PLANNING PROPOSAL

Greater Hume Local Environmental Plan 2012

Rezoning of R5 Large Lot Residential Zone land to RU5 Village Zone and changes to minimum subdivision lot size

Lots 1-3 DP1287711, Commercial Street and Walla Walla Road, Walla Walla NSW

February 2024

Prepared by:

Blueprint Planning

For:

Annesley Holdings Pty Ltd

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STATEMENT

This Planning Proposal relates to –	• rezoning of R5 Large Lot Residential Zone land to RU5 Village Zone (affecting 4.9 hectares of land), and • change to minimum subdivision lot size of the proposed RU5 Village Zone part of the land from 2 ha to 600 m^2 (affecting 4.9 hectares of land), • change to minimum subdivision lot size of the existing RU5 Village Zone part of the land from 0 to 600 m^2 (affecting 7.1 hectares of land), • with consequential changes to the Land Zoning Map and Lot Size Map, under the *Greater Hume Local Environmental Plan 2012.*
This Planning Proposal has been prepared in accordance with –	• section 3.33 of the *Environmental Planning and Assessment Act 1979*, and • *Local Environmental Plan Making Guideline* (NSW Department of Planning and Environment, August 2023).
This report has been prepared by –	James Laycock *BUrbRegPlan (NE), MBA (CS), MPIA, RPIA* Blueprint Planning 3/576 Kiewa Street ALBURY NSW 2640

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Document Control

Ref.	Version	Date	Revision Details	Author
1637	1	27/10/23	Draft for Council review/Gateway Determination	JL
	2	22/11/23	Draft following Council review	JL
	3	28/02/24	Draft following Department review	JL

EXECUTIVE SUMMARY

This Planning Proposal relates to land at Walla Walla NSW – more specifically part Lots 1-3 DP1287711, Commercial Street and Walla Walla Road, Walla Walla.

This report has been prepared in support of the rezoning change for part Lots 1-3 DP1287711 from R5 Large Lot Residential Zone to RU5 Village Zone and a change to the minimum subdivision lot size of part Lots 1-3 DP1287711 from 0 square metres and 2 hectares to 600 square metres under the *Greater Hume Local Environmental Plan 2012* with consequential changes to the Land Zoning Map and Lot Size Map.

The objective or intended outcome of these changes is to enable the land to be developed for residential purposes consistent with the existing Walla Walla township residential subdivision lot pattern and character.

This report has been prepared in accordance with –

- section 3.33 of the *Environmental Planning and Assessment Act 1979*, and
- *Local Environmental Plan Making Guideline* (NSW Department of Planning and Environment, August 2023).

Consideration of the Planning Proposal against the above requirements and guidelines demonstrates that the land is suitable 'in principle' for the proposed rezoning and minimum subdivision lot size changes because –

- the locations, sizes, areas, and shapes of the land proposed to be rezoned represents a considered and orderly response to existing township residential subdivision patterns and development, and
- the rezoning and minimum subdivision lot size changes of the land in the way proposed is consistent with relevant strategies, State environmental planning policies and directions.

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APPENDICES

FIGURES/TABLES

GLOSSARY

Land	Lots 1-3 DP1287711, Commercial Street and Walla Walla Road, Walla Walla NSW
Planning Proposal	rezoning of R5 Large Lot Residential Zone land to RU5 Village Zone and changes to minimum subdivision lot size from 0 m^2 and 2 ha to 600 m^2, with consequential changes to the Land Zoning Map and Lot Size Map under the LEP
Council; GHC	Greater Hume Council
EP&A Act	*Environmental Planning and Assessment Act 1979*
LEP	*Greater Hume Local Environmental Plan 2012*
LGA	local government area
Proponent	Annesley Holdings Pty Ltd ABN 14 111 716 637
Blueprint Planning	Blueprint Planning and Development Pty Ltd ACN 110 843 206 as trustee for Blueprint Development Trust ABN 87 492 545 653 trading as Blueprint Planning

1.0 INTRODUCTION

1.1 Preliminary

This report contains word abbreviations and terms listed in the **Glossary**.

This report has been prepared in support of a request by the Proponent to Council for the rezoning of part of the Land from R5 Large Lot Residential Zone to RU5 Village Zone and changes to the minimum subdivision lot size of parts of the Land from 0 square metres and 2 hectares to 600 square metres under the LEP.

1.2 Scope

This Planning Proposal has been prepared in accordance with the legislative and guideline requirements listed in the **Statement** at the beginning of this report, and have been prepared by Blueprint Planning on behalf of the Proponent.

1.3 Site and context description

The Land is located in the township of Walla Walla in southern NSW, situated approximately 34 kilometres to the north of Albury and 37 kilometres to the west of Holbrook, with access from Commercial Street and Walla Walla Road.

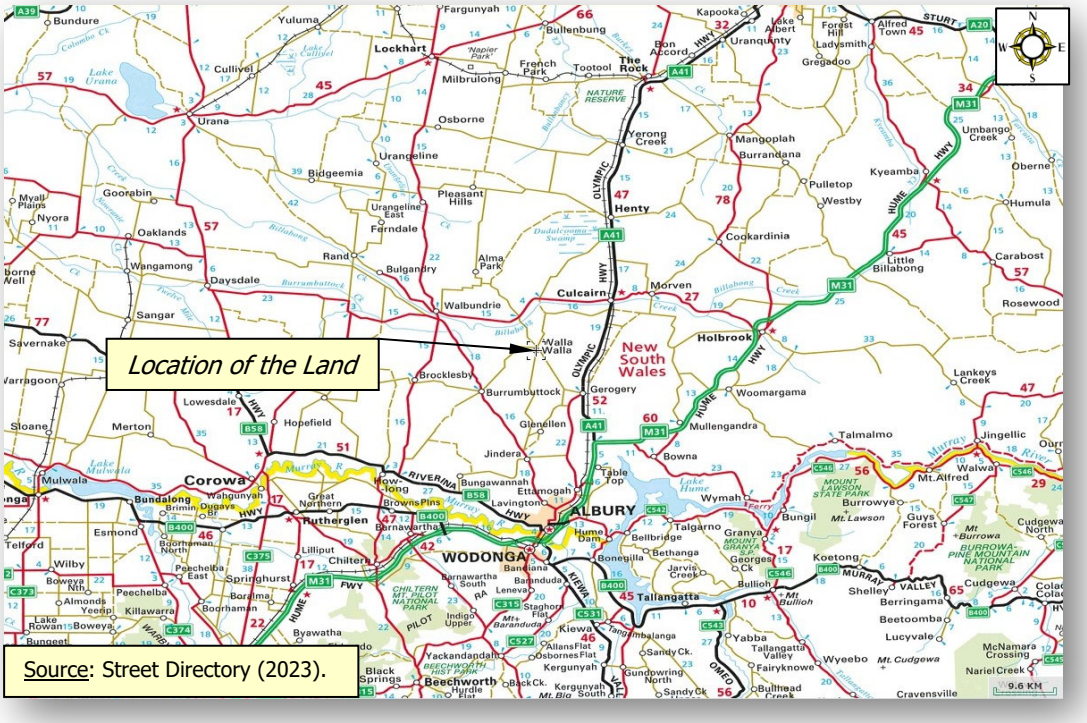
The Land proposed to be rezoned comprises approximately 4.9 hectares (subject to survey) and consists of vacant R5 Large Lot Residential Zone land on the south-eastern side of the Walla Walla township. The Land proposed to have a change to its minimum subdivision lot size has a total area of 12 hectares (subject to survey) and also consists of vacant land.

The location of the Land is shown regionally in **Figure 1: Regional location map** and locally in **Figure 2: Aerial photograph of the Land**.

Title diagrams of the Land are shown in **Appendix A: Title diagrams**.

Photographs of the Land and the surrounding area are shown in **Appendix B: Photographs of the Land and surrounding area**.

Figure 1: Regional location map



2.0 OBJECTIVES AND INTENDED OUTCOMES

2.1 Objectives

The objective of the Planning proposal is to amend the *Greater Hume Local Environmental Plan 2012* to enable the Land to be used for residential purposes consistent with the existing Walla Walla township residential subdivision lot pattern and character.

2.2 Intended outcomes

The intended outcome of the Planning Proposal is to facilitate the growth and sustainability of the Walla Walla township and local area by rezoning additional land for township-scale residential purposes, which in turn will support existing and future local employment generating commercial, industrial and agricultural land uses.

Figure 2: Aerial photograph of the Land

Legend: — The area subject to the Planning Proposal. Source: SIX Maps (12 December 2014).

3.0 EXPLANATION OF PROVISIONS

The objective and intended outcome mentioned in **Section 2.0: Objectives and intended outcomes** are to be achieved by amending the LEP as shown in **Table 1: Summary of LEP amendments**, **Figure 3: Proposed zoning change** and **Figure 4: Proposed minimum subdivision lot size changes**.

Table 1: Summary of LEP amendments

LEP map proposed to be amended	*Effect of proposed amendment*
Land Zoning Map - Sheet LZN_001B	Rezone part of the Land from R5 Large Lot Residential Zone to RU5 Village Zone.
Lot Size Map - Sheet LSZ_001B	For the western part of the Land, which is already zoned RU5 Village Zone, change the minimum subdivision lot size from 0 m^2 to 600 m^2 to be consistent with the existing Walla Walla township minimum subdivision lot size for residential development. For the eastern part of the Land, which is already zoned R5 Large Lot Residential Zone, change the minimum subdivision lot size from 2 ha to 600 m^2 to be consistent with the existing Walla Walla township minimum subdivision lot size for residential development.

A concept subdivision plan showing how the Land may be subdivided after the Planning Proposal has been implemented is shown in **Figure 5: Possible future subdivision of the Land following implementation of the Planning Proposal (subject to separate DA process)**.[1]

[1] Subject to a separate Development Application process including public notification and assessment by the Council.

