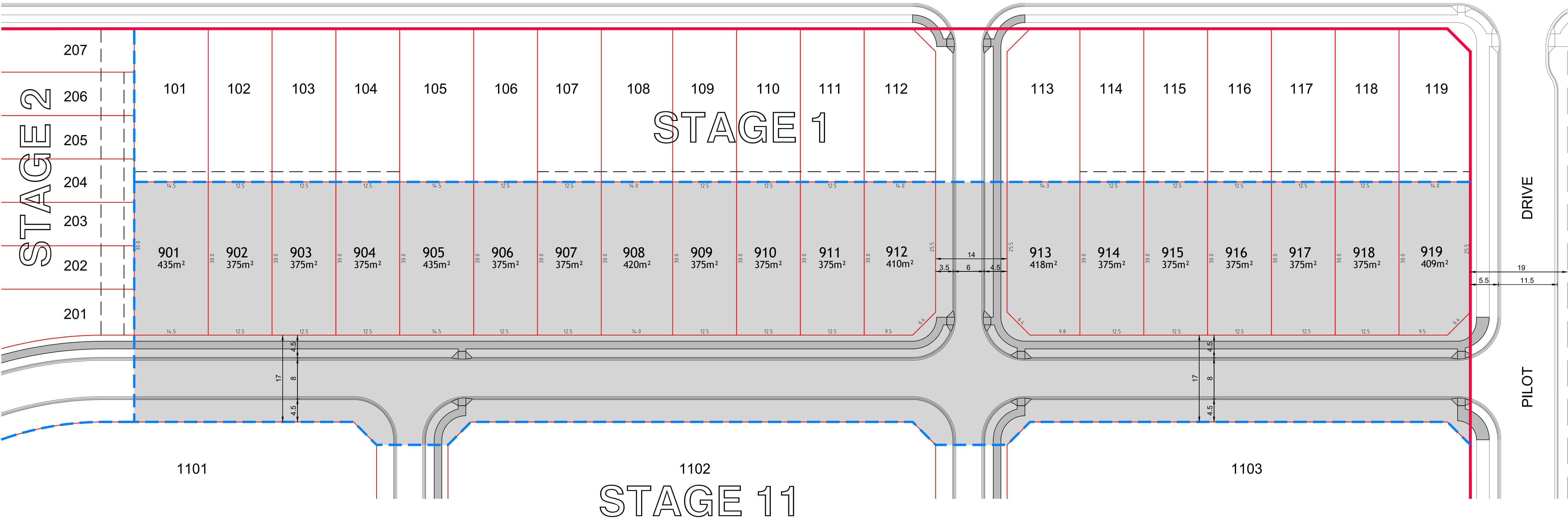
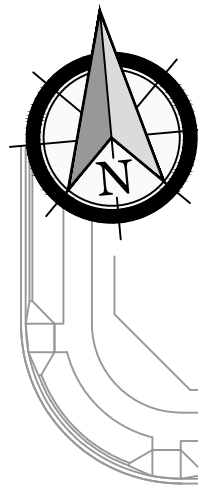


central coast office ph: (02) 4305 4300
hunter office ph: (02) 4978 5100
sydney office ph: (02) 8046 7411

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APPROVED
FUTURE LOTS

CESSNA AVENUE (APPROVED UNDER DA/1451/2021)



LEGEND

- DEVELOPMENT BOUNDARY
- PROPOSED BOUNDARIES
- STAGE BOUNDARIES
- FUTURE BOUNDARIES
- PROPOSED EASEMENT

NOTE:
STAGE NUMBERING IS INDICATIVE ONLY, AND CONSTRUCTION MAY BE UNDERTAKEN OUT OF SEQUENCE, SUBJECT TO AGREEMENT BETWEEN THE APPLICANT AND COUNCIL.

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes
B	31/05/2023	DA ISSUE	AM	JB	DATUM: N/A CONTOUR INTERVAL: N/A	0 10.0 20.0m SCALE: 1:400 (FULL)	
SHEET 13 OF 16							
project managementcivil engineeringinfrastructuresuperintendencysocial impacttown planningsurveyingdevelopment feasibilityvisualisationurban design							



STAGE 9
DETAIL PLAN

location: 35 McCULLOUGH STREET, COORANBONG

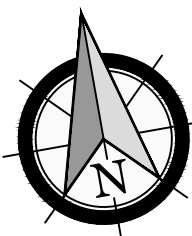
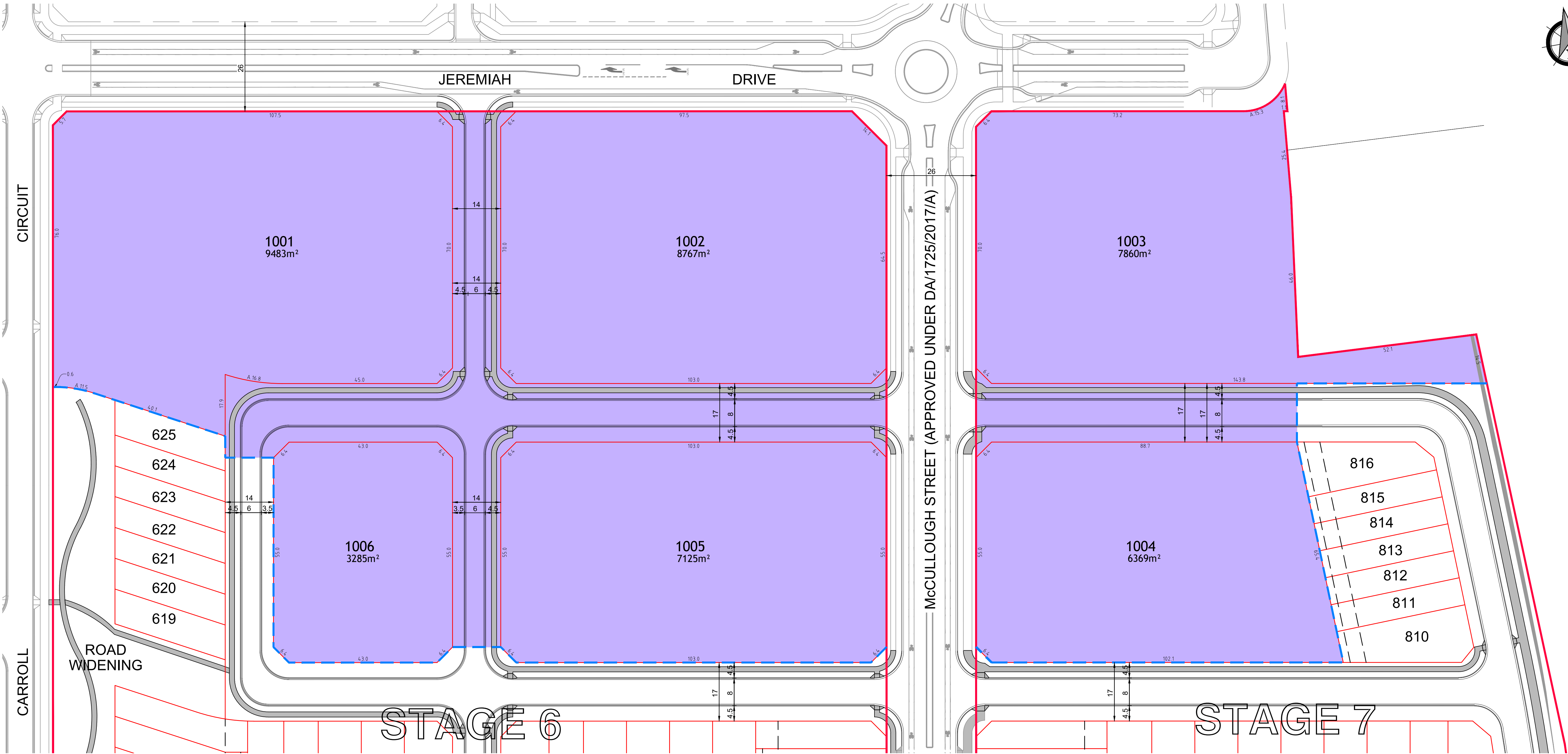
council: LAKE MACQUARIE

dwg ref: 239078(29)-DA-113-B

client: JOHNSON PROPERTY GROUP

central coast office ph: (02) 4305 4300
hunter office ph: (02) 4978 5100
sydney office ph: (02) 8046 7411

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LEGEND

- DEVELOPMENT BOUNDARY
- PROPOSED BOUNDARIES
- STAGE BOUNDARIES
- FUTURE BOUNDARIES
- PROPOSED EASEMENT

NOTE:
STAGE NUMBERING IS INDICATIVE ONLY, AND CONSTRUCTION MAY BE UNDERTAKEN OUT OF SEQUENCE, SUBJECT TO AGREEMENT BETWEEN THE APPLICANT AND COUNCIL.

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes
B	31/05/2023	DA ISSUE	AM	JB	DATUM: N/A CONTOUR INTERVAL: N/A	0 15.0 30.0m SCALE: 1:600 (FULL)	

SHEET 14 OF 16

- project management
- civil engineering
- infrastructure
- superintendency
- social impact
- town planning
- surveying
- development feasibility
- visualisation
- urban design



STAGE 10
DETAIL PLAN

location: 35 McCULLOUGH STREET,
COORANBONG

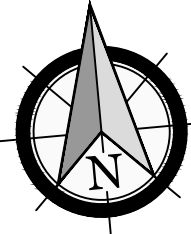
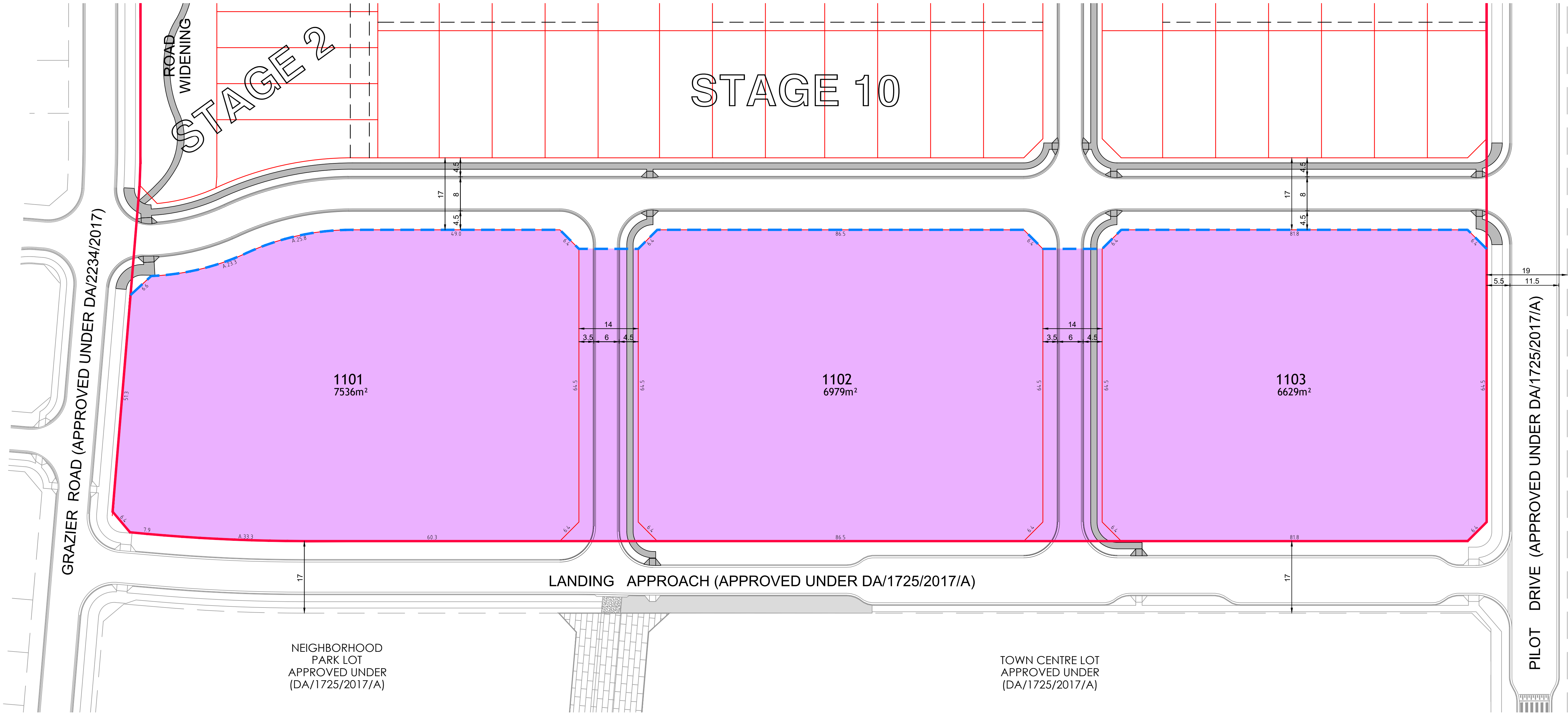
council: LAKE MACQUARIE

dwg ref: 239078(29)-DA-114-B



central coast office ph: (02) 4305 4300
hunter office ph: (02) 4978 5100
sydney office ph: (02) 8046 7411

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LEGEND

- DEVELOPMENT BOUNDARY
- PROPOSED BOUNDARIES
- STAGE BOUNDARIES
- FUTURE BOUNDARIES
- PROPOSED EASEMENT

NOTE:
STAGE NUMBERING IS INDICATIVE ONLY, AND CONSTRUCTION MAY BE UNDERTAKEN OUT OF SEQUENCE, SUBJECT TO AGREEMENT BETWEEN THE APPLICANT AND COUNCIL.

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes
B	31/05/2023	DA ISSUE	AM	JB	DATUM: N/A CONTOUR INTERVAL: N/A	0 12.5 25.0m SCALE: 1:500 (FULL)	

SHEET 15 OF 16

- project management
- civil engineering
- infrastructure
- superintendency
- social impact
- town planning
- surveying
- development feasibility
- visualisation
- urban design



STAGE 11
DETAIL PLAN

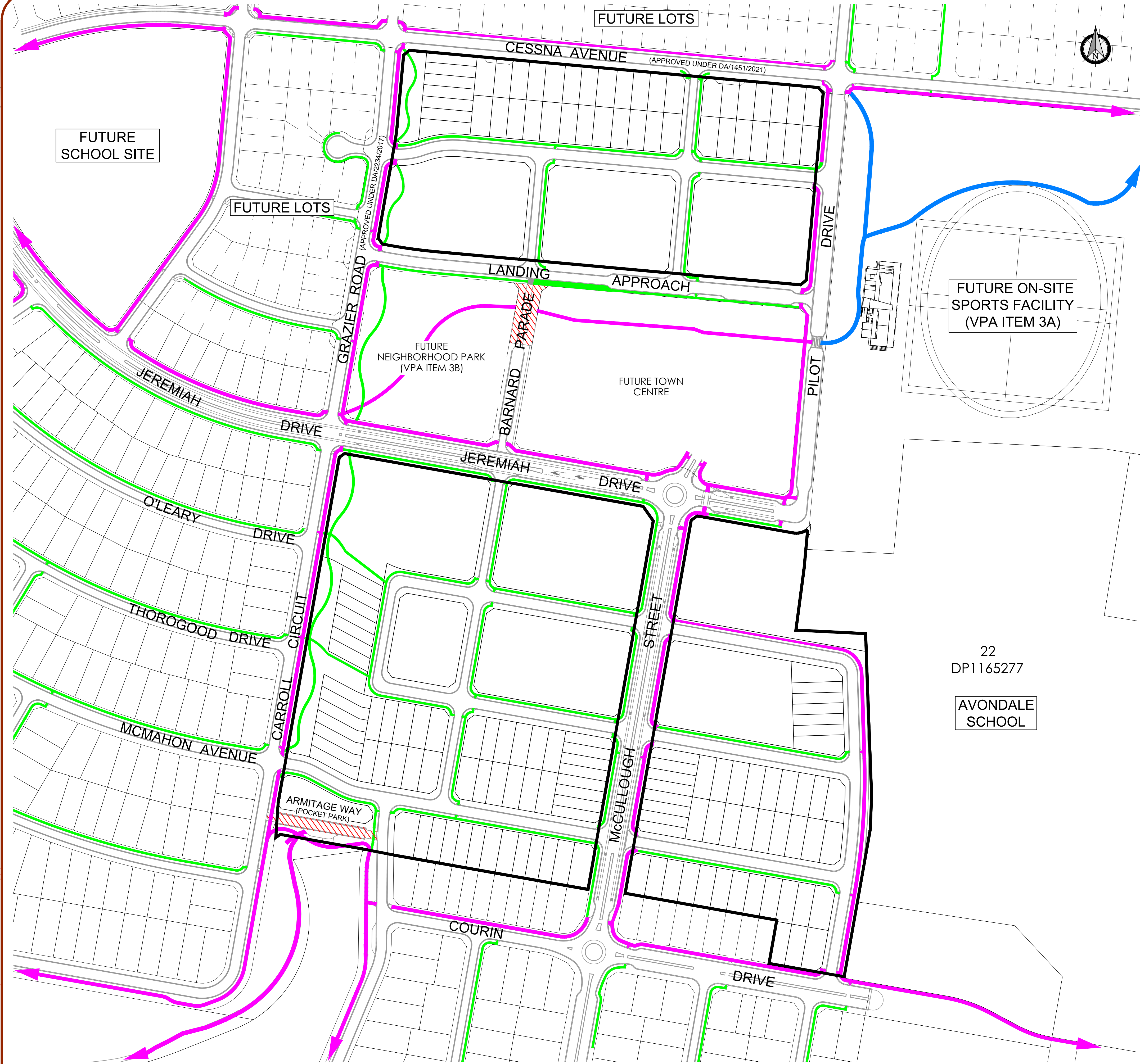
location: 35 McCULLOUGH STREET,
COORANBONG