Figure 3: Proposed zoning change

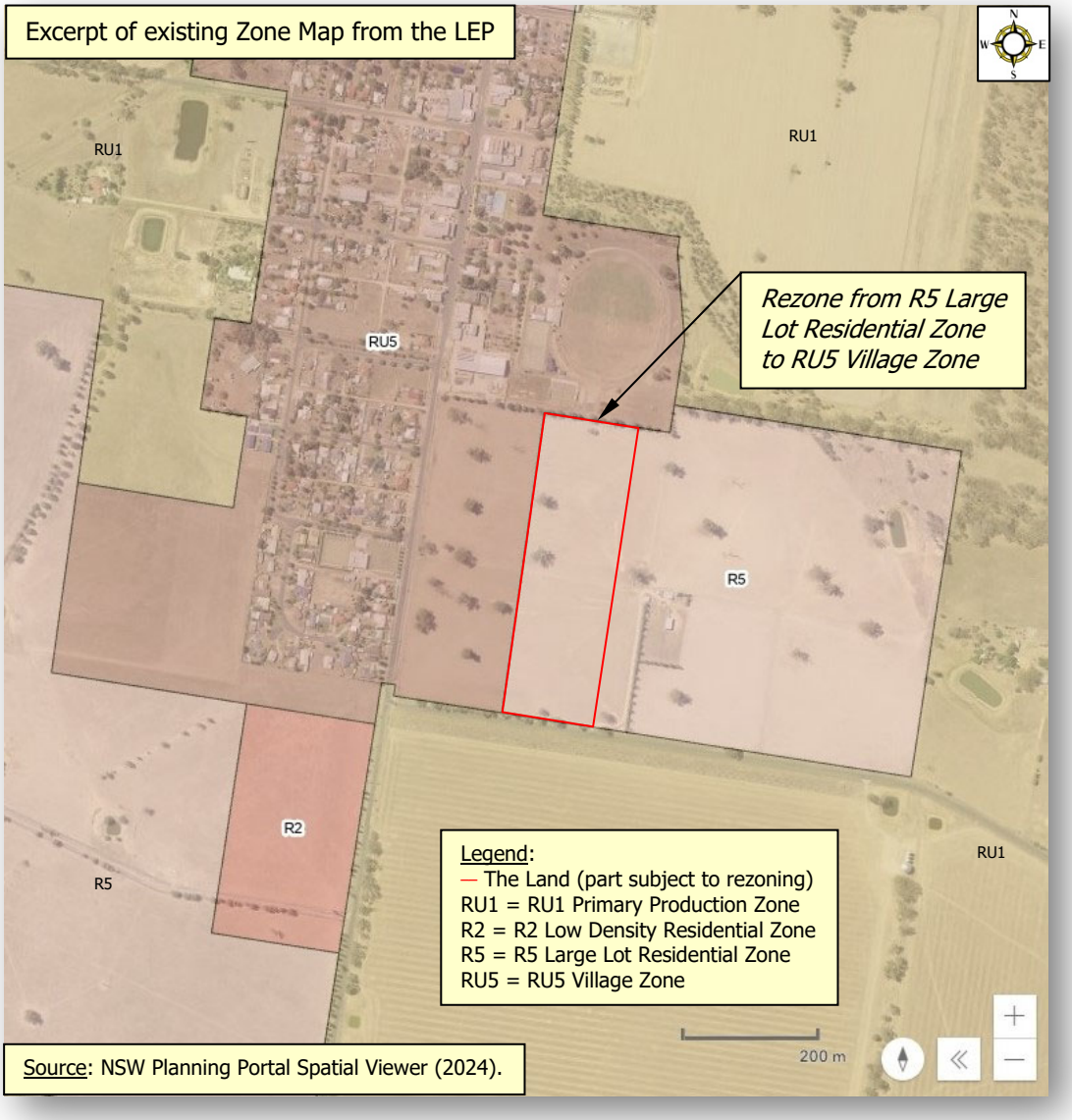
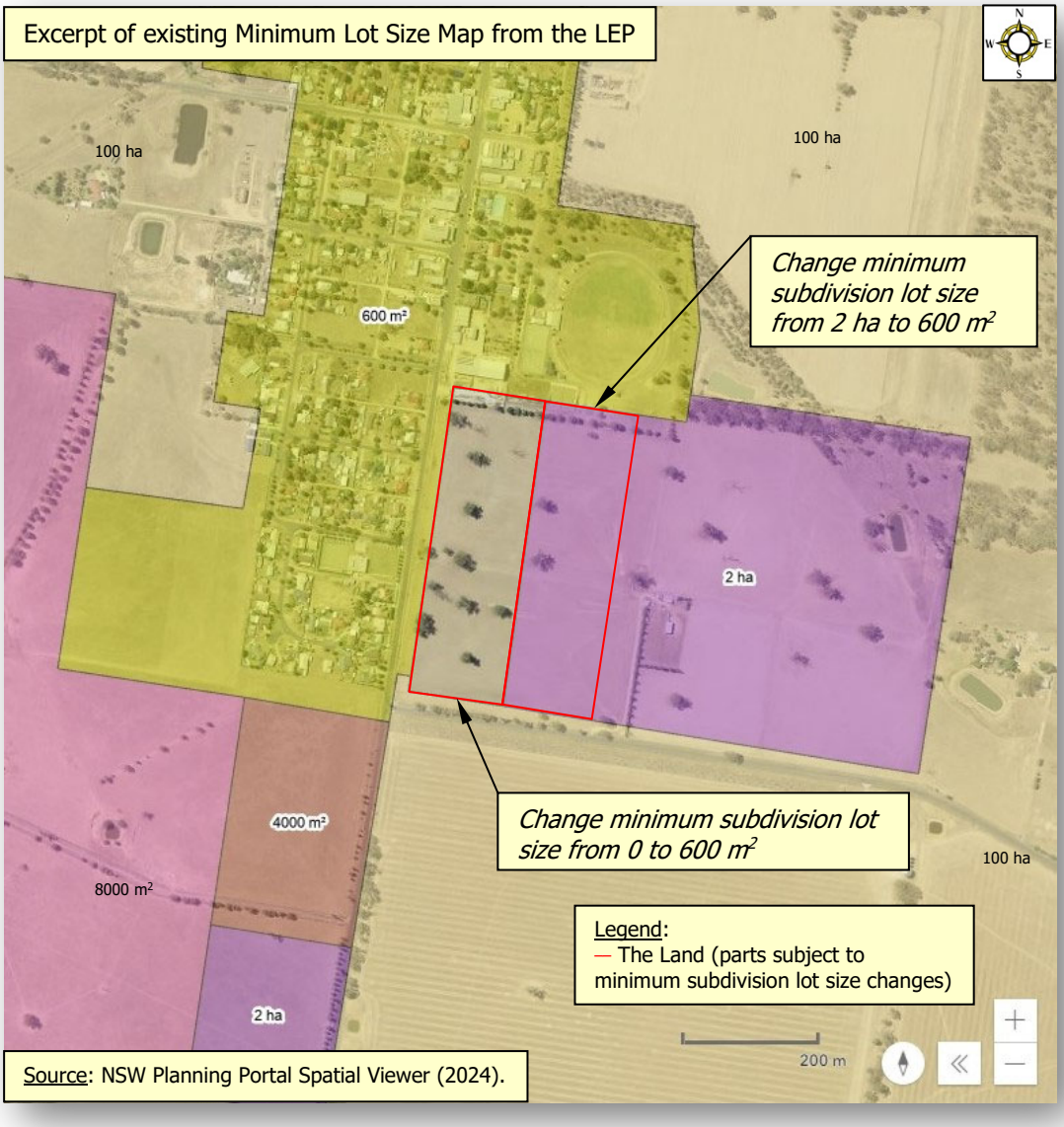
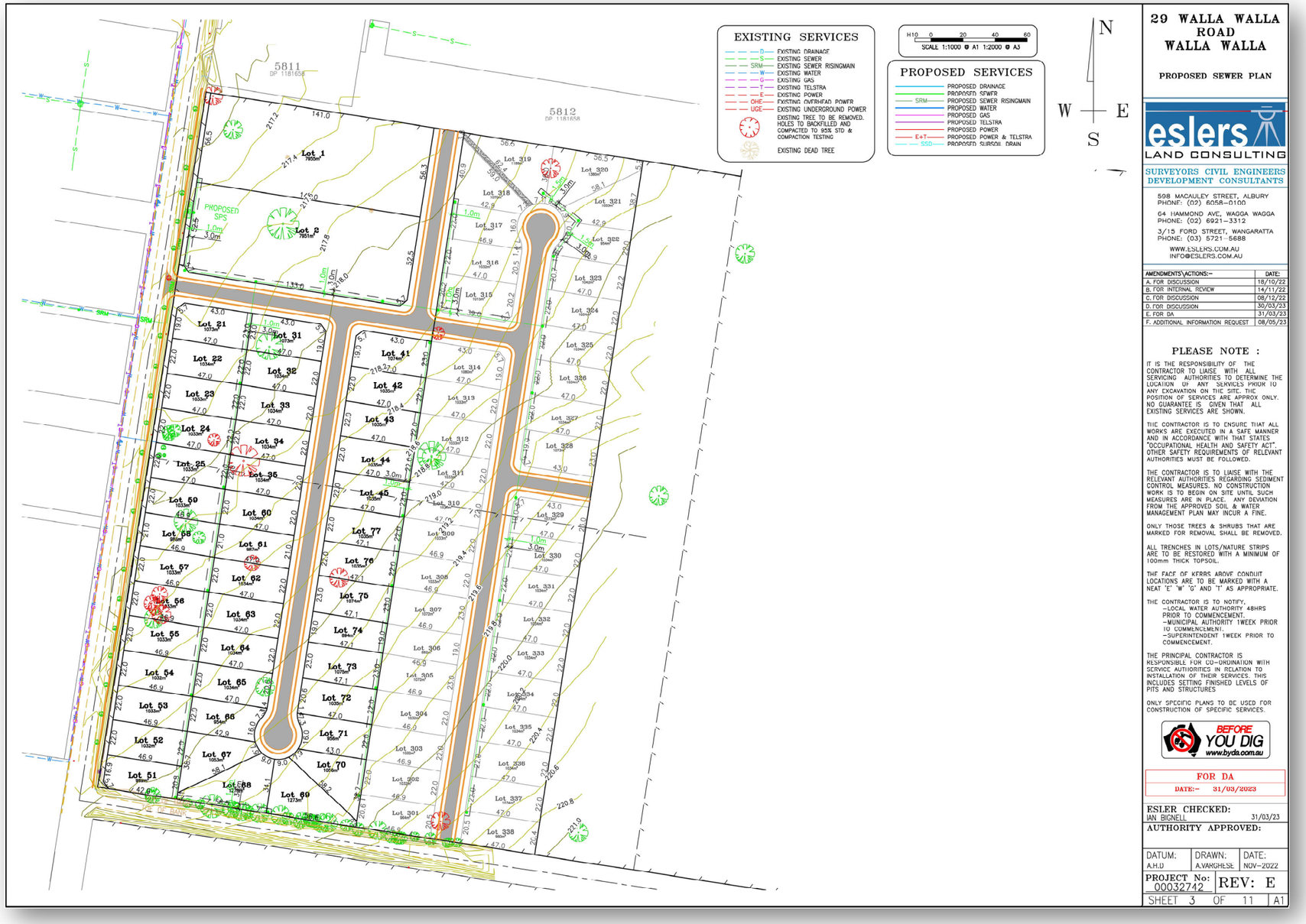


Figure 4: Proposed minimum subdivision lot size changes



<u>Figure 5</u>: Possible future subdivision of the Land following implementation of the Planning Proposal (subject to separate DA process)



4.0 JUSTIFICATION OF STRATEGIC AND SITE-SPECIFIC MERIT

4.1 Strategic merit

4.1.1 Need for the Planning Proposal

Is the Planning Proposal a result of an endorsed local strategic planning statement, strategic study or report?

The Planning Proposal is not a direct result of the *Greater Hume Local Strategic Planning Statement 2020*[2] or other strategic study or report. This Planning Proposal is a Proponent-initiated project supported by prior consultation with GHC.

Is the Planning Proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

The Planning Proposal as detailed in **Table 1: Summary of LEP amendments** is considered the best means of achieving the relevant objectives and intended outcomes mentioned in **Section 2.0: Objectives and intended outcomes**.

4.1.2 Relationship to the strategic planning framework

Will the Planning Proposal give effect to the objectives and actions of the applicable regional or district plan or strategy (including any exhibited draft plans or strategies)?

The Planning Proposal is consistent with relevant objectives and actions of the *Riverina Murray Regional Plan 2041* (NSW Government, 2023)[3] as set out in **Appendix C: *Riverina Murray Regional Plan 2041***. There are currently no exhibited draft plans or strategies relevant for consideration.

[2] https://www.greaterhume.nsw.gov.au/Your-Greater-Hume-Council/Building-and-Development/Planning-Guides-and-Tools

[3] https://www.planning.nsw.gov.au/plans-for-your-area/regional-plans/riverina-murray-regional-plan-2041

Is the Planning Proposal consistent with a council local strategic planning statement that has been endorsed by the Planning Secretary or GCC, or another endorsed local strategy or strategic plan?

The Planning Proposal is consistent with the planning policies of the *Greater Hume Local Strategic Planning Statement 2020* (GHC, pp. 20-21; 24; 32) set out in **Appendix D: *Greater Hume Local Strategic Planning Statement 2020***.

The Planning Proposal is also consistent with the *Greater Hume Development Control Plan 2013* through being generally consistent with the Chapter 5.0: Township Structure Plan for Walla Walla, noting that –

- residential land use is 'permitted with prior consent' in the Land Use Table of the RU5 Village Zone under the LEP, and
- the boundaries of the Walla Walla Structure Plan would need to be amended to suit the Planning Proposal when the next general review of the DCP is carried out in accordance with the nominated DCP review schedule in the *Greater Hume Local Strategic Planning Statement 2020.*

Is the Planning Proposal consistent with any other State and regional studies or strategies?

There are no other State or regional studies or strategies or specific corridor/precinct plans applicable to the Land, including any draft regional, district or corridor/precinct plans released for public comment.

Is the Planning Proposal consistent with applicable state environmental planning policies?

The Planning Proposal is consistent with applicable state environmental planning policies as set out in **Appendix E: State Environmental Planning Policies**.

Is the Planning Proposal consistent with applicable Ministerial Directions (section 9.1 directions) or key government priority?

The Planning Proposal is consistent with applicable directions or key government priorities as set out in **Appendix F: Directions under section 9.1(2) of the *Environmental Planning and Assessment Act 1979***.

4.2 Site-specific merit

4.2.1 Environmental, social and economic impact

Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the Planning Proposal?

The Land is currently zoned part RU5 Village Zone and part R5 Large Lot Residential Zone (not, for example, a rural or environmental zone) and is not recorded or known to have any significant environmental values or resource attributes.

Possible future subdivision and development of the Land in accordance with **Figure 5: Possible future subdivision of the Land following implementation of the Planning Proposal (subject to separate DA process)** is not likely to 'trigger' entry into the Biodiversity Offset Scheme[4] for the following reasons –

Assessment	***Reference***
• No part of the Land is identified as an area of "outstanding biodiversity value" (known as "critical habitat" under the former *Threatened Species Conservation Act 1995*).	Development is "likely to significantly affect threatened species" if it is carried out in a declared area of outstanding biodiversity value (section 7.2(1)(c) of the *Biodiversity Conservation Act 2016*).
• The likely clearing of native vegetation is less than 0.25 hectares.	The clearing of native vegetation of an area declared by clause 7.2 of the *Biodiversity Conservation Regulation 2017* as exceeding the threshold.
• No part of the Land is identified on the Biodiversity Values Map.	The clearing of native vegetation, or other action prescribed by clause 6.1 of the *Biodiversity Conservation Regulation 2017*, on land included on the Biodiversity Values Map published under clause 7.3 of the *Biodiversity Conservation Regulation 2017.*
• The future subdivision and development (with the likely clearing of native vegetation less than 0.25 hectares) is unlikely to significantly affect threatened species, populations or ecological communities, or their habitats.	Development is "likely to significantly affect threatened species" if it is likely to significantly affect threatened species or ecological communities, or their habitats, according to the test in section 7.3 of the *Biodiversity Conservation Act 2016* (section 7.2(1)(a) of the *Biodiversity Conservation Act 2016*).

[4] https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme

Are there any other likely environmental effects of the Planning Proposal and how are they proposed to be managed?

The following specialist reports have been prepared in support of the Planning Proposal –

- Infrastructure report at **Appendix G**,
- Traffic Impact Assessment report at **Appendix H**,
- Preliminary Site Investigation report at **Appendix I**,
- Aboriginal Cultural Heritage Due Diligence report at **Appendix J**, and
- Bushfire Assessment report at **Appendix K**.

There are no likely environmental effects of the Planning Proposal, noting that any future residential development of the Land would require connection to reticulated services, including reticulated water, sewer, stormwater, electricity and telecommunication services. GHC has existing planning and civil engineering policies concerning road and footpath construction and water sensitive urban design (WSUD) for urban subdivision.

Has the Planning Proposal adequately addressed any social and economic effects?

The Planning Proposal provides for residential subdivision and development opportunities (approximately 38 new residential lots subject to separate Council approval) which will (incrementally) contribute to the social and economic fabric of Walla Walla township and local areas through (incremental) population growth which in turn will support employment generating commercial, industrial and agricultural land uses and businesses.

In Walla Walla there are significant tracts of undeveloped RU5, R2 and R5 land (refer to **Figure 3**). Whilst this land may be zoned permitting residential development, anecdotally, this land is not available for development. This is simply because the owner/s of the land do not wish to develop and/or sell their land for development. It may be the case that some land owners wish to develop their land in the future but certainly not at the moment. This situation is not unusual.

Therefore, in regard to current land supply and demand in Walla Walla, whilst there is appropriately zoned land for residential development there is no or limited available 'supply' of it in the form of willing developers and sellers.

The subject Planning Proposal has been initiated by the Proponent who is a willing developer and seller. In this regard 'supply' has a chance of meeting 'demand'.

4.2.2 Infrastructure (Local, State and Commonwealth)

Is there adequate public infrastructure for the Planning Proposal?

Adequate local public infrastructure for the Planning Proposal already exists or will be made available to the Land via connecting public roads and reticulated services. No State or Commonwealth infrastructure is required to support the Planning Proposal.

Reticulated service	***Consultation***	***Reference document***
Water	*Consultation with Riverina Water has revealed that acceptable water capacity (volume and pressure) exists to service the Land to a point and then augmentation works would need to occur. Consultation is continuing to facilitate forecast capital works and budgeting.*	*Infrastructure Report at* ***Appendix G****.*
Sewer	*Consultation with GHC has revealed that adequate sewer capacity exists to service the Land in full, with a sewer pump station required.*	
Stormwater	*Consultation with GHC has revealed that adequate stormwater capacity exists to service the Land in full.*	
Electricity	*Consultation with Essential Energy has revealed that adequate electrical capacity exists to service the Land in full, with electrical sub-stations required.*	
Telecommunications	*Consultation with Telstra has revealed that adequate telecommunications capacity exists to service the Land in full.*	
Natural gas	*Consultation with APA has revealed that adequate natural gas capacity exists to service the Land in full.*	

The costs of connecting reticulated services to the Land will be borne by the developer. The eventual residential subdivision of the Land would be subject to Council's and Riverina Water's normal 'developer contribution' fees and charges also at the cost of the developer.

4.2.3 State and Commonwealth interests

What are the views of State and Federal public authorities and government agencies consulted in order to inform the Gateway Determination?

Consultation will be carried out with public authorities/agencies as required by the Gateway Determination issued by the Department of Planning and Environment in accordance with section 3.34(2)(d) of the EP&A Act.

5.0 MAPS

The Planning Proposal requires LEP mapping changes as set out in **Table 1: Summary of LEP amendments**, **Figure 3: Proposed zoning change** and **Figure 4: Proposed minimum subdivision lot size changes** being changes to Land Zoning Map – Sheet LZN_001B and Lot Size Map – Sheet LSZ_001B.

6.0 COMMUNITY CONSULTATION

Community consultation is required under section 3.34(2)(c) of the EP&A Act and in accordance with *Local Environmental Plan Making Guideline* (NSW Department of Planning and Environment, August 2023) as follows –

- 28 day public exhibition period,
- notification provided to adjoining and surrounding landowners who may be directly or indirectly impacted,
- consultation with relevant government departments and agencies, service providers and other key stakeholders,
- public notices provided in local media i.e. The Border Mail newspaper,
- static displays and supporting material in Council public buildings, nominally –
  - Holbrook Office, 39 Young Street, Holbrook
  - Culcairn Office, 40 Balfour Street, Culcairn
  - Henty Office, RTC and Library, 30 Sladen Street, Henty
  - Jindera Community Hub, 83 Urana Street, Jindera
  - Walla Walla, RTC and WAW Credit Union, Commercial Street, Walla Walla

- electronically available via Greater Hume Council's website including provision for electronic submissions,
- hard copies of all documentation being made available to the community free-of-charge, and
- electronic copies of all documentation being made available to the community free-of-charge.

7.0 PROJECT TIMELINE

The anticipated timeframe for processing the Planning Proposal is set out in **Table 2: Project timeline**.

Table 2: Project timeline

Project milestone	*Estimated commencement date*	*Estimated completion date*
Consideration by Council	March 2024	March 2024
Council decision	March 2024	March 2024
Anticipated commencement date (date of Gateway Determination)	March 2024	April 2024
Anticipated timeframe to finalise required technical information	Not anticipated to be required	Not anticipated to be required
Timeframe for public agency consultation	April 2024	May 2024
Commencement and completion dates of public exhibition period, including a public hearing (if required)	April 2024	May 2024
Timeframe for consideration of public submissions	May 2024	May 2024
Timeframe for consideration of the Planning Proposal post exhibition	May 2024	June 2024
Date of submission of Planning Proposal to DPE	July 2024	July 2024
Anticipated date Council will make the plan (if delegated)	July 2024	July 2024
Anticipated date Council will forward the Planning Proposal to DPE for publication in the Government Gazette	August 2024	August 2024

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APPENDIX A:

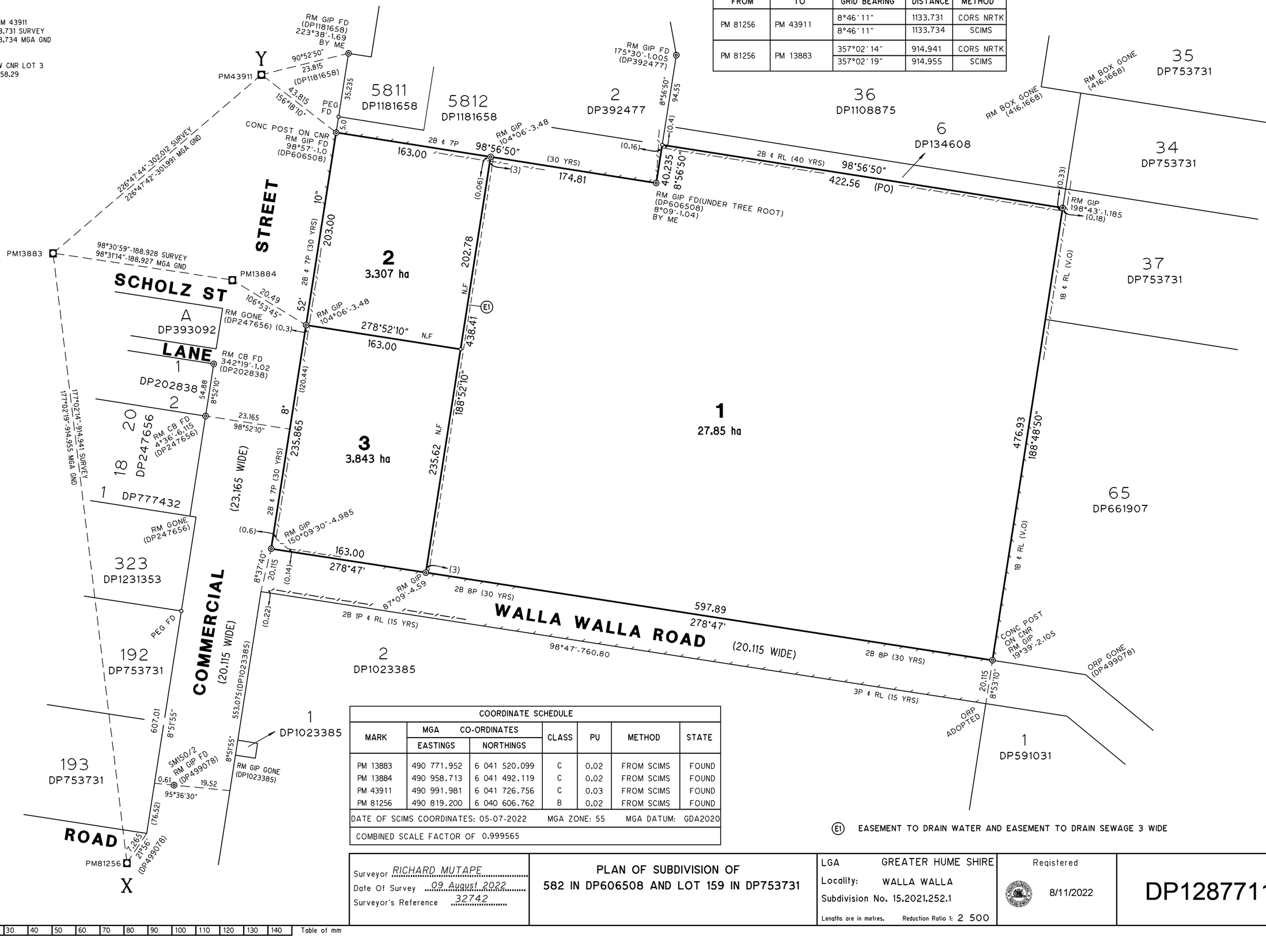
Title diagrams

PM CONNECTIONS

X-Y
PM 81256-PM 43911
8°46'11"-1133.731 SURVEY
8°46'11"-1133.734 MGA GND

PM81256-SW CNR LOT 3
10°45'05"-658.29

GNSS VALIDATION SCHEDULE				
FROM	TO	GRID BEARING	DISTANCE	METHOD
PM 81256	PM 43911	8°46'11"	1133.731	CORS NRTK
		8°46'11"	1133.734	SCIMS
PM 81256	PM 13883	357°02'14"	914.941	CORS NRTK
		357°02'19"	914.955	SCIMS



COORDINATE SCHEDULE						
MARK	MGA CO-ORDINATES EASTINGS	MGA CO-ORDINATES NORTHINGS	CLASS	PU	METHOD	STATE
PM 13883	490 771.952	6 041 520.099	C	0.02	FROM SCIMS	FOUND
PM 13884	490 958.713	6 041 492.119	C	0.02	FROM SCIMS	FOUND
PM 43911	490 991.981	6 041 726.756	C	0.03	FROM SCIMS	FOUND
PM 81256	490 819.200	6 040 606.762	B	0.02	FROM SCIMS	FOUND
DATE OF SCIMS COORDINATES: 05-07-2022			MGA ZONE: 55		MGA DATUM:	GDA2020
COMBINED SCALE FACTOR OF 0.999565						

(E1) EASEMENT TO DRAIN WATER AND EASEMENT TO DRAIN SEWAGE 3 WIDE

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 Table of mm

Surveyor RICHARD MUTAPE
Date Of Survey 09 August 2022
Surveyor's Reference 32742

PLAN OF SUBDIVISION OF
582 IN DP606508 AND LOT 159 IN DP753731

LGA GREATER HUME SHIRE
Locality: WALLA WALLA
Subdivision No. 15.2021.252.1
Lengths are in metres. Reduction Ratio 1: 2 500

Registered 8/11/2022

DP1287711

Plan Form 6_Digital (2021)

Deposited Plan Administration Sheet | Sheet 1 of ~~5~~ 4

OFFICE USE ONLY

Registered 8/11/2022

Title System TORRENS

DP1287711

LGA GREATER HUME SHIRE

LOCALITY WALLA WALLA

PARISH CASTLESTEAD

COUNTY HUME

Plan of Subdivision of lot 582 in DP606508 and lot 159 in DP753731

Survey Certificate Survey

I, Richard Mutape of ESLERS LAND CONSULTING, a surveyor registered under Surveying and Spatial Information Act 2002, certify that:

The land shown in the plan was surveyed in accordance with the Surveying and Spatial Information Regulation 2017, is accurate and the survey was completed on: 09/08/2022

Urban/Rural: Rural

Datum Line: X-Y

Signature

Dated: 01/09/2022

Surveyor Identification No.: SU008629

Surveyor registered under the *Surveying and Spatial Information Act 2002.*

Crown Lands NSW/Western Lands Office Approval

I, (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given.

Signature

Date

File Number

Office

Subdivision Certificate (Check One)

I, COLIN KANE

- [x] Authorised Person
- [ ] General Manager
- [ ] Registered Certifier

certify that the provisions of section 6.15 of the *Environmental Planning and Assessment Act 1979* have been satisfied in relation to the proposed subdivision, new road or reserve set out herein.

Signature

Consent Authority: GREATER HUME COUNCIL

Date of Endorsement: 05/10/2022

Subdivision Certificate Number: 15.2021.252.1

File Number: 10.2021.252.1

Plans Used in the preparation of this survey

DP202838, DP247656, DP393092, DP499078, DP606508, ~~DP753731~~, DP1023385, DP1181658, 1452.1668, 19610.1603

Statement of intention to dedicate public roads, create public reserves and drainage reserves, acquire/resume land.

Surveyor's Reference 32742

Signatures, Seals and Section 88B Statements should appear on the following sheet(s)

Plan Form 6_Digital (2021)	**Deposited Plan Administration Sheet**	Sheet 2 of ~~5~~ 4
Registered 8/11/2022 OFFICE USE ONLY	DP1287711	

Plan of Subdivision of lot 582 in DP606508 and lot 159 in DP753731

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2017*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

Subdivision Certificate Number: 15.2021.252.1

Date of Endorsement: 05/10/2022

LOT NUMBER	SUB-ADDRESS NUMBER	ADDRESS NUMBER	ROAD NAME	ROAD TYPE	LOCALITY NAME
1		29	WALLA WALLA	ROAD	WALLA WALLA
2		104	COMMERCIAL	STREET	WALLA WALLA
3		116	COMMERCIAL	STREET	WALLA WALLA

Surveyor's Reference 32742

Plan Form 6_Digital (2021)	**Deposited Plan Administration Sheet**	Sheet 3 of ~~5~~ 4
Registered 8/11/2022 OFFICE USE ONLY	DP1287711	

Plan of Subdivision of lot 582 in DP606508 and lot 159 in DP753731

Subdivision Certificate Number
15.2021.252-1

Date of Endorsement
05/10/2022

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2017*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919, AS AMENDED, IT IS INTENDED TO create:

1. Easement to drain water and Easement to drain sewage 3 Wide (E1)

Surveyor's Reference 32742

Plan Form 6_Digital (2021)	**Deposited Plan Administration Sheet**	Sheet 4 of ~~5~~4
Registered 8/11/2022 OFFICE USE ONLY	DP1287711	
Plan of Subdivision of lot 582 in DP606508 and lot 159 in DP753731	This sheet is for the provision of the following information as required: • A schedule of lots and addresses - See 60(c) *SSI Regulation 2017* • Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919* • Signatures and seals- see 195D *Conveyancing Act 1919* • Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.	
Subdivision Certificate Number: 15.2021.252.1 Date of Endorsement: 05/10/2022		

Name of Registered Proprietor:
RUSSELL WAYNE SCHROETER

Signature of the Registered Proprietor:

Name of Registered Proprietor:

Signature of the Registered Proprietor:

Surveyor's Reference 32742

APPENDIX B:

Photographs of the Land and surrounding area

Photograph 1:

The Land (looking northeast from the southwest lot boundary corner of the Land at the road intersection of Commercial Street and Walla Walla Road).

Photograph 2:

The southern lot boundary of the Land (looking east from the southwest lot boundary corner of the Land at the road intersection of Commercial Street and Walla Walla Road).

Photograph 3:

The eastern lot boundary of the Land (looking north from the southeast lot boundary corner of the Land from Walla Walla Road).

Photograph 4:

The Land (looking northwest from the southeast lot boundary corner of the Land from Walla Walla Road).

Photograph 5:

The southern lot boundary of the Land (looking west from the southeast lot boundary corner of the Land from Walla Walla Road).

Photograph 6:

The Land (looking southeast from the northwest lot boundary corner of the Land from Commercial Street).

Photograph 7:

The western lot boundary of the Land (looking south from the northwest lot boundary corner of the Land from Commercial Street).