council: LAKE MACQUARIE

dwg ref: 239078(29)-DA-115-B



central coast office ph: (02) 4305 4300
hunter office ph: (02) 4978 5100
sydney office ph: (02) 8046 7411
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NOTE:
THE PURPOSE OF THIS PLAN IS TO PROVIDE AN OVERVIEW OF THE PATHWAY NETWORK WITHIN AND SURROUNDING THE PROPOSED DEVELOPMENT, AND COMPRISES A COMBINATION OF EXISTING, PROPOSED AND FUTURE PEDESTRIAN / CYCLIST INFRASTRUCTURE (WHICH ARE SUBJECT TO SEPARATE APPLICATIONS OR AGREEMENTS WITH COUNCIL). IT IS PROVIDED FOR CONTEXTUAL PURPOSES ONLY. PLEASE REFER TO THE PROPOSED CONCEPT ENGINEERING PLAN SET (DWG. 239078(29)-CENG-001-A) WHICH IDENTIFIES THE PATHWAY INFRASTRUCTURE THAT WILL BE DELIVERED SPECIFICALLY UNDER THIS DEVELOPMENT APPLICATION.

22
DP1165277
AVONDALE
SCHOOL

LEGEND

- DEVELOPMENT BOUNDARY
- PROPOSED BOUNDARIES
- FUTURE BOUNDARIES
- 1.5m PATH
- 2.5m PATH
- 3m PATH (INDICATIVE)
- PEDESTRIAN AREA

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes
B	31/05/2023	DA ISSUE	AM	JB	DATUM: N/A CONTOUR INTERVAL: N/A	0 30 60 75m SCALE: 1:1500 (FULL)	

SHEET 16 OF 16

• project management • civil engineering • infrastructure • superintendency • social impact • town planning • surveying • development feasibility • visualisation • urban design



drawing title:
PATHWAY NETWORK PLAN

location: 35 McCULLOUGH STREET, COORANBONG

council: LAKE MACQUARIE

dwg ref: 239078(29)-DA-116-B

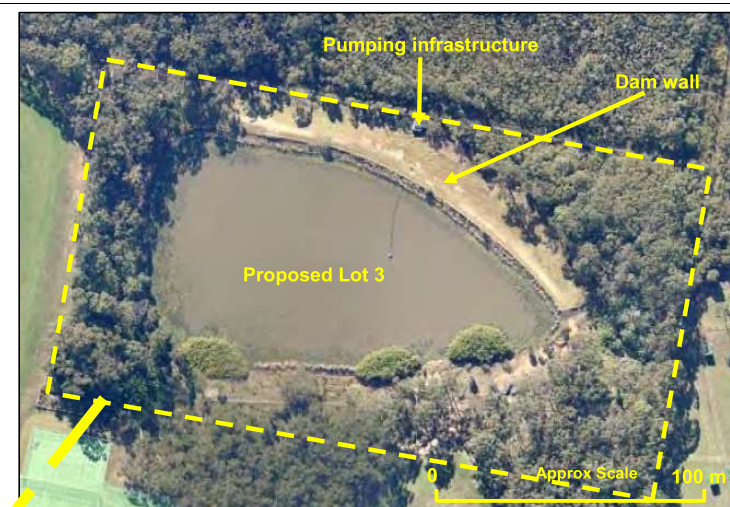
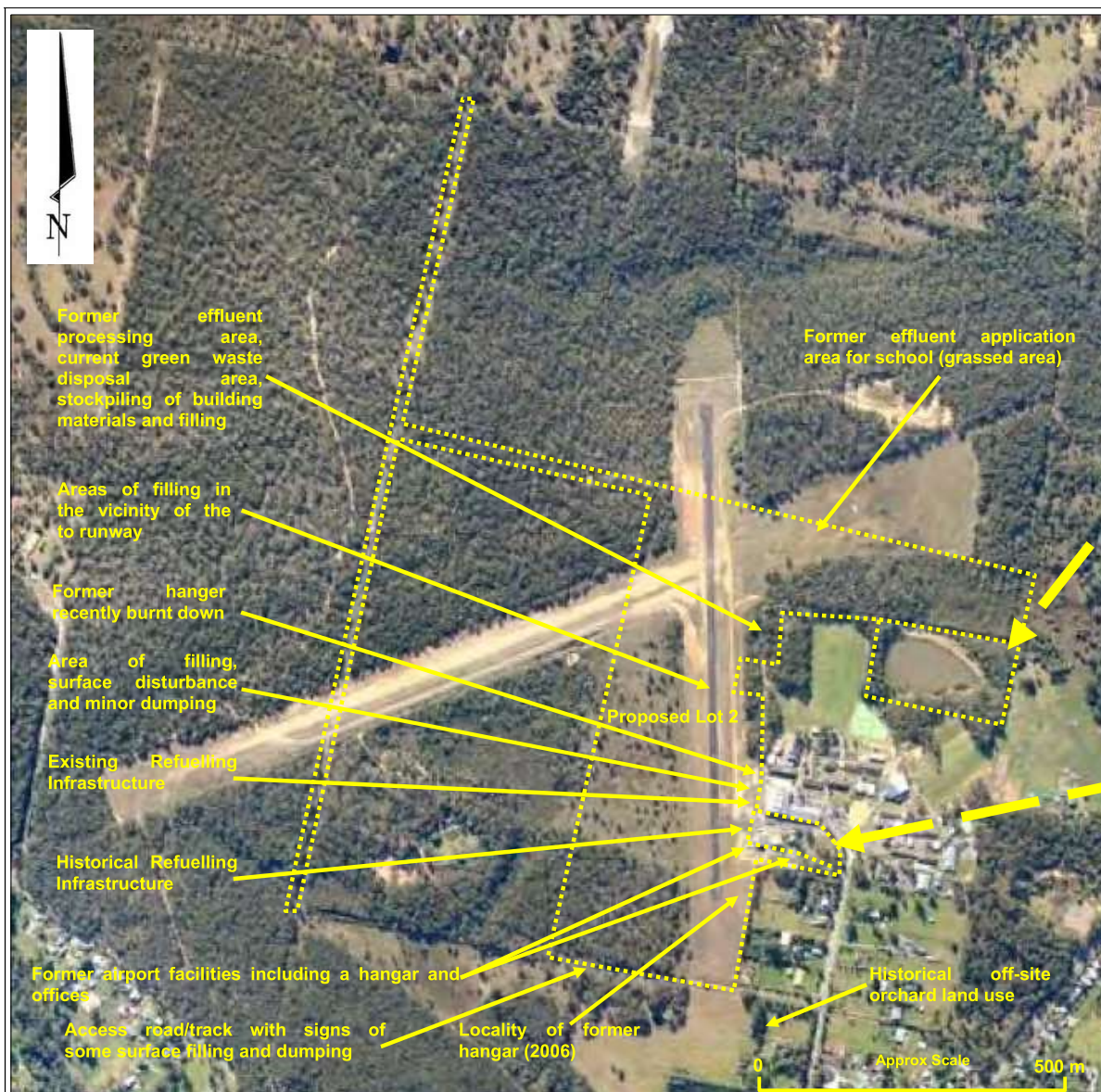
client:

JOHNSON PROPERTY GROUP

adw johnson

central coast office ph: (02) 4305 4300
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sydney office ph: (02) 8046 7411
www.adwjohanson.com.au

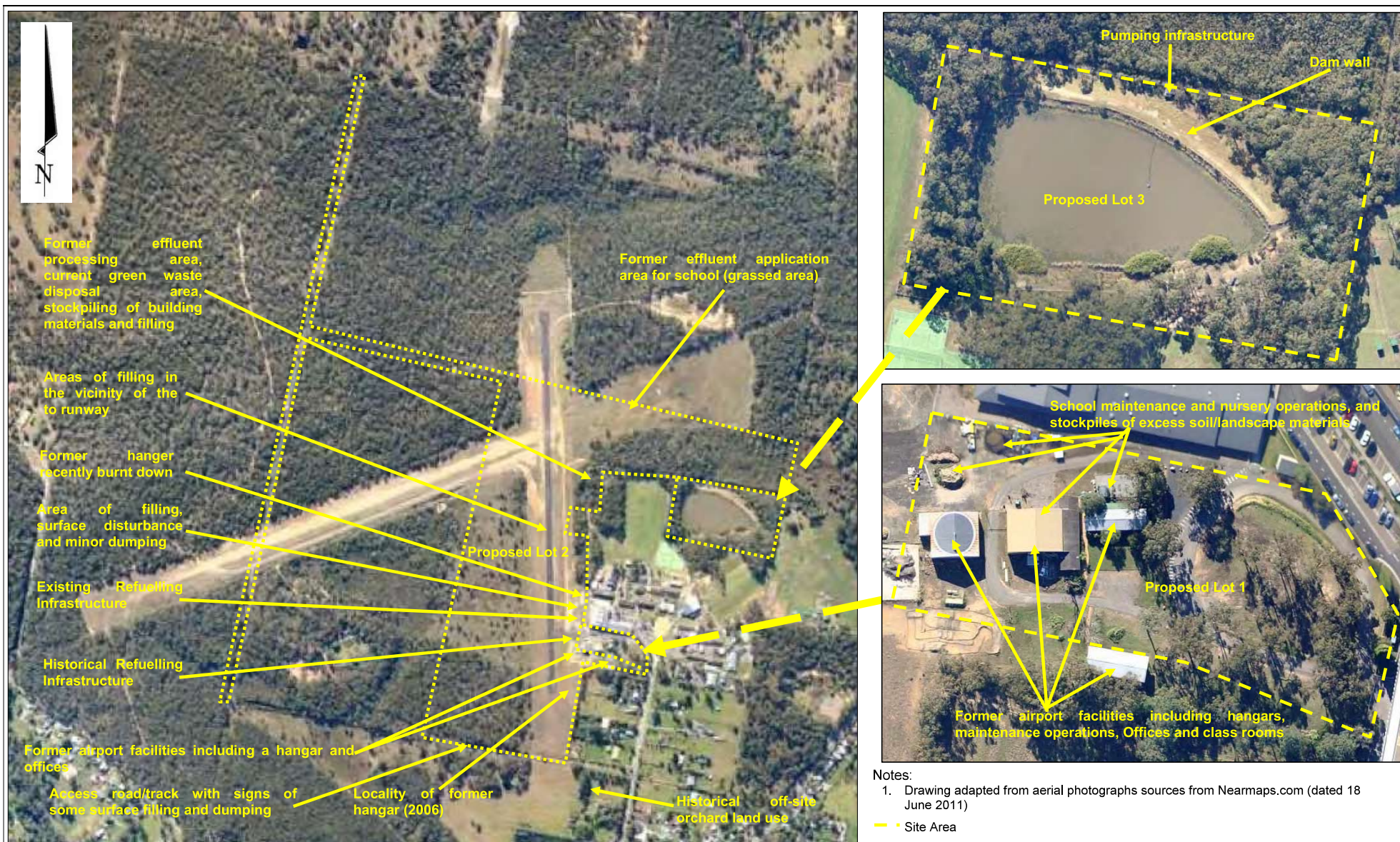
Attachment C – Previous Investigation Figures

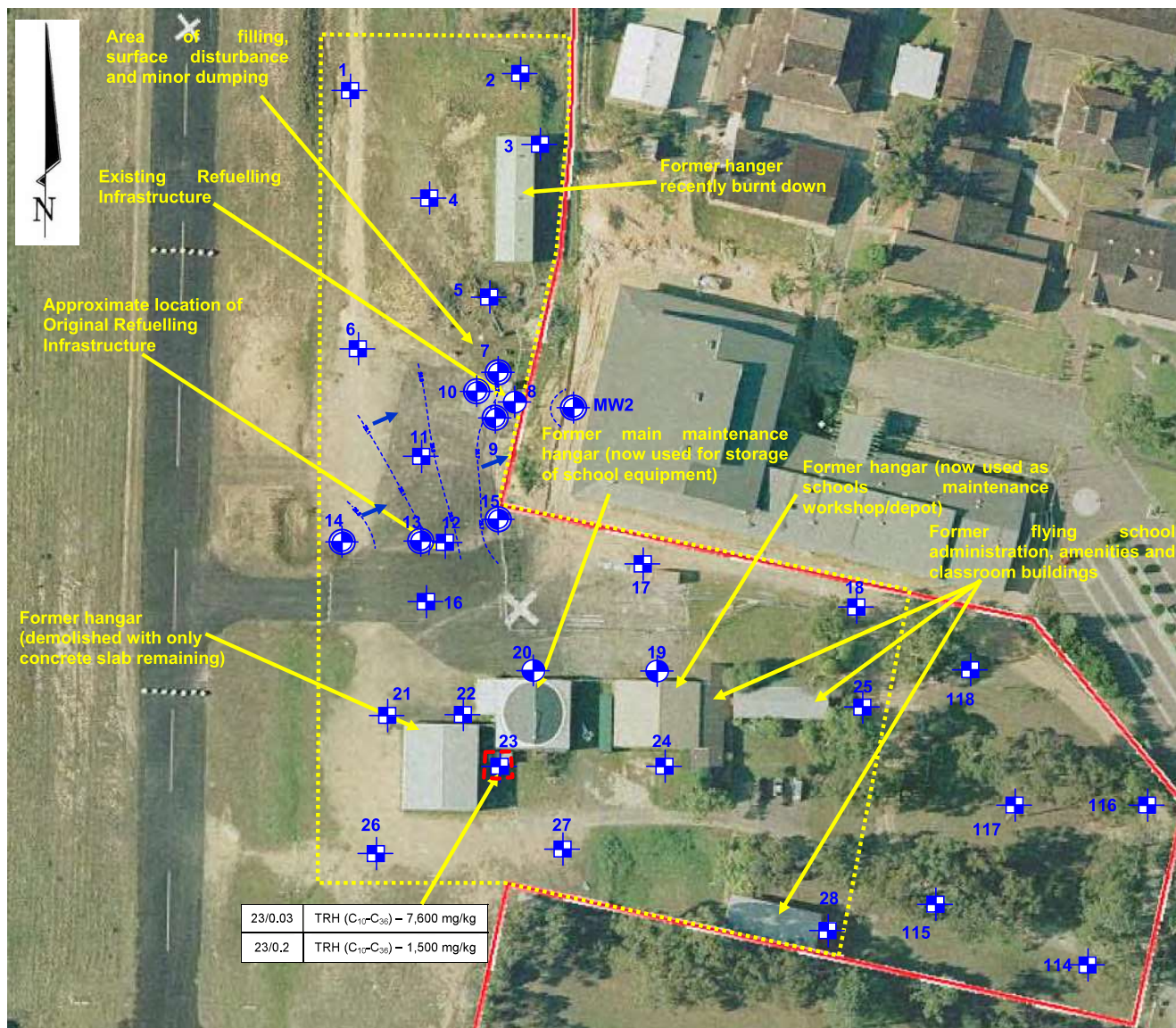


Notes:

1. Drawing adapted from aerial photographs sources from Nearmaps.com (dated 18 June 2011)

— Site Area



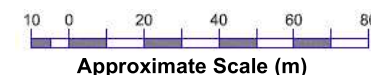


Proposed Investigation Location	Rationale	Contaminant of Concern
1	Site coverage & area of past disturbance	HM, OCP & asbestos
2	Site coverage & area of filling/disturbance	HM, OCP, TPH, BTEX, PAH, PCB & asbestos
3	Targeting former hangar & area of filling	HM, OCP, TPH, BTEX, PAH, PCB, phenols & asbestos
4	Site coverage & area of past disturbance	HM, OCP & asbestos
5	Site coverage & area of filling/disturbance	HM, OCP, TPH, BTEX, PAH, PCB & asbestos
6	Site coverage & area of past disturbance	HM, OCP & asbestos
7	Targeting refuelling infrastructure (possible groundwater monitoring well)	HM, TPH, BTEX, PAH & phenols
8	Targeting refuelling infrastructure (possible groundwater monitoring well)	HM, TPH, BTEX, PAH & phenols
9	Targeting refuelling infrastructure (possible groundwater monitoring well)	HM, TPH, BTEX, PAH & phenols
10	Targeting refuelling infrastructure (possible groundwater monitoring well)	HM, TPH, BTEX, PAH & phenols
11	Site coverage, area of past disturbance & vicinity of refuelling infrastructure	HM, OCP, TPH, BTEX, PAH, PCB & asbestos
12	Targeting refuelling infrastructure (pit may be extended into a trench to locate former UST locations)	HM, OCP, TPH, BTEX, PAH, PCB, phenols & asbestos
13	Targeting refuelling infrastructure (possible groundwater monitoring well)	HM, OCP, TPH, BTEX, PAH, PCB, phenols & asbestos
14	Site coverage, area of past disturbance & vicinity of refuelling infrastructure (possible groundwater monitoring well)	HM, OCP, TPH, BTEX, PAH, PCB, phenols & asbestos
15	Site coverage, area of past disturbance & vicinity of refuelling infrastructure (possible groundwater monitoring well)	HM, OCP, TPH, BTEX, PAH, PCB, phenols & asbestos
16	Site coverage, area of past disturbance & vicinity of refuelling infrastructure	HM, OCP, TPH, BTEX, PAH, PCB & asbestos
17	Site coverage & area of past disturbance	HM, OCP & asbestos
18	Site coverage & area of past disturbance	HM, OCP & asbestos
19	Targeting former hangar	HM, OCP, TPH, BTEX, PAH, PCB, phenols & asbestos
20	Targeting former hangar	HM, OCP, TPH, BTEX, PAH, PCB, phenols & asbestos
21	Targeting former hangar	HM, OCP, TPH, BTEX, PAH, PCB, phenols & asbestos
22	Targeting former hangar & area of surface staining	HM, OCP, TPH, BTEX, PAH, PCB, phenols & asbestos
23	Targeting former hangar & area of surface staining	HM, OCP, TPH, BTEX, PAH, PCB, phenols & asbestos
24	Targeting former hangar	HM, OCP, TPH, BTEX, PAH, PCB, phenols & asbestos
25	Targeting former administration building & site coverage	HM, OCP & asbestos
26	Site coverage & area of past disturbance	HM, OCP & asbestos
27	Site coverage & area of past disturbance	HM, OCP & asbestos
28	Targeting former administration building & site coverage	HM, OCP & asbestos