Photograph 8:

The northern lot boundary of the Land (looking east from the northwest lot boundary corner of the Land from Commercial Street).

Photograph 9:

The Land (looking southwest from the northeast lot boundary corner of the Land from the Walla Walla Recreation Reserve).

Photograph 10:

The northern lot boundary of the Land (looking west from the northeast lot boundary corner of the Land from the Walla Walla Recreation Reserve).

Photograph 11:

The eastern lot boundary of the Land (looking south from the northeast lot boundary corner of the Land from the Walla Walla Recreation Reserve).

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APPENDIX C:

Riverina Murray Regional Plan 2041

	Planning Proposal consistency
Objectives and actions of the *Riverina Murray Regional Plan 2041*	
Strategy 5.3 New urban development will:	
• *avoid constraints and hazards* • *minimise land use conflict with other uses, including agricultural land, freight corridors, industrial uses, and energy developments and corridors* • *protect sensitive land uses from sources of air pollution such as major roads, freight routes, and railway lines, using appropriate development controls and design solutions* • *protect areas of high environmental value and, ideally, avoid removal* • *be integrated with existing urban areas* • *provide a variety of housing that reflects community need* • *integrate land use and transport planning, including outcomes that support public and active transport opportunities* • *protect the viability of city and town centres* • *protect and enhance local character* • *consider access to existing, or provide new, services and infrastructure as an area is developed* • *be designed to support walking and cycle friendly neighbourhoods and connect to existing active transport networks* • *accord with staging and release plans.*	Consistent: The Planning Proposal provides for residential subdivision and development opportunities (approximately 38 new residential lots subject to Council approval) which will (incrementally) contribute to the social and economic fabric of Walla Walla township and local areas through (incremental) population growth which in turn will support employment generating commercial, industrial and agricultural businesses. The Planning Proposal is supported by the following specialist reports – • **Appendix G: Infrastructure report**, • **Appendix H: Traffic Impact Assessment report**, • **Appendix I: Preliminary Site Investigation report**, • **Appendix J: Aboriginal Cultural Heritage Due Diligence report**, and • **Appendix K: Bushfire Assessment report**.

Housing

In regard to the strategy to "*provide a variety of housing that reflects community need"* the *Riverina Murray Regional Plan 2041* notes (p. 28) that "*Stronger than anticipated population growth has exhausted serviced land supply in some areas and new growth opportunities will be required to meet demand.*"

In Walla Walla there are significant tracts of undeveloped RU5, R2 and R5 land (refer to **Figure 3**). Whilst this land may be zoned permitting residential development, anecdotally, this land is not available for development. This is simply because the owner/s of the land do not wish to develop and/or sell their land for development. It may be the case that some land owners wish to develop their land in the future but certainly not at the moment. This situation is not unusual. In this regard the comment in the *Riverina Murray Regional Plan 2041* (p. 28) that "*Not all factors affecting housing shortages and diversity can be directly addressed through the planning system…*" is considered apt.

Therefore, in regard to current land supply and demand in Walla Walla, whilst there is appropriately zoned land for residential development there is no or limited available 'supply' of it in the form of willing developers and sellers.

The subject Planning Proposal has been initiated by the Proponent who is a willing developer and seller. In this regard 'supply' has a chance of meeting 'demand', and therefore relevant residential objectives and actions of the *Riverina Murray Regional Plan 2041* have a chance of being met in the not so unusual circumstances of Walla Walla.

Servicing and infrastructure provision

In regard to the strategy "*consider access to existing, or provide new, services and infrastructure as an area is developed*" it is noted that the Land is already connected or has access to reticulated water, sewer, stormwater, electricity, natural gas, and telecommunications services which adequate capacity to accommodate the expected 38 additional future residential lots. In regard to services provided by Council, the eventual residential subdivision of the Land would be subject to the Council's normal 'developer contribution' fees and charges. Likewise, in regard to services provided by Riverina Water. The Land would be unable to be physically developed until all relevant service authorities have provided their consent via the normal development application process for land subdivision.

APPENDIX D:

Greater Hume Local Strategic Planning Statement 2020

	Planning Proposal consistency
Strategic Vision, intent and priorities	
Planning Priority One – Housing and Land Supply	
Rationale	
Greater Hume will strive to provide opportunities in the townships and their surrounds that offer diversity of housing choice that meets the needs of the growing and changing community. *…*	Consistent: The Planning Proposal provides for residential subdivision and development opportunities (approximately 38 new residential lots) which will (incrementally) contribute to the social and economic fabric of Walla Walla township and local areas through (incremental) population growth which in turn will support employment generating commercial, industrial and agricultural businesses.
To deliver this planning priority, Council will:	
Monitor the uptake of residential land in the towns and villages and investigate future residential areas (as identified on the town maps). These areas will:	
• *Be located to avoid areas that are identified as important agricultural land or areas that create potential for land use conflict;*	Consistent: The Land is not identified as important agricultural land or an area that may create potential for land use conflict.
• *Align with the utility infrastructure network and its capabilities;*	Consistent: Prior consultation has been carried out with GHC in regard to road and reticulated sewer and stormwater infrastructure and Riverina Water in regard to reticulated water infrastructure and other service agencies have also been consulted as documented in the Infrastructure Report at **Appendix G: Infrastructure report**.
• *Avoid or mitigate the impacts of hazards, including the implications of climate change;*	Consistent: The Land is not identified as flood-prone land or contaminated land as documented in the preliminary site investigation report at **Appendix H: Preliminary Site Investigation report** and is partly identified as bushfire-prone land as documented in the Bushfire Assessment report at **Appendix K: Bushfire Assessment report**.
• *Protect areas with high environmental value and/or cultural heritage value and important biodiversity corridors;*	Consistent: The Land is not identified as an area of high environmental value or an important biodiversity corridor or an area of Aboriginal cultural heritage value as documented in the report provided at **Appendix I: Aboriginal Cultural Heritage Due Diligence report**.
• *Not hinder development or urban expansion and will contribute to the function of existing townships;*	
• *Create new neighbourhoods that are environmentally sustainable, socially inclusive, easy to get to, healthy and safe.*	The existing residential and streetscape character of the RU5 zone areas surrounding the Land would not be impacted as a result of future residential development because all proposed further subdivision and residential land use would fit and be compatible with established character through same or similar lot areas, dimensions, orientation and outlook with connecting and integrated street and services infrastructure. The practical effect of the Planning Proposal is that approximately 38 additional residential lots would be created in the future at lot sizes consistent with adjoining residential subdivision lot pattern and character.[5]
• *Investigate a mixture of smaller and larger residential lots in the towns and villages to create opportunity, respond to future demand, and to provide a range of housing options.*	

[5] Subject to a separate Development Application process including public notification and assessment by the Council.

Planning Priority Three - Utility Infrastructure	
Rationale	
Infrastructure is critical to the proper functioning and wellbeing of the community both now and in the future. *As the towns and villages continue to grow within Greater Hume, it is important to provide infrastructure in the right place at the right time.* *Understanding the current capacity and planned investments in utility infrastructure in the towns and villages will enable Council to capitalise on opportunities for economic and housing growth.* *...* *Aligning these utility infrastructure projects with future growth opportunities and Councils Delivery Program (2017-2021) and Operational Plan (2019-2020) is a key initiative of this planning priority.* *...*	Consistent: Prior consultation has been carried out with GHC in regard to road and reticulated sewer and stormwater infrastructure and Riverina Water in regard to reticulated water infrastructure and other service agencies have also been consulted as documented in the Infrastructure Report at **Appendix G: Infrastructure report**.
Planning Priority Nine - Climate change and natural hazards	
Rationale	
... *When planning and developing new urban areas, design and environmental considerations such as vegetation, water management (water sensitive urban design) and energy efficiency will be incorporated into the decision-making process. This will assist our communities to build resilience to climate change.*	Consistent: The Planning Proposal has been prepared in regard to the opportunities and constraints of the Site through and site analysis and design response process, with the likely future subdivision and development of the Land documented in **Figure 5: Possible future subdivision of the Land following implementation of the Planning Proposal (subject to separate DA process)**.

APPENDIX E:

State Environmental Planning Policies

State Environmental Planning Policy	Applicable?	Aims or principles of policy, if applicable?	Consistent?	Assessment
State Environmental Planning Policy (Biodiversity and Conservation) 2021	Yes	*<u>Chapter 2 Vegetation in non-rural areas</u>* *Part 2.1 Preliminary* *2.1 Aims of Chapter* *The aims of this Chapter are—* *(a) to protect the biodiversity values of trees and other vegetation in non-rural areas of the State, and* *(b) to preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation.* *<u>Chapter 4 Koala habitat protection 2021</u>* *Part 4.1 Preliminary* *4.1 Aim of Chapter* *This Chapter aims to encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free-living population over their present range and reverse the current trend of koala population decline.*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land
State Environmental Planning Policy (Exempt & Complying Development Codes) 2008	Yes	*This Policy aims to provide streamlined assessment processes for development that complies with specified development standards by—* *(a) providing exempt and complying development codes that have State-wide application, and* *(b) identifying, in the exempt development codes, types of development that are of minimal environmental impact that may be carried out without the need for development consent, and* *(c) identifying, in the complying development codes, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Act, and* *(d) enabling the progressive extension of the types of development in this Policy, and* *(e) providing transitional arrangements for the introduction of the State-wide codes, including the amendment of other environmental planning instruments.*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land
State Environmental Planning Policy (Housing) 2021	Yes	*3 Principles of Policy* *The principles of this Policy are as follows—* *(a) enabling the development of diverse housing types, including purpose-built rental housing,* *(b) encouraging the development of housing that will meet the needs of more vulnerable members of the community, including very low to moderate income households, seniors and people with a disability,* *(c) ensuring new housing development provides residents with a reasonable level of amenity,* *(d) promoting the planning and delivery of housing in locations where it will make good use of existing and planned infrastructure and services,* *(e) minimising adverse climate and environmental impacts of new housing development,* *(f) reinforcing the importance of designing housing in a way that reflects and enhances its locality,* *(g) supporting short-term rental accommodation as a home-sharing activity and contributor to local economies, while managing the social and environmental impacts from this use,* *(h) mitigating the loss of existing affordable rental housing.*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land
State Environmental Planning Policy (Industry and Employment) 2021	Yes	*<u>Chapter 3 Advertising and signage</u>* *Part 3.1 Preliminary* *3.1 Aims, objectives etc* *(1) This Chapter aims—* *(a) to ensure that signage (including advertising)—* *(i) is compatible with the desired amenity and visual character of an area, and* *(ii) provides effective communication in suitable locations, and* *(iii) is of high quality design and finish, and* *(b) to regulate signage (but not content) under Part 4 of the Act, and* *(c) to provide time-limited consents for the display of certain advertisements, and* *(d) to regulate the display of advertisements in transport corridors, and*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land

State Environmental Planning Policy	Applicable?	Aims or principles of policy, if applicable?	Consistent?	Assessment
		(e) to ensure that public benefits may be derived from advertising in and adjacent to transport corridors. *(2) This Chapter does not regulate the content of signage and does not require consent for a change in the content of signage.*		
State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development	Yes	*2 Aims, objectives etc* *(1) This Policy aims to improve the design quality of residential apartment development in New South Wales.*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land
State Environmental Planning Policy (Planning Systems) 2021	Yes	*Chapter 2 State and regional development* *Part 2.1 Preliminary* *2.1 Aims of Chapter* *The aims of this Chapter are as follows—* *(a) to identify development that is State significant development,* *(b) to identify development that is State significant infrastructure and critical State significant infrastructure,* *(c) to identify development that is regionally significant development.*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land
State Environmental Planning Policy (Resilience and Hazards) 2021	Yes	*Chapter 4 Remediation of land* *4.1 Object of this Chapter* *(1) The object of this Chapter is to provide for a Statewide planning approach to the remediation of contaminated land.* *(2) In particular, this Chapter aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment—* *(a) by specifying when consent is required, and when it is not required, for a remediation work, and* *(b) by specifying certain considerations that are relevant in rezoning land and in determining development applications in general and development applications for consent to carry out a remediation work in particular, and* *(c) by requiring that a remediation work meet certain standards and notification requirements.*	Yes	The Planning Proposal does not derogate the aims of *State Environmental Planning Policy (Resilience and Hazards) 2021.* For the purposes of clause 4.6 of *State Environmental Planning Policy (Resilience and Hazards) 2021* and *Managing Land Contamination: Planning Guidelines* (DUAP & EPA, 1998) the Land: • is not located within an "investigation area" which means land declared to be an investigation area by a declaration in force under Division 2 of Part 3 of the *Contaminated Land Management Act 1997*; and • is not land on which development for a purpose referred to in Table 1 to the *Managing Land Contamination: Planning Guidelines* (DUAP & EPA, 1998) is being, or is known to have been, carried out. The Land is not listed on Council's contaminated land register. A Preliminary Site Investigation report is provided at **Appendix I**.
State Environmental Planning Policy (Sustainable Buildings) 2022	Yes	*1.3 Aims of Policy* *The aims of this Policy are as follows—* *(a) to encourage the design and delivery of sustainable buildings,* *(b) to ensure consistent assessment of the sustainability of buildings,*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land

State Environmental Planning Policy	Applicable?	Aims or principles of policy, if applicable?	Consistent?	Assessment
		(c) to record accurate data about the sustainability of buildings, to enable improvements to be monitored, *(d) to monitor the embodied emissions of materials used in construction of buildings,* *(e) to minimise the consumption of energy,* *(f) to reduce greenhouse gas emissions,* *(g) to minimise the consumption of mains-supplied potable water,* *(h) to ensure good thermal performance of buildings.*		
State Environmental Planning Policy (Transport and Infrastructure) 2021	Yes	*<u>Chapter 2 Infrastructure</u>* *2.1 Aim of Chapter* *The aim of this Chapter is to facilitate the effective delivery of infrastructure across the State by—* *(a) improving regulatory certainty and efficiency through a consistent planning regime for infrastructure and the provision of services, and* *(b) providing greater flexibility in the location of infrastructure and service facilities, and* *(c) allowing for the efficient development, redevelopment or disposal of surplus government owned land, and* *(d) identifying the environmental assessment category into which different types of infrastructure and services development fall (including identifying certain development of minimal environmental impact as exempt development), and* *(e) identifying matters to be considered in the assessment of development adjacent to particular types of infrastructure development, and* *(f) providing for consultation with relevant public authorities about certain development during the assessment process or prior to development commencing, and* *(g) providing opportunities for infrastructure to demonstrate good design outcomes.* *<u>Chapter 3 Educational establishments and child care facilities</u>* *3.1 Aims of Chapter* *The aim of this Chapter is to facilitate the effective delivery of educational establishments and early education and care facilities across the State by—* *(a) improving regulatory certainty and efficiency through a consistent planning regime for educational establishments and early education and care facilities, and* *(b) simplifying and standardising planning approval pathways for educational establishments and early education and care facilities (including identifying certain development of minimal environmental impact as exempt development), and* *(c) establishing consistent State-wide assessment requirements and design considerations for educational establishments and early education and care facilities to improve the quality of infrastructure delivered and to minimise impacts on surrounding areas, and* *(d) allowing for the efficient development, redevelopment or use of surplus government-owned land (including providing for consultation with communities regarding educational establishments in their local area), and* *(e) providing for consultation with relevant public authorities about certain development during the assessment process or prior to development commencing, and* *(f) aligning the NSW planning framework with the National Quality Framework that regulates early education and care services, and* *(g) ensuring that proponents of new developments or modified premises meet the applicable requirements of the National Quality Framework for early education and care services, and of the corresponding regime for State regulated education and care services, as part of the planning approval and development process, and* *(h) encouraging proponents of new developments or modified premises and consent authorities to facilitate the joint and shared use of the facilities of educational establishments with the community through appropriate design.*	Yes	The Planning Proposal does not alter the provisions and application of this Policy to the Land

APPENDIX F:

Directions or key government priority under section 9.1(2) of the *Environmental Planning and Assessment Act 1979*

Local Planning Directions	Applicable?	Requirement	Consistency? (consistent; justifiably inconsistent; inconsistent)
Focus area 1: Planning Systems			
1.1 Implementation of Regional Plans	Yes	*Planning proposals must be consistent with a Regional Plan released by the Minister for Planning.*	Consistent: The Planning Proposal is consistent with the *Riverina Murray Regional Plan 2041* as set out in **Appendix C: *Riverina Murray Regional Plan 2041***.
1.3 Approval and Referral Requirements	Yes	*LEP provisions should encourage the efficient and appropriate assessment of development*	Consistent: The Planning Proposal only proposes Land Zoning and Minimum Lot Size mapping changes.
1.4 Site Specific Provisions	Yes	*Unnecessarily restrictive site specific planning controls are discouraged*	Consistent: The Planning Proposal only proposes Land Zoning and Minimum Lot Size mapping changes.
Focus area 3: Biodiversity and Conservation			
3.1 Environment Protection Zones	Yes	*Environmentally sensitive areas should be protected and conserved*	Consistent: The Land is not known to contain any environmentally sensitive areas and the Planning Proposal does not derogate the objective of this Direction.
3.2 Heritage Conservation	Yes	*Items, areas, objects and places of environmental heritage significance and indigenous heritage significance should be conserved*	Consistent: The Land is not known to contain any items, areas, objects or places of historical or Aboriginal cultural heritage significance having been assessed in **Appendix H: Aboriginal Cultural Heritage Due Diligence report** and the Planning Proposal does not derogate the objective of this Direction.
3.5 Recreation Vehicle Areas	Yes	*Sensitive land or land with significant conservation values should be protected from adverse impacts from recreation vehicles*	Consistent: No recreation vehicle areas are proposed.
3.6 Strategic Conservation Planning	Yes	*Areas with high biodiversity value should be protected, conserved or enhanced.*	Consistent: The Land is not known to contain any high biodiversity value areas and the Planning Proposal does not derogate the objective of this Direction.
Focus area 4: Resilience and Hazards			
4.3 Planning for Bushfire Protection	Yes	*To protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas and to encourage sound management of bush fire prone areas*	Consistent: Acceptable outcomes are achieved as set out in **Appendix K: Bushfire Assessment report**.
4.4 Remediation of Contaminated Land	Yes	*To reduce the risk of harm to human health and the environment by ensuring that contamination and remediation are considered*	Consistent: The Land – • is not located within an "investigation area" which means land declared to be an investigation area by a declaration in force under Division 2 of Part 3 of the *Contaminated Land Management Act 1997*, and • is not land on which development for a purpose referred to in Table 1 to the *Managing Land Contamination: Planning Guidelines* (DUAP & EPA, 1998) is being, or is known to have been, carried out. The Land is not listed on Council's contaminated land register. An investigation report is provided at **Appendix I: Preliminary Site Investigation report**.
Focus area 5: Transport and Infrastructure			
5.1 Integrating Land Use and Transport	Yes	*To ensure that urban structures, building forms, land use locations, development designs, subdivision and street layouts achieve the following planning objectives:* *(a) improving access to housing, jobs and services by walking, cycling and public transport, and*	Consistent: The Land has access to the local road network, with all adjoining roads being 'local roads' under control of GHC. A traffic report is provided at **Appendix H: Traffic Impact Assessment report**.

Local Planning Directions	Applicable?	Requirement	Consistency? (consistent; justifiably inconsistent; inconsistent)
		(b) increasing the choice of available transport and reducing dependence on cars, and *(c) reducing travel demand including the number of trips generated by development and the distances travelled, especially by car, and* *(d) supporting the efficient and viable operation of public transport services, and* *(e) providing for the efficient movement of freight.*	
Focus area 6: Housing			
6.1 Residential Zones	Yes	*A variety and choice of housing types to provide for existing and future housing needs is encouraged, as well as making efficient use of and providing access to existing infrastructure and services, and minimising the impact of residential development on the environment and resources.*	Consistent: The Planning Proposal provides for residential subdivision development opportunities (approximately 38 residential lots) and any future development of the Land would need to be consistent with the 'objectives' of the RU5 Village Zone – • *To provide for a range of land uses, services and facilities that are associated with a rural village.* • *To protect the amenity of residents.*
6.2 Caravan Parks and Manufactured Home Estates	Yes	*Providing for a variety of housing types and opportunities for caravan parks and manufactured home estates is encouraged*	Consistent: The Land does not contain any existing caravan parks or manufactured home estates and the Planning Proposal does not derogate the objective of this Direction.

APPENDIX G:

Infrastructure Report

Premise

ANNESLEY HOLDINGS PTY LTD

116 COMMERCIAL STREET, WALLA WALLA

INFRASTRUCTURE REPORT

Report/Reference No: 32742
Rev: A
14 September 2023

DOCUMENT AUTHORISATION			
Revision	**Revision Date**	**Author**	**Review**
Rev A	14/09/23	A Musunuru	I Bignell

Scope

This report is associated with the proposed development of a 44-lot subdivision, across multiple stages, of land at Lots 2 & 3 of DP1287711, addressed as 104 and 116 Commercial Street, Walla Walla, NSW.

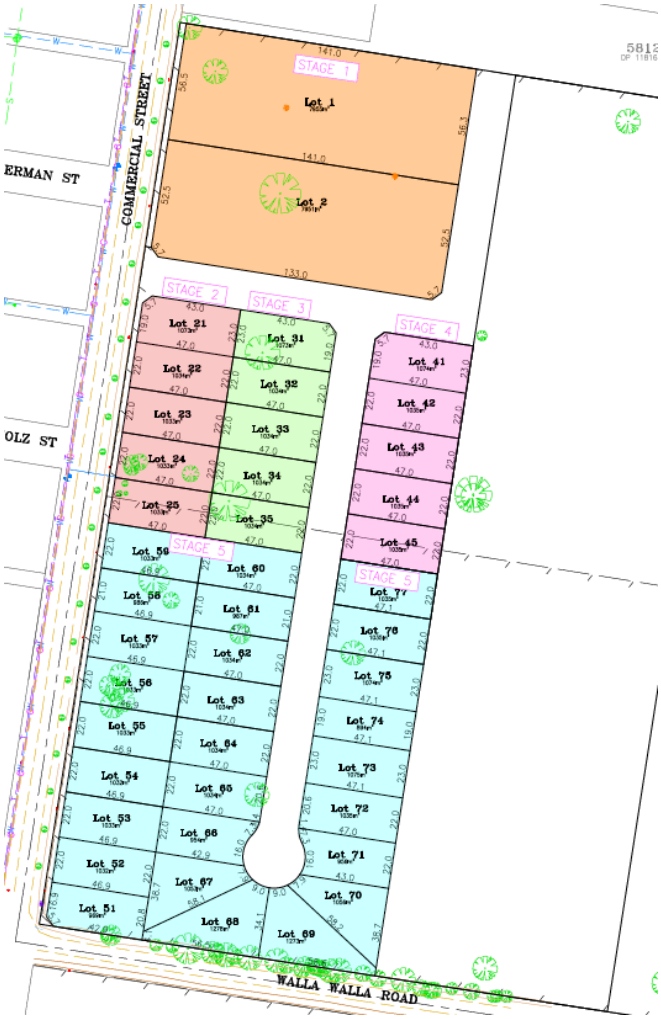

Figure 1 The Proposed Overall Layout of the Development, extract of plans provided with this application.

Methodology

Service authorities have been contacted and their servicing of the proposed development area investigated. All the existing & proposed services are detailed in the plans provided with this application.

➢ WATER

Responsible Authority: Riverina Water

Riverina Water has confirmed that the current capacity at the Walla Walla Reservoir is 450 kilolitres with a 95% peak day demand already exceeding this by an additional 60 kilolitres to 510kL. The proposed 44 lots (2 Industrial and 42 Residential lots) would incur an additional 160KL on top that accumulates to above a 30% over capacity at peak day demand.

Basic Stats:

- Existing Walla Walla Reservoir:
  - TWL 235.8m AHD
  - Capacity 450kL
- 95% Peak Day Demands (based on 5 years of historical daily demand data) is 510kL.
- 44 future lots @ 3.8kL/day (peak day's demand) = 160kL

After several discussions, Riverina water will allow the first 2 stages (2 Commercial and 5 residential lots) to be connected to the existing 100mm water main on commercial street as shown in figure 2.

In regard to Stages 3 – 5 (37 Residential lots) a broader discussion with Greater Hume council and information is required to determine the strategic future growth plan is for Walla Walla so RWCC can facilitate and plan the necessary upgrades / services to supplement and supply adequate water pressure and flow.

Figure 2 Existing 100mm diameter Water main on Commercial Street

➢ **STORMWATER**

Responsible Authority: Greater Hume Council

The land is falling to the North-West, with drainage concept demonstrated in the provided plans. Drainage will be connected to the existing waterway to the North of the property, connecting to existing culvert along Edwards Street as shown in Figure 3. Further detailed drainage calculations will be completed during the design phase.

Figure 3 Location of existing waterway and culvert.

➢ **GAS**

Responsible Authority: APA Gas

There is an existing medium pressure gas main running along the commercial street as shown in figure 4, which can be used to service this subdivision. The gas main location has been determined by conducting a dial before your dig search on 19/10/2022.

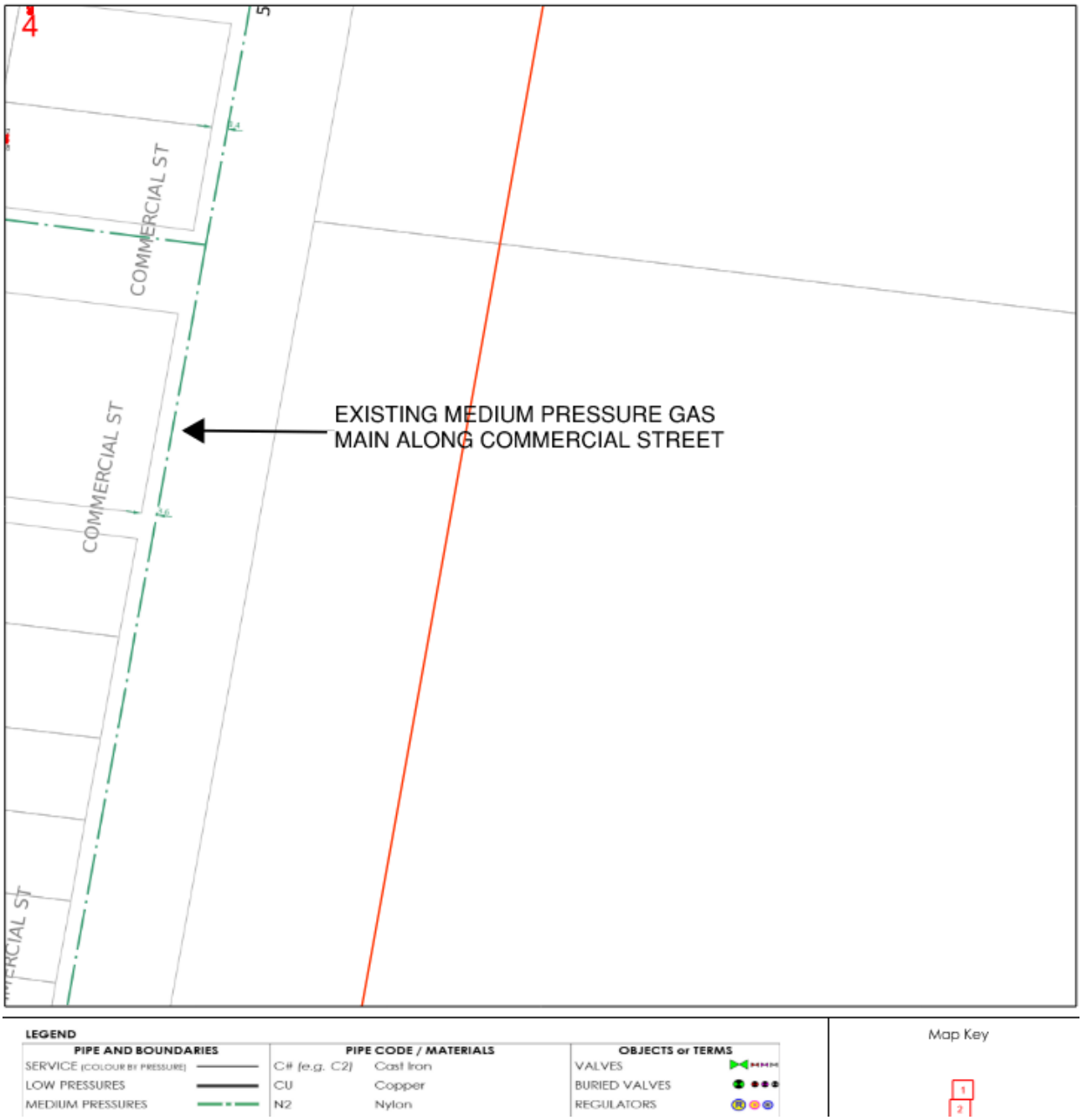

Figure 4 Location of existing medium pressure gas main

➢ **SEWER**

Responsible Authority: Greater Hume Council

A sewer pump station and rising main discharging into a council nominated manhole will be installed to service this subdivision as there are no existing sewer mains nearby to service these proposed lots. Please refer to figure 5.