Notes:

1. Drawing adapted from aerial photographs sources from Spatial Information Exchange (SIX) Website.

- Approximate test pit location and identification
- Approximate test bore location and identification
- Approximate test bore/monitoring well location and identification
- Approximate footprint of former airport facilities
- Interpolated groundwater equipotential contours and flow direction
- Unacceptable contamination [Sample ID & Contaminant Concentration] and approximate lateral extent





30/0.1	BaP – 23 mg/kg PAH – 443.8 mg/kg
134/0.1	BaP – 2.8 mg/kg PAH – 47.2 mg/kg

Proposed Investigation Location(s)	Rationale	Primary Contaminants of Concern
29 to 53	Site coverage & area of filling/disturbance	HM, OCP, TPH, BTEX, PAH, PCB & asbestos
54	Targeting footprint of former hanger & site coverage	HM, OCP, TPH, BTEX, PAH, PCB, phenols & asbestos
55 to 57	Site coverage, area of filling/disturbance and former off-site orchard land use	HM, OCP, TPH, BTEX, PAH, PCB & asbestos
58 to 63	Targeting an area of filling (partially surfaced access road) and former off-site orchard land use	HM, OCP, TPH, BTEX, PAH, PCB & asbestos
64 to 71	Targeting an area of disturbance (unsurfaced access road)	HM, OCP, TPH, BTEX, PAH, PCB & asbestos
71 to 73	Site coverage & area of past disturbance	HM, OCP, TPH, BTEX, PAH, PCB & asbestos

Notes:

- Drawing adapted from aerial photographs sources from Spatial Information Exchange (SIX) Website.

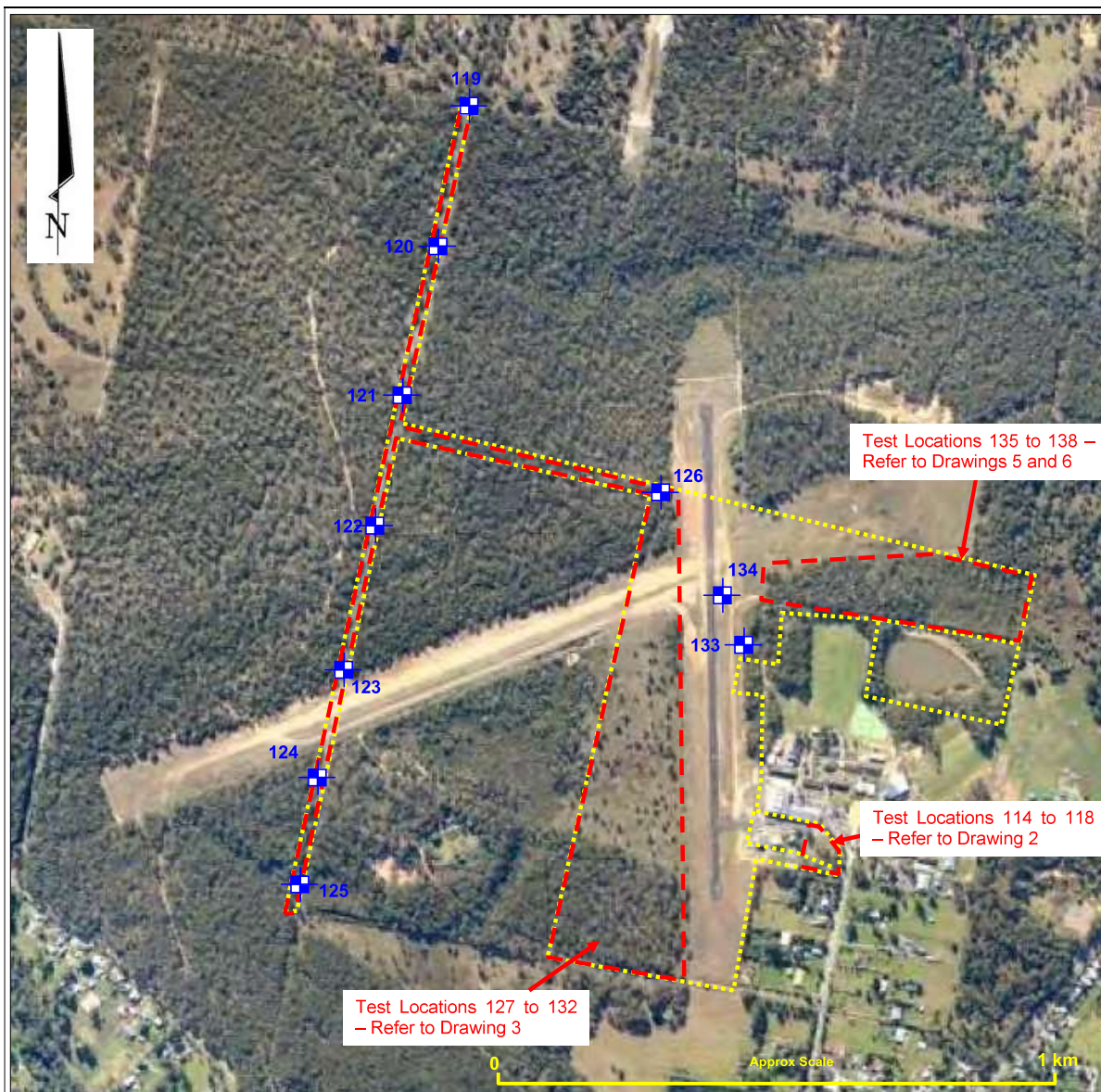
Approximate test pit location and identification

Areas of filling/disturbance in the vicinity of the runway

Unacceptable contamination [Sample ID & Contaminant Concentration] and approximate lateral extent

0 10 20 30 40 50 60

Approximate Scale (m)