Figure 5 Location of Proposed pumpstation and Council nominated manhole.

➢ **ELECTRICITY**

Responsible Authority: Essential Energy

There are existing low voltage and high voltage overhead powerlines running along Commercial Street and Walla Walla Road which will be used to service this subdivision as shown in figure 6. An electrical substation will be installed to provide electricity to all proposed lots and the proposed sewer pump station. The existing electrical asset's location has been determined by conduction a dial before you dig search on 19/10/2022.

Figure 6 Location of existing powerlines.

➢ **TELECOMMUNICATION**

Responsible Authority: NBN

This new development can be serviced via the existing NBN fixed wireless satellite service. Please refer to figure 7.

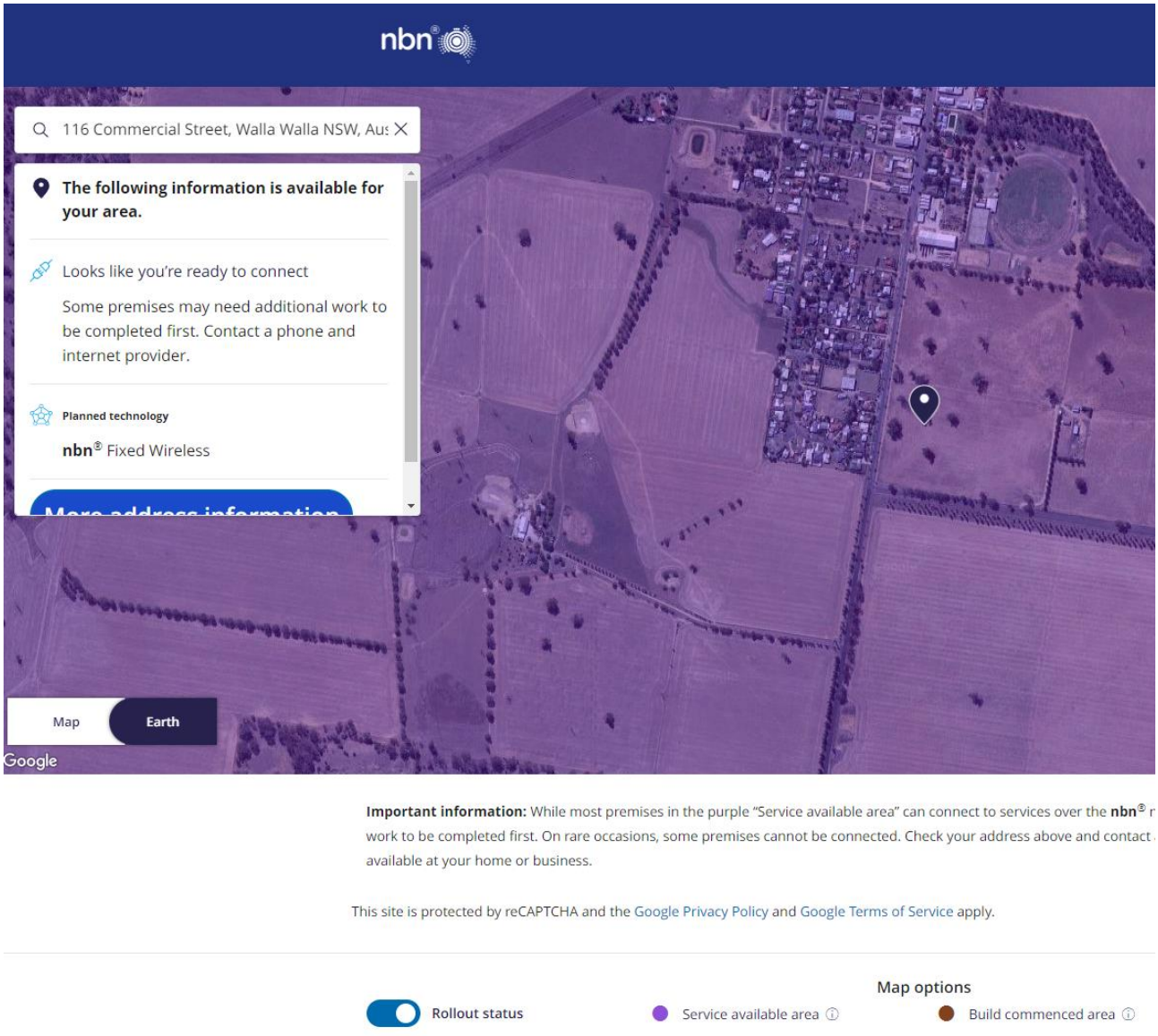

Figure 7 NBN fixed wireless map.

APPENDIX H:

Traffic Impact Assessment report

TRAFFICWORKS™

Traffic Impact Assessment Report

Commercial Street and Walla Walla Road, Walla Walla, NSW

Project Number 220916
Final Report 8/08/2023

Client Annesley Holdings Pty Ltd

TRAFFICWORKS™

Document control record

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Document control	
Report title	Commercial Street and Walla Walla Road, Walla Walla, NSW
Project number	220916
Client	Annesley Holdings Pty Ltd
Client contact	James Laycock (Blueprint Planning)

Revision	**Date issued**	**Revision details / status**	**Prepared by**	**Authorised by**
Draft	31/07/2023	Preliminary draft	Said Diria	Kate Kennedy
Final	8/08/2023	Final	Said Diria	Kate Kennedy

TRAFFICWORKS™

Executive summary

Blueprint Planning on behalf of Annesley Holdings Pty Ltd, engaged Trafficworks to undertake a traffic impact assessment (TIA) for the proposed development of a residential subdivision at the intersection of **Commercial Street and Walla Walla Road, Walla Walla, NSW**.

The table below summarises the site and the proposed development, and our conclusions and recommendations.

Address	Intersection of Commercial Street and Walla Walla Road, Walla Walla, NSW
Zoning	Village (RU5) / Large Lot Residential (R5)
Proposed development	Residential subdivision
Road network	Commercial Street Walla Walla Road
Traffic generation	Daily and peak hour traffic volumes of: — 800 vpd — 68 vph
Conclusion	We conclude there are no traffic engineering reasons that would prevent the development from proceeding, subject to implementation of our recommendations. — The SISD requirement of 97 m for a 50 km/h design speed is satisfied along Commercial Street north and south of the proposed site access location. — The sight distance available east and west of the proposed access along Walla Walla Road is appropriate. — Traffic calming devices should be considered on the development's internal road as it has a straight section of road that exceeds 250 m. — The site's frontage along Walla Walla Road within the land zoned R5: Large Lot Residential will likely remain unchanged post-development to ensure it reflects a rural type of environment (i.e. no footpaths and kerb and channel) expected within a low-density residential area. — Both the site accesses along Commercial Street and Walla Walla Road meet the turn warrants for BAR/BAL turn lanes.

	— No additional work is required at both the proposed site access along Commercial Street and Walla Walla Road to accommodate the development traffic.
Recommendations	It is recommended that: — **Recommendation 1:** the 50 km/h speed zone on Walla Walla Road is extended east of the site post development. — **Recommendation 2:** during detailed design, the shared driveways along Commercial Street and the individual driveways along the development's internal road should be checked to confirm they meet the ESD requirements of 40 m as stipulated in AS/NZS 2890.1. — **Recommendation 3:** lot boundary fence design should achieve the sight distance to pedestrians required in AS/NZS 2890.1. — **Recommendation 4:** all internal roads, court bowls and driveway accesses should be constructed to the Greater Hume Shire Engineering Guidelines for Subdivisions and Development Standards. — **Recommendation 5:** all residential lots will have direct kerbside waste collection either along Commercial Street or the internal road network depending on their location. — **Recommendation 6:** traffic calming treatments should be installed at spacings of 80 m – 120 m on subdivision roads with straight lengths greater than 250 m. — **Recommendation 7:** the site's frontage along Walla Walla Road and Commercial Street within zone RU5: Village should be constructed consistent with an urban environment, including footpath and kerb and channel.

Referenced documents

References used in the preparation of this report include the following:

- Australian Standards:
  - AS/NZS 2890.1 – Parking Facilities Part 1: Off-street car parking (AS/NZS2890.1)
- Austroads Guide to Road Design
  - Part 4A – Unsignalised and Signalised Intersections, for sight distance criteria and provision for turning vehicles at intersections (AGRD4)
- Austroads Guide to Traffic Management
  - Part 6 – Intersections, Interchanges and Crossings Management**,** for sight distance criteria and provision for turning vehicles at intersections (AGTM6)
  - Part 8 – Local Area Traffic Management (AGTM8)
- Greater Hume Shire Council
  - Local Environmental Plan 2010 (LEP).
  - Development Control Plan 2011 (DCP)
  - Engineering Guidelines for Subdivisions and Development Standards

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Table of Contents

1 Introduction

Blueprint Planning on behalf of Annesley Holdings Pty Ltd, engaged Trafficworks to undertake a traffic impact assessment (TIA) for the proposed development of a residential subdivision at the intersection of **Commercial Street and Walla Walla Road, Walla Walla, NSW**.

For detail about:

- existing site conditions – see section 2
- description of the proposed development – see section 3.1
- traffic impact of the proposed development – see section 3
- assessment of the access to the proposed development – see section 4
- our conclusions and recommendations – see section 5.

2 Existing conditions

2.1 Subject site

The subject site:

- is located at the corner of Walla Walla Road and Commercial Street in Walla Walla
- accommodates a rural dwelling with the balance of the land consisting of vacant farm land
- is south of the Walla Walla township
- consists of:
  - 29 Walla Walla Road, Lot 1 of DP1287711
  - 104 Commercial Street, Lot 2 of DP1287711
  - 116 Commercial Street, Lot 3 of DP1287711.

Vehicular access to the subject site is available from Walla Walla Road.

The street frontage lengths are as follows:

- Commercial Street: 440 m
- Walla Walla Road: 760 m.

Figure 1 shows the site's location, surrounded by farmland and residential properties.

Figure 1: Location plan (reproduced with permission from Nearmaps)

The majority of the subject site is zoned R5: Large Lot Residential (Lot 1 of DP1287711) and the remainder RU5: Village (lot 2-3 of DP1287711) per the Greater Hume Shire Council (council) Local Environmental Plan 2010 (LEP).

The surrounding land uses consist of the following:

- RU1: Primary Production (light brown)
- R2: Low Density Residential (dark pink)
- R5: Large Lot Residential (light pink)
- RU5: Village (dark brown).

Figure 2 shows the zoning for the site and surrounding area.

Figure 2: Zoning plan (reproduced from NSW ePlanning Spatial Viewer)

2.2 Road network

The road network includes:

- Walla Walla Road
- Commercial Street

2.2.1 Commercial Street

Table 1 describes the features of this road.

Table 1: Commercial Street features

Feature	Description
Road type	Regional road funded by Transport for NSW and managed by council
Access	Provides access between the intersection of Walla Cemetery Road / Klemke Avenue / Pioneer Drive to the north and the intersection of Walla Walla Road / Walla Walla Jindera Road to the south
Carriageway	10 m seal, no kerb and channel or shoulders

Feature	Description
Road reservation	24 m wide
Speed limit	Posted speed limit of 50 km/h, transitioning to 100 km/h approximately 190 m south of Walla Walla Road

Figure 3 and Figure 4 provide further information about the road.

Figure 3: Commercial Street facing south

Figure 4: Commercial Street facing north

2.2.2 Walla Walla Road

Table 2 describes the features of this road.

Table 2: Walla Walla Road features

Feature	Description
Road type	Local road managed by council
Access	Provides access between the intersection of Walla Walla Jindera Road / Commercial Street to the west and the intersection of Cross Street / Station Street to the east (near Olympic Highway)
Carriageway	7 m seal
Road reservation	20 m wide
Speed limit	Posted speed limit of 50 km/h, transitioning to 100 km/h approximately 100 m east of Commercial Street

Figure 5 and Figure 6 provide further information about the road.

Figure 5: Walla Walla Road facing west towards the T-intersection with Commercial Street

Figure 6: Walla Walla Road facing east

2.3 Traffic volumes

The existing traffic volumes along Commercial Street and Walla Walla Road were observed on site by Trafficworks on the 7 July 2023 between the hours of 4:00 pm - 5:00 pm within the school holidays. The existing traffic volumes during the PM peak were observed to be in the order of:

- 100 vehicles per hour (vph) along Commercial Street distributed evenly northbound and southbound
- 80 vph along Walla Walla Road distributed evenly eastbound and westbound.

It is assumed that the existing traffic volumes during the PM peak are similar to the AM peak.

It is likely that the typical traffic volumes would be slightly higher outside of the school holidays as a result of the two schools (St Paul's College and Walla Public School) within the locality.

2.4 Crash history

TfNSW Centre for Road Safety website details all injury crashes on roads throughout New South Wales and reports that no casualty crashes have occurred on the roads near the subject site in the last five years (2016 – 2020).

Based on this, we conclude that no crash trend requires immediate investigation.

2.5 Public transport

The subject site has no access to public transport with the exception of public school bus service (S850), that operates between Culcairn and Jindera Schools via Walla Walla. The closest bus stop is located along Market Street, an approximate 11-minute walk (850 m) north of the site.

2.6 Pedestrians and cyclists

There are currently no on-road or off-road bicycle paths within the vicinity of the subject site. Concerning pedestrians, Commercial Street has a footpath along its western side, and between Jacob Wenkie Dr – Wenke Street and Railway Street – Queen Street along its eastern side. There are no footpaths provided along Walla Walla Road.

3 Traffic assessment of the proposed development

3.1 The proposal

The subject site at full development will consist of the following:

- 12.11 ha of land zoned RU5 subdivided to include two large commercial developments on the north-western corner of the site (subject to their own future separate development application), **80 general residential lots** and an internal road network
- 22.89 ha of land zoned R5, with no indicative lot/internal road layout
    - based on the percentage of land used for road development within RU5 (approximately 17%) and the minimum subdivision lot size of 2 hectares (specific to the zone R5), the designated area can accommodate a maximum of **9 low density residential lots**.

The current assessment however will only consider the proposed residential subdivision within the area zoned RU5. The balance of the land within R5 will be subject to a separate development application in future.

Vehicular access to the general residential lots will be via the proposed internal road network which provides access to Commercial Street and Walla Walla Road. The only exception being the 14 residential lots along the site's western frontage which are expected to be accessed directly off Commercial Street via seven shared driveways.

Approximately half the area designated for development is currently zoned RU5 with the remaining area zoned R5. As a result, the remaining land will need to be rezoned accordingly as represented in Figure 7. Refer to Appendix 1 – Proposed zoning plan with proposed lots for the complete plan.

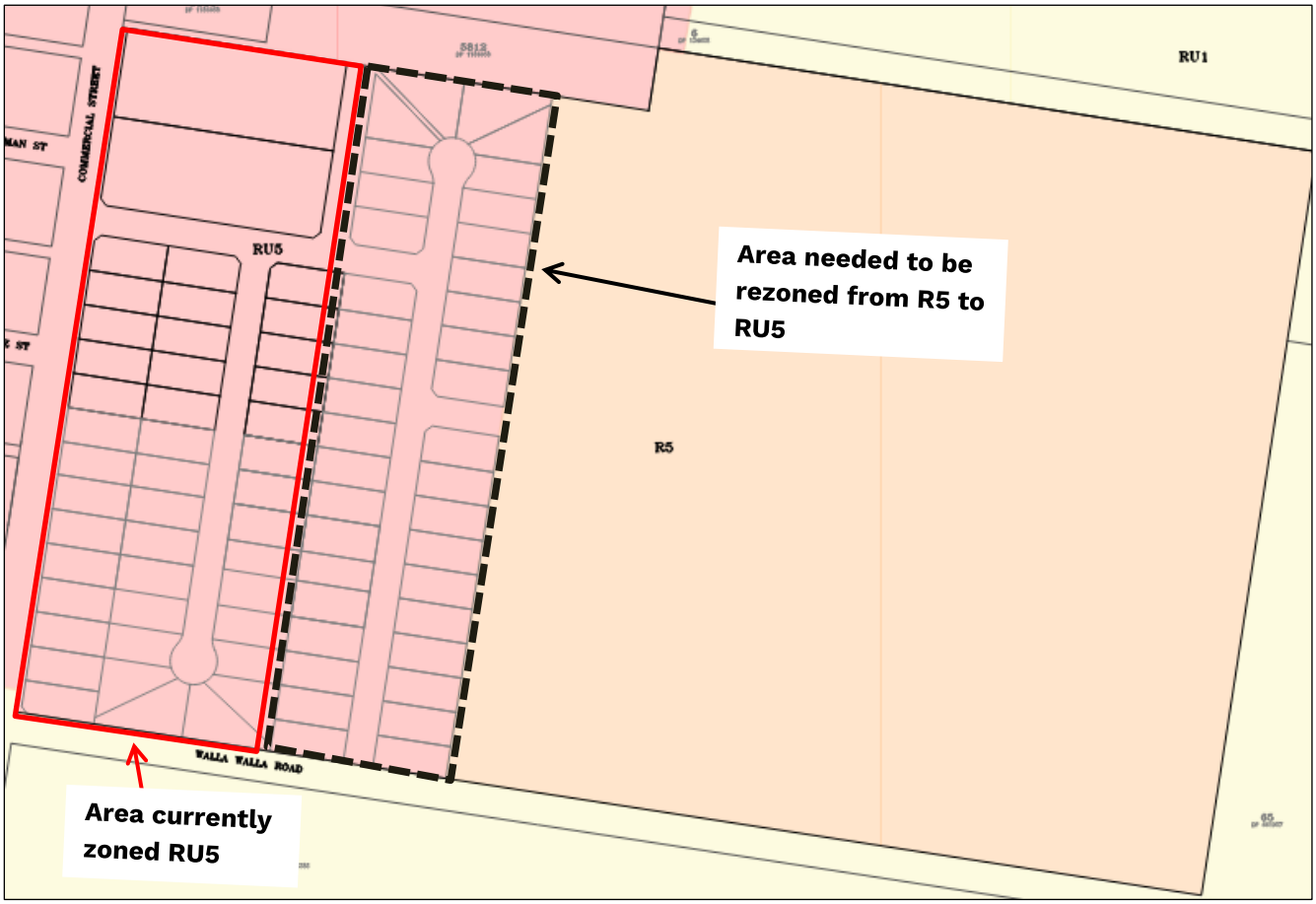


Figure 7: Proposed zoning plan with the proposed lots

3.2 Traffic generation

Traffic generation for new developments is typically estimated using the traffic generation rates provided in the RTA Guide to Traffic Generating Developments (2002).

The traffic generated by the proposed development is summarised in Table 3.

Table 3: Daily and peak traffic flow for the proposed development

Development type	Access	Trip Generation Rate		Trip Generation (No. of vehicles)	
		Peak Hour	Daily	Peak Hour	Daily
Residential subdivision	Internal access (66 lots)	0.85 vehicle trips per dwelling per hour	9 vehicle trips per dwelling per day	56	594
	Direct access via Commercial Street (14 lots)			12	126
Total				**68**	**800**

Table 3 demonstrates that the proposed development, when fully developed, is anticipated to generate approximately:

- 800 vehicles per day (vpd) to and from the development
- morning and afternoon peaks of 68 vehicles per hour (vph).

3.3 Traffic distribution assumptions

Our traffic distribution assumptions are that:

- AM peak – 80% departures / 20% arrivals
- PM peak – 30% departures / 70% arrivals

Based on the development's location from the Walla Walla town centre and neighbouring townships, it is anticipated that:

- 50% of the vehicles generated will travel to/from the north for work in neighbouring townships such as Culcairn, Henty and Wagga Wagga via Commercial Street
- 50% will travel to/from the south for work in Albury and Wodonga
    - 25%/25% split via Walla Walla Jindera Road and Walla Walla Road due to both routes having similar travel times and distances.

In regards to access into/out of the site it is expected that:

- all northbound vehicles will use the access along Commercial Street
- all vehicles travelling to/from the south via Walla Walla Road will use the access on Walla Walla Road
- vehicles travelling to/from the south via Walla Walla Jindera Road will be equally split between both accesses
- overall, there will be an approximate 37%/63% split between the access on Walla Walla Road and Commercial Street respectively.

3.4 Anticipated traffic volumes

It is assumed that the proposed residential development will be staged over eight years (10 - 12 lots per year). Assuming development begins in 2024 the site is expected to be fully developed by 2032.

Due to the site being located in a remote area, the growth on the surrounding road network by full development could be attributed to the additional traffic generated by the proposed development. However, to be conservative the existing traffic volumes along Commercial Street and Walla Walla Road were projected to 2032 adopting an annual compounded growth rate of 1%.

Figure 8 shows the anticipated peak hour traffic volumes at the proposed development in 2032.

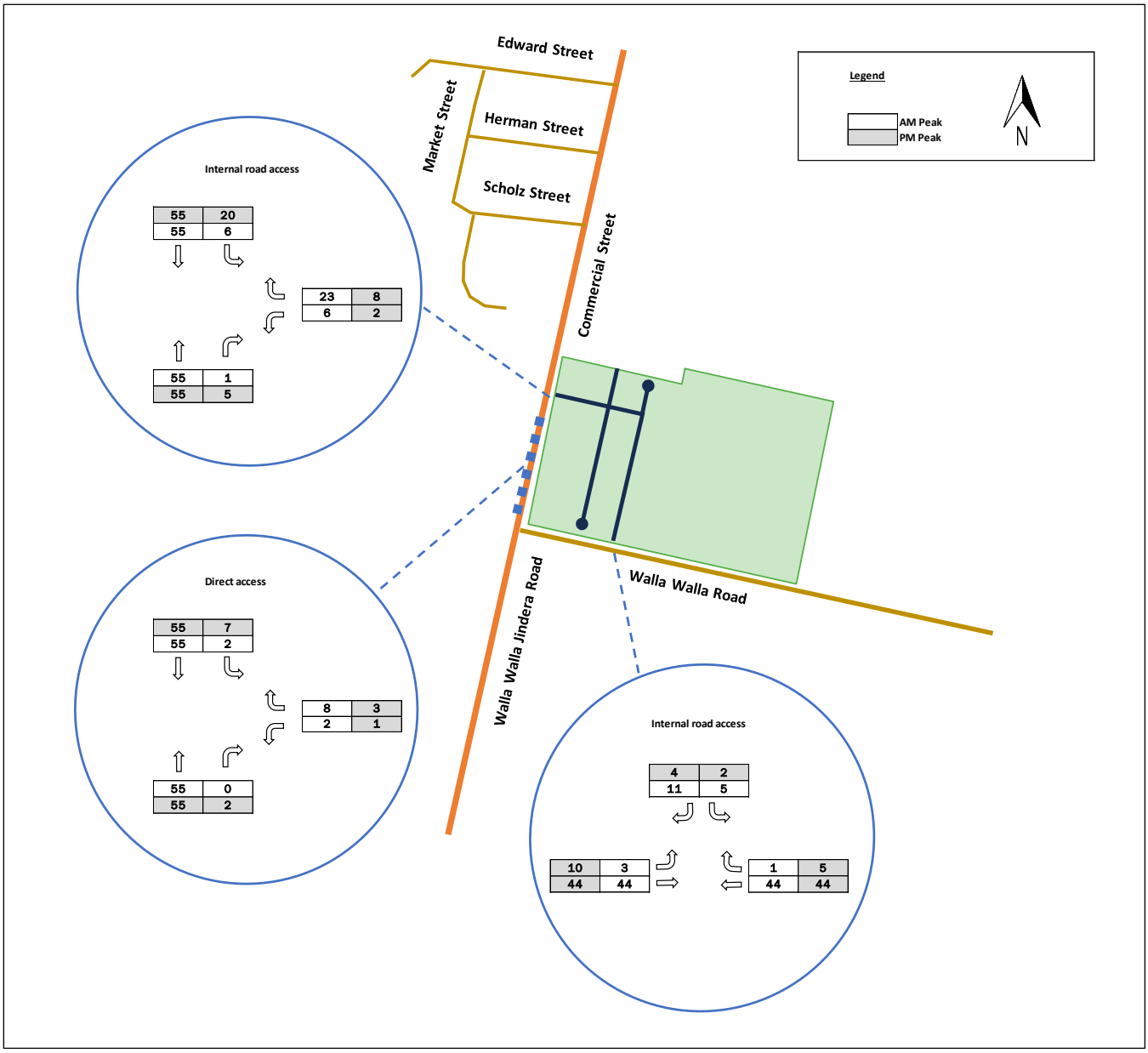


Figure 8: Anticipated peak hour traffic volumes at the proposed development in 2032.

4 Access to the site

4.1 Site access – Access road SISD requirement

The visibility criterion typically applied to intersections is Safe Intersection Sight Distance (SISD). Figure 9 shows the SISD, which:

- is nominated in the Austroads Guide to Road Design, Part 4A (AGRD4) as the minimum distance that should be provided on a major road at any intersection (refer to Section 3.2.2 in AGRD4A)
- provides sufficient distance for a driver of a vehicle on the major road:
  - to observe a vehicle from the minor access approach moving into a collision situation, e.g., in the worst case, stalling across the traffic lanes
  - to decelerate to a stop before reaching the collision point.

The minimum SISD criterion, specified in Table 3.2 of AGRD4A, requires clear visibility for a desirable minimum distance of:

- 97 m relating to the general reaction time RT of 2 seconds and a design speed of 50 km/h on Commercial Street
- 285 m relating to the general reaction time RT of 2 seconds and a design speed of 110 km/h for Walla Walla Road.

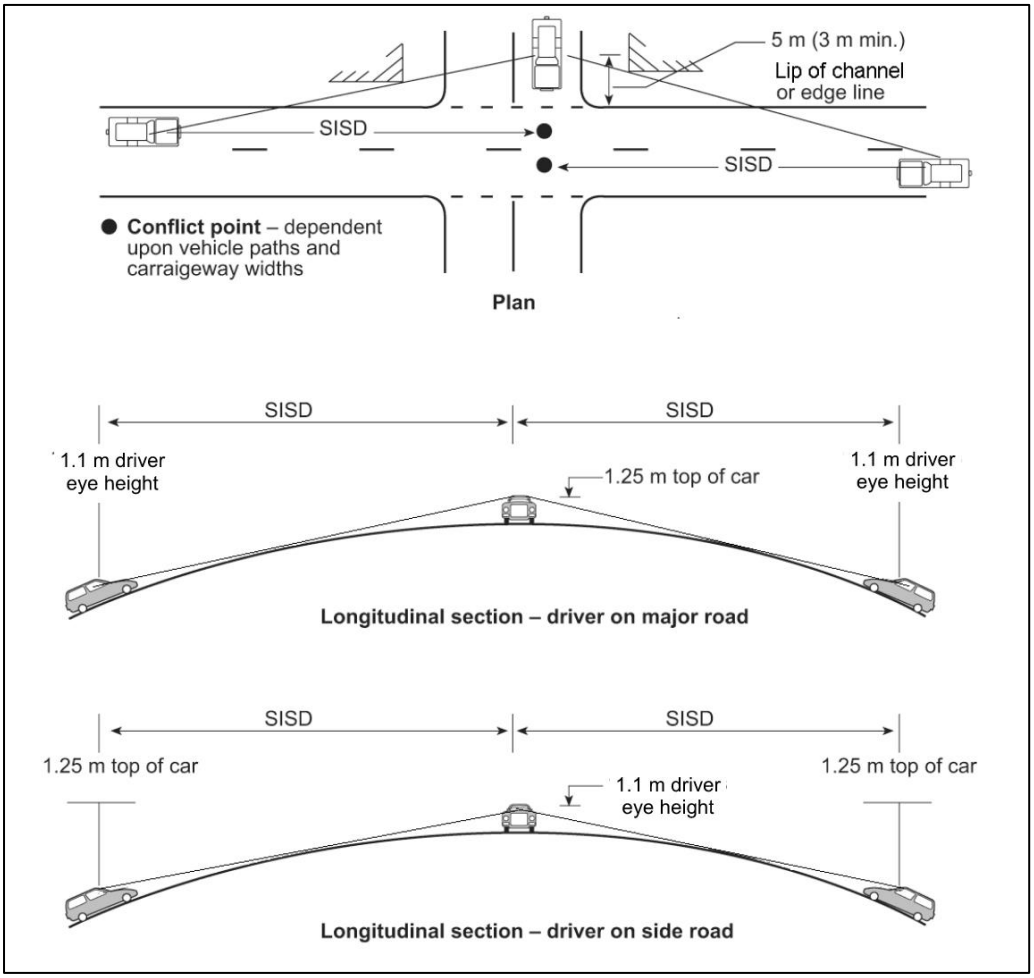


Figure 9: Safe Intersection Sight Distance (SISD) (Source: Figure 3.2 from AGRD4)

Impacts for this proposed development along Commercial Street

Commercial Street, adjacent to the proposed site access, has a design speed of 50 km/h. As a result, the corresponding SISD is 97 m. This is achieved to the north and south of the proposed site access.