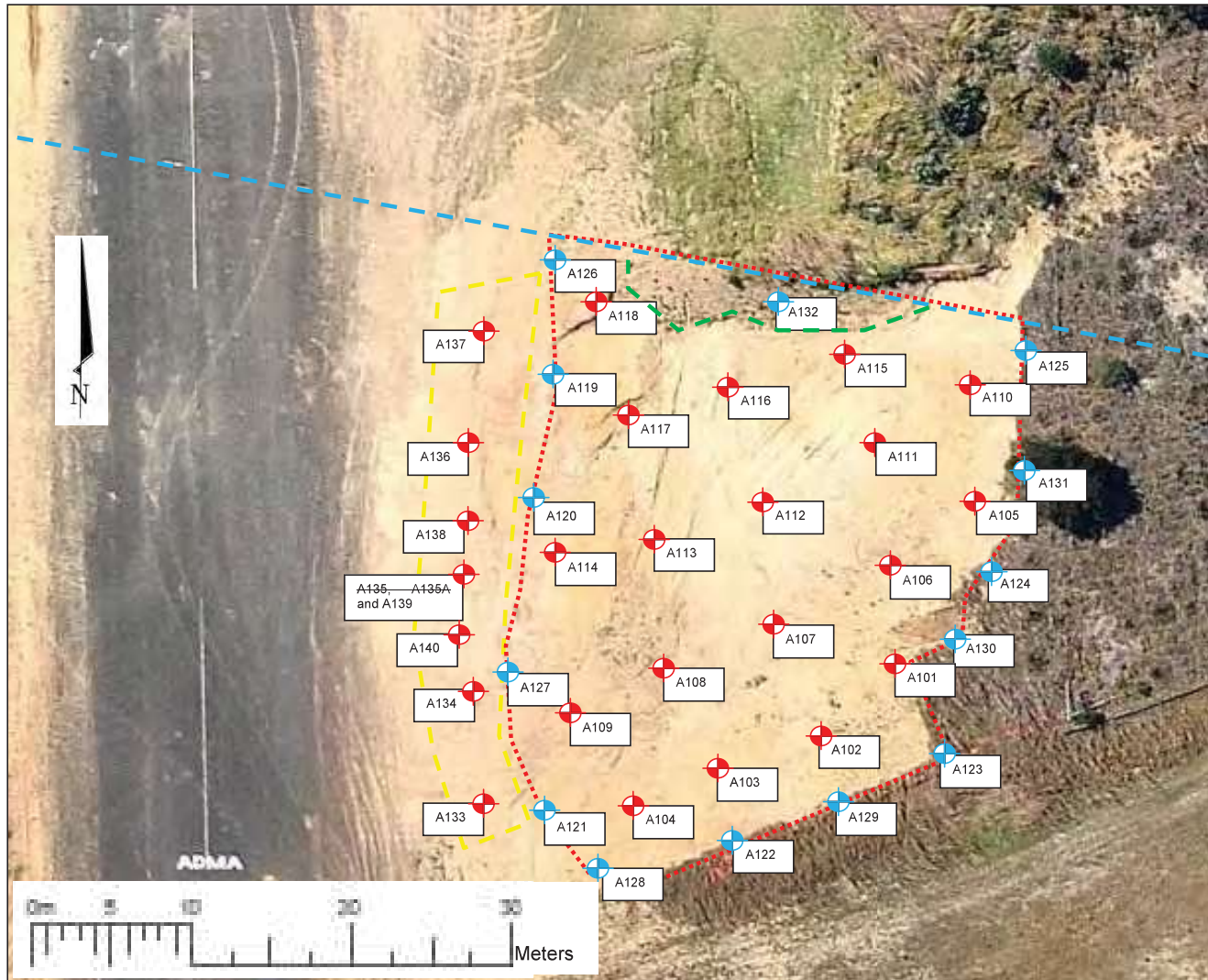


Notes:

1. Drawing adapted from aerial photographs sources from Nearmaps.com (dated 18 June 2011)

Approximate test pit location and identification







Site Area

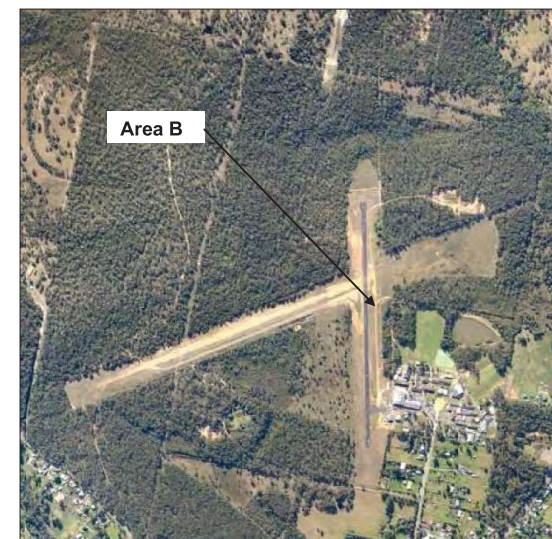
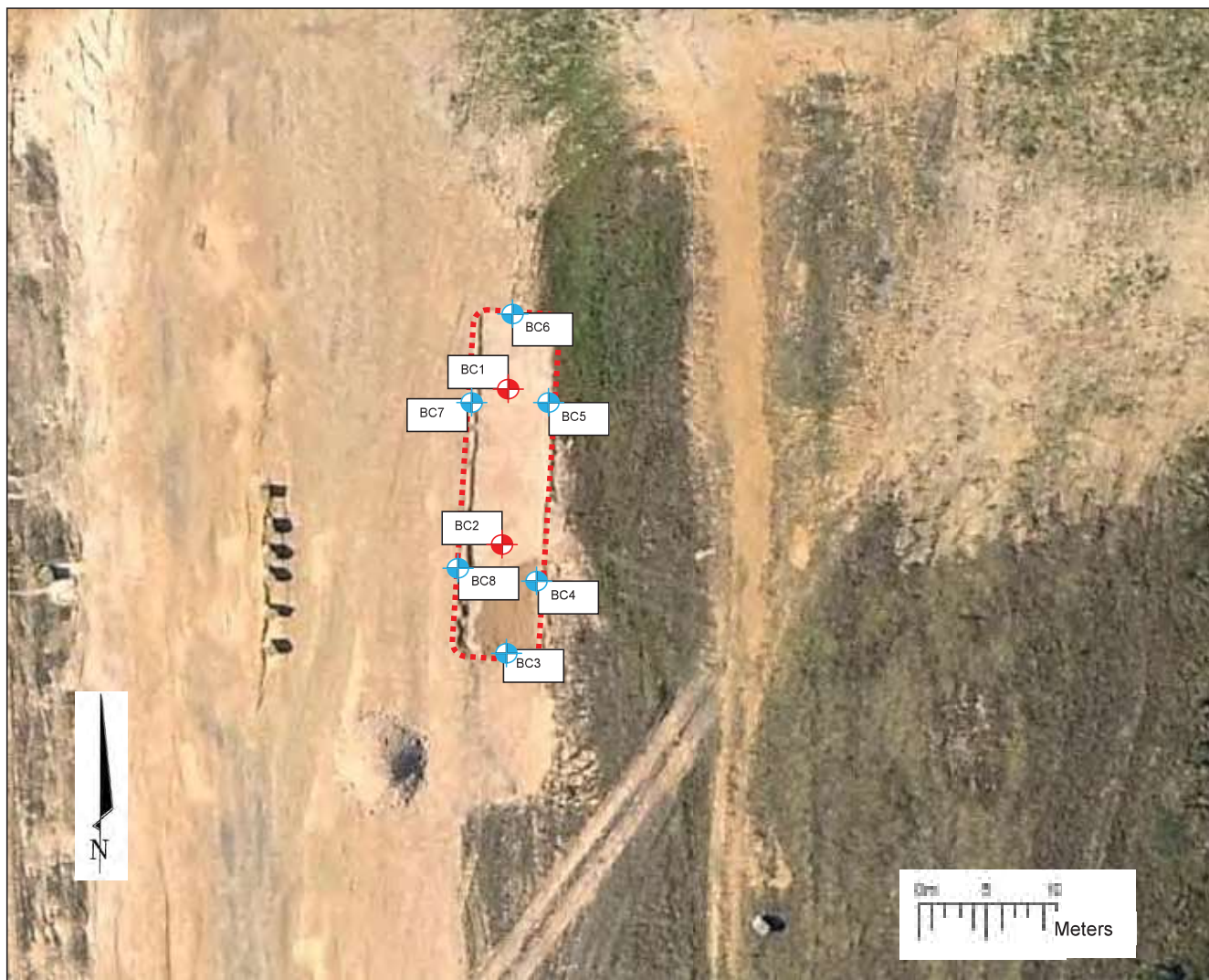


NOTES:

Drawing adapted from Nearmap Photomaps dated Oct 2013

LEGEND:

-  Approximate area of validation work for Area A
-  Approximate sample points excavation base
-  Approximate sample point excavation wall
-  Approximate truck loading area
-  Approximate location of graded slope
-  Approximate site boundary



NOTES:

Drawing adapted from Nearmap
Photomaps dated Feb 2013

LEGEND:



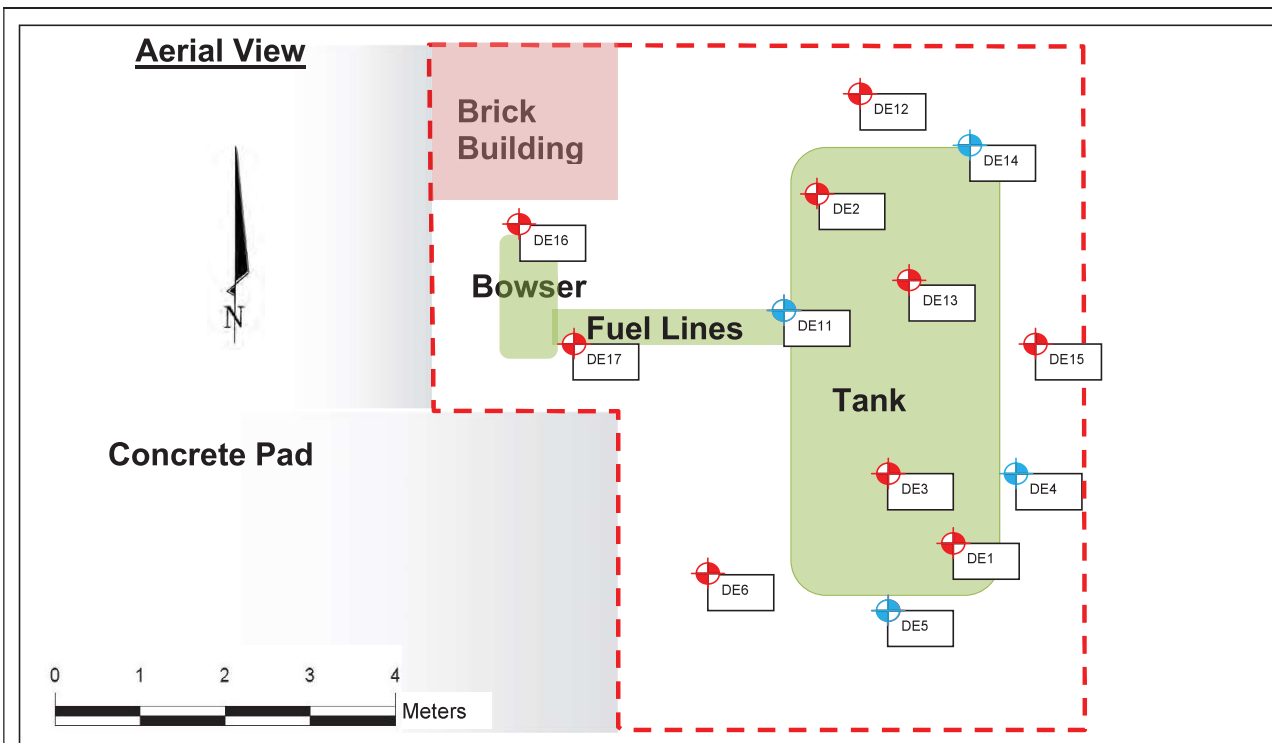
Approximate area of validation work
for Area B



Approximate sample point
excavation base



Approximate sample point
excavation wall

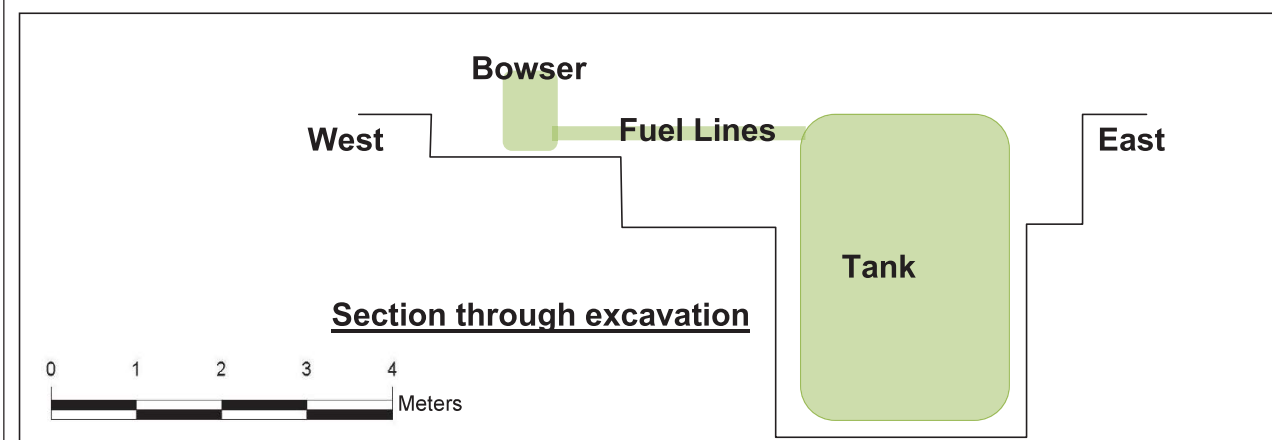


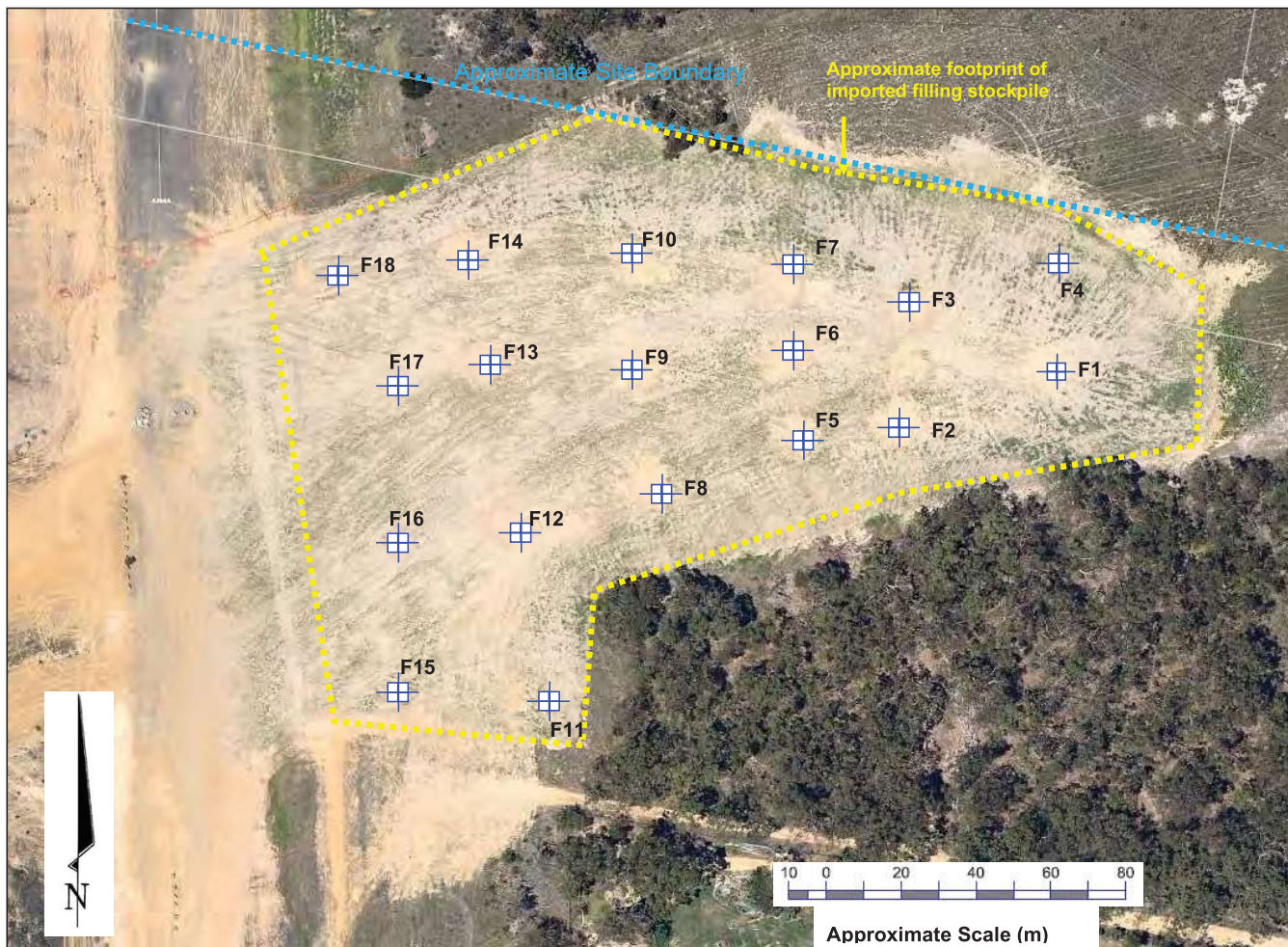
NOTES:

Drawing adapted from Nearmap Photomaps dated Feb 2013

LEGEND:

- Approximate area of validation work for Area D
- Approximate sample point excavation base
- Approximate sample point excavation wall
- Approximate Lot boundary





NOTES:

Drawing adapted from Nearmap
Photomaps dated Feb 2013

LEGEND:



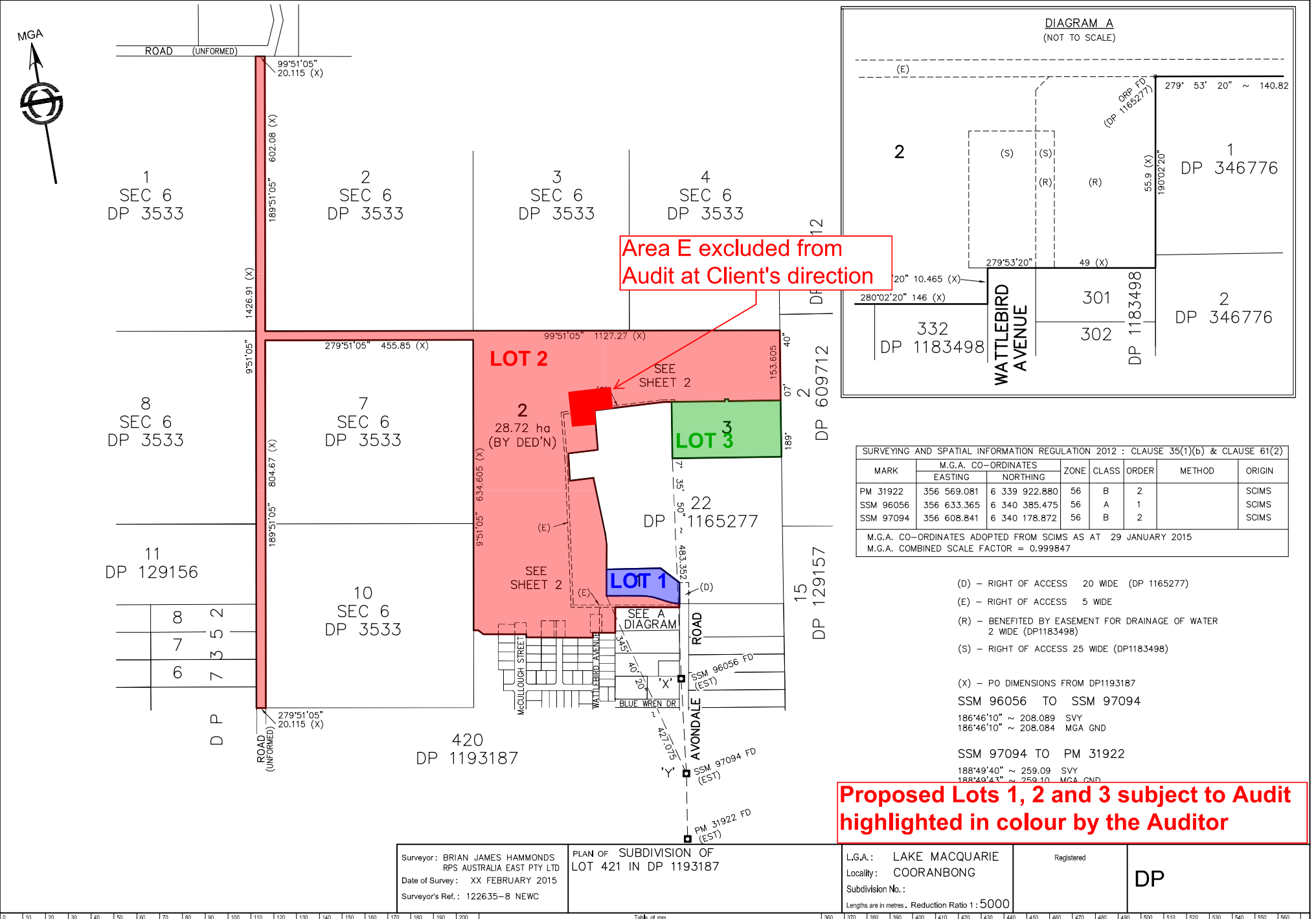
Approximate area of validation work
for Area F



Approximate test pit location

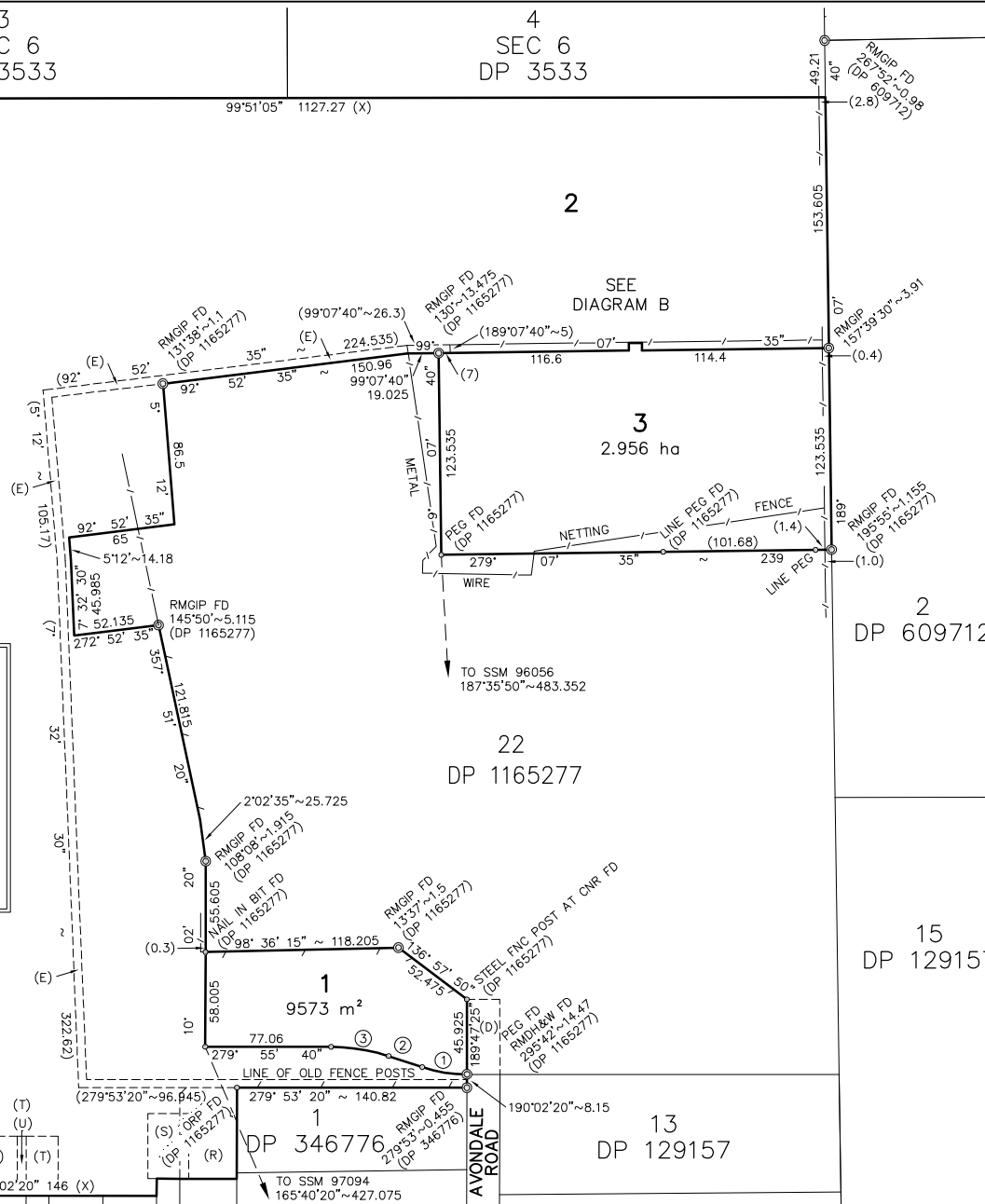
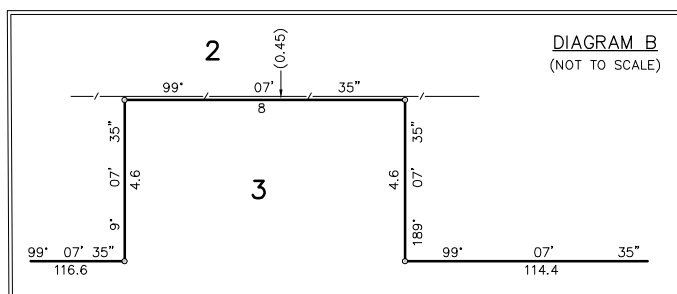


Approximate site boundary



4
SEC 6
DP 3533

SCHEDULE OF SHORT LINES				
LINE	BEARING	DISTANCE	ARC	RADIUS
1	289°03'	27.77	27.89	88.15
2	298°06'45"	21.625		
3	289°01'15"	35.71	35.86	112.975
4	10°02'20"	6.865 (X)		
5	280°02'20"	94.15 (X)		
6	319°01'55"	13.86 (X)		
7	279°51'05"	10.26 (X)		



10
SEC 6
DP 3533

Surveyor: BRIAN JAMES HAMMONDS
RPS AUSTRALIA EAST PTY LTD
Date of Survey: XX FEBRUARY 2015
Surveyor's Ref.: 122635-8 NEWC

PLAN OF SUBDIVISION OF
LOT 421 IN DP 1193187

L.G.A. : LAKE MACQUARIE
Locality : COORANBONG
Subdivision No. :
Lengths are in metres . Reduction Ratio 1 : 200

Registered

DP