Figure 10 and Figure 11 demonstrate the available site distance along Commercial Street.

Figure 10: Available sight distance to the north of the proposed site access along Commercial Street

Figure 11: Available sight distance to the south of the proposed site access along Commercial Street

Conclusion 1: The SISD requirement of 97 m for a 50 km/h design speed is satisfied along Commercial Street north and south of the proposed site access location.

Impacts for this proposed development along Walla Walla Road

Walla Walla Road, adjacent to the proposed site access, has a design speed of 110 km/h. As a result, the corresponding SISD is 285 m. This is achieved to the east of the proposed access location, as demonstrated by Figure 12.

To the west, the T-intersection of Commercial Street and Walla Walla Road is approximately 200 m away. Clear sightlines are available to the intersection, where vehicles are slowing to turn into Walla Walla Road. The available sightlines are adequate for the access, as shown in. Figure 13.

Figure 12: Available sight distance to the east of the proposed site access along Walla Walla Road

Figure 13: Available sight distance to the west of the proposed site access along Walla Walla Road towards Commercial Street

Conclusion 2: The sight distance available in each direction at the proposed access along Walla Walla Road is appropriate.

Post development, it is recommended that the 50 km/h speed zone on Walla Walla Road (currently ending 100 m past its intersection with Commercial Street) is extended east of the site to increase safety.

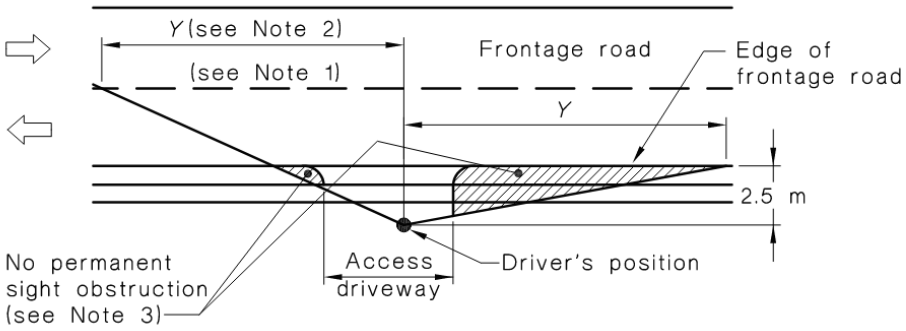
Recommendation 1: the 50 km/h speed zone on Walla Walla Road is extended east of the site post development.

4.2 Site access – Access driveway ESD requirement for lot driveways

Section 3.2.4 in AS/NZS 2980.1 Parking Facilities – Part 1: Off-street car parking, sets out:

- entering sight distance (ESD) criteria for a driver exiting an access driveway to traffic on the frontage road
- sight distance to pedestrians.

Un-signalised access driveways shall be located so the intersection sight distance available to drivers leaving the driveway along the frontage road is at least that shown in Figure 3.2 of AS/NZS 2890.1 (reproduced in Figure 14).



Frontage road speed (Note 4) km/h	Distance (*Y*) along frontage road m		
	Access driveways other than domestic (Note 5)		Domestic property access (Note 6)
	Desirable 5 s gap	Minimum SSD	
40	55	35	30
50	69	45	40
60	83	65	55
70	97	85	70
80	111	105	95
90	125	130	Use values from 2nd and 3rd columns
100	139	160	
110	153	190	

Figure 14: Sight distance requirements at driveways (Source: Figure 3.2 from AS/NZS 2890.1)

Impacts for this proposed development

Commercial Street and the internal road are subject to a speed limit of 50 km/h. As a result, an ESD of 40 m (refer to Figure 14) for domestic properties is required at each individual/shared driveway.

It is recommended that during detailed design, the individual driveways are checked to ensure they meet the ESD requirements stipulated in AS/NZS 2890.1

Recommendation 2: During detailed design, the shared driveways along Commercial Street and the individual driveways along the development's internal road should be checked to confirm they meet the ESD requirements of 40 m as stipulated in AS/NZS 2890.1.

4.3 Sight distance to pedestrians

As shown in Figure 3.3 of AS/NZS 2890.1 (reproduced in Figure 15), clear sight lines shall be provided at the property line to provide adequate visibility between vehicles leaving the property and pedestrians on the frontage road footpath.

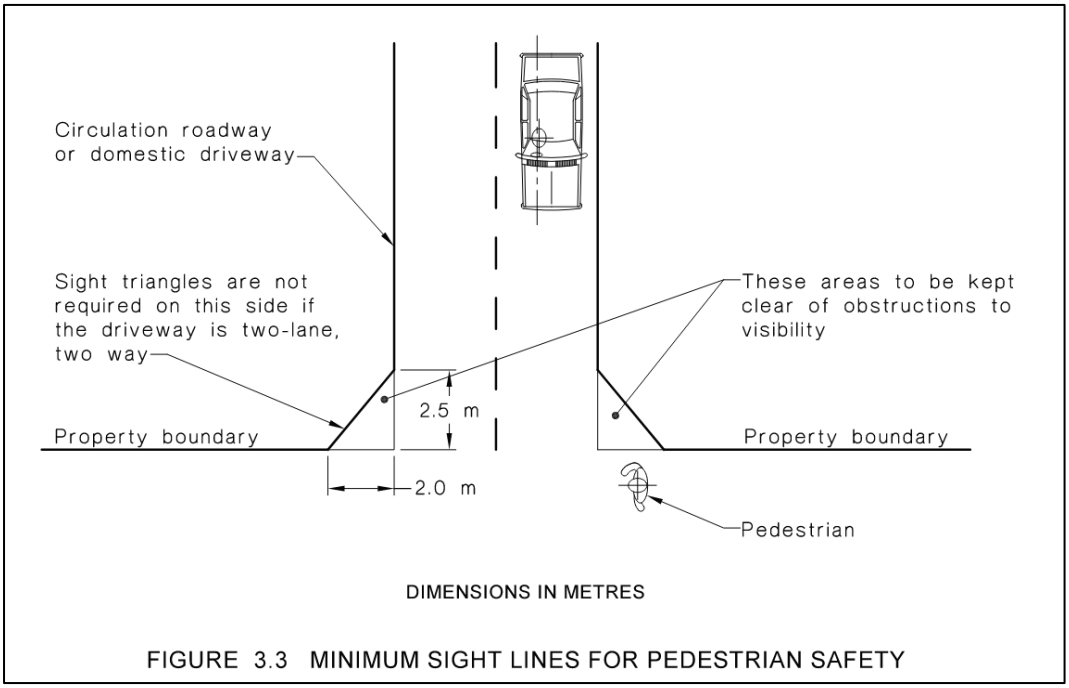


Figure 15: Minimum sight lines for pedestrian safety (Source: Figure 3.3 from AS/NZS 2890.1)

Impacts of this proposed development

Lot boundary fences must be designed to taper down towards the street boundary. This provides the required sight lines between a departing driver and pedestrians on the frontage footpath.

Recommendation 3: Lot boundary fence design should achieve the sight distance to pedestrians required in AS/NZS 2890.1.

4.4 Development internal road network

The proposed internal road network and access points onto the abutting road network (shown in Appendix 1) should be consistent with the Greater Hume Shire Engineering Guidelines for Subdivisions and Development Standards.

4.4.1 Internal Road, court bowl and driveways

All internal roads, court bowls and driveway accesses should be constructed to the Greater Hume Shire Engineering Guidelines for Subdivisions and Development Standards.

Recommendation 4: All internal roads, court bowls and driveway accesses should be constructed to the Greater Hume Shire Engineering Guidelines for Subdivisions and Development Standards.

4.4.2 Waste management

All residential lots will be provided with direct kerbside collection off either the frontage of Commercial Street or along the internal road network depending on the location of the lot.

Recommendation 5: All residential lots should have direct kerbside waste collection either along Commercial Street or the internal road network depending on their location.

4.4.3 Speed zoning and traffic calming

The proposed development is expected to operate under the default urban 50 km/h speed limit. The Austroads Guide to Traffic Management Part 8 (AGTM8) indicates that straight section road lengths (i.e. between slow or near-stop conditions) should be kept below 200 m – 250 m for target speeds of around 50 km/h.

An assessment of the proposed internal private road layout reveals that the development's internal private road has a straight section of road of approximately 380 m in length. Consequently, traffic calming devices should be considered.

Conclusion 3: Traffic calming devices should be considered on the development's internal road as it has a straight section of road that exceeds 250 m.

AGTM8 in Section 3.3.2 notes that *AS 1742.13 – 2009 Manual of uniform traffic control devices Part 13: Local area traffic management* recommends installing LATM treatments with maximum treatment spacing in the 80 – 120 m range.

Recommendation 6: Traffic calming treatments should be installed at spacings of 80 m – 120 m on subdivision roads with straight lengths greater than 250 m.

4.4.4 Development frontage along Commercial Street and Walla Walla Road

The Council will likely request the sections of Commercial Street and Walla Walla Road fronting the site within zone RU5 to be constructed consistent with an urban environment, including footpath and kerb and channel.

The area of land zoned R5 on the other hand, only has a frontage along Walla Walla Road. This section of road will likely remain unchanged post-development to ensure the site's frontage reflects the rural type of environment (i.e. no footpaths and kerb and channel) expected within a low-density residential area.

Recommendation 7: The site's frontage along Walla Walla Road and Commercial Street within zone RU5: Village should be constructed consistent with an urban environment, including footpath and kerb and channel.

Conclusion 4: The site's frontage along Walla Walla Road within the land zoned R5: Large Lot Residential will likely remain unchanged post-development to ensure it reflects a rural type of environment (i.e., no footpaths and kerb and channel) expected within a low-density residential area.

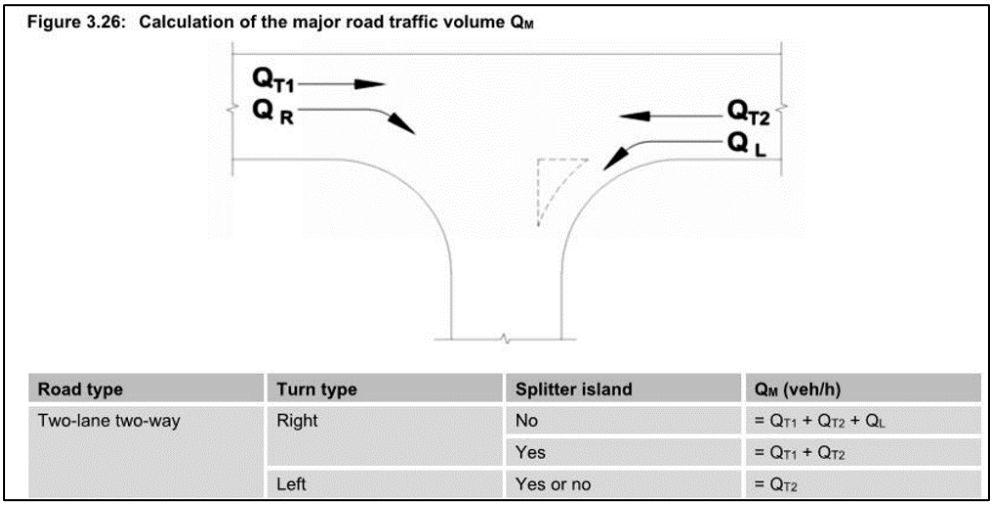
4.5 Turn provisions impact

The traffic turning from major roads into minor roads should not delay through traffic.

Generally, turn treatments from major roads into minor roads at sign-controlled intersections are provided for safe and efficient intersection operation.

Figure 16 shows the formulas determining the major road volume (QM).

The results were then applied to Figure 3.26, Austroads Guide to Traffic Management Part 6 (AGTM6), to determine the turning treatments for the intersections.



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= Q_{T1} + Q_{T2} + Q_L
		Yes	= Q_{T1} + Q_{T2}
	Left	Yes or no	= Q_{T2}

Figure 16: Formulas used to determine major road traffic (Source: Figure 3.26 from AGTM6)

4.5.1 Turn lane treatments

Traffic volumes help determine appropriate turn lane treatments at access intersections to development sites.

Table 6 and Table 7 in Appendix 2 – Turn treatments summarise the various types of left and right turn treatments, as defined in the AGRD4.

4.5.2 Anticipated conditions for Commercial Street / site access intersection

To determine the turn warrants at the intersection for the anticipated conditions, traffic volumes from Figure 8 were applied in Table 4 and Figure 17.

Table 4: Traffic volumes on Commercial Street at the subject site access intersection – anticipated conditions

Road	Peak Period	Left Turn Q_L (vph)	Right Turn Q_R (vph)	Through Q_T (vph)		Q_M Left Turn	Q_M Right Turn
Commercial Street	AM	6	1	Q_{T1}	55	55	116
				Q_{T2}	55		
	PM	20	5	Q_{T1}	55	55	130
				Q_{T2}	55		

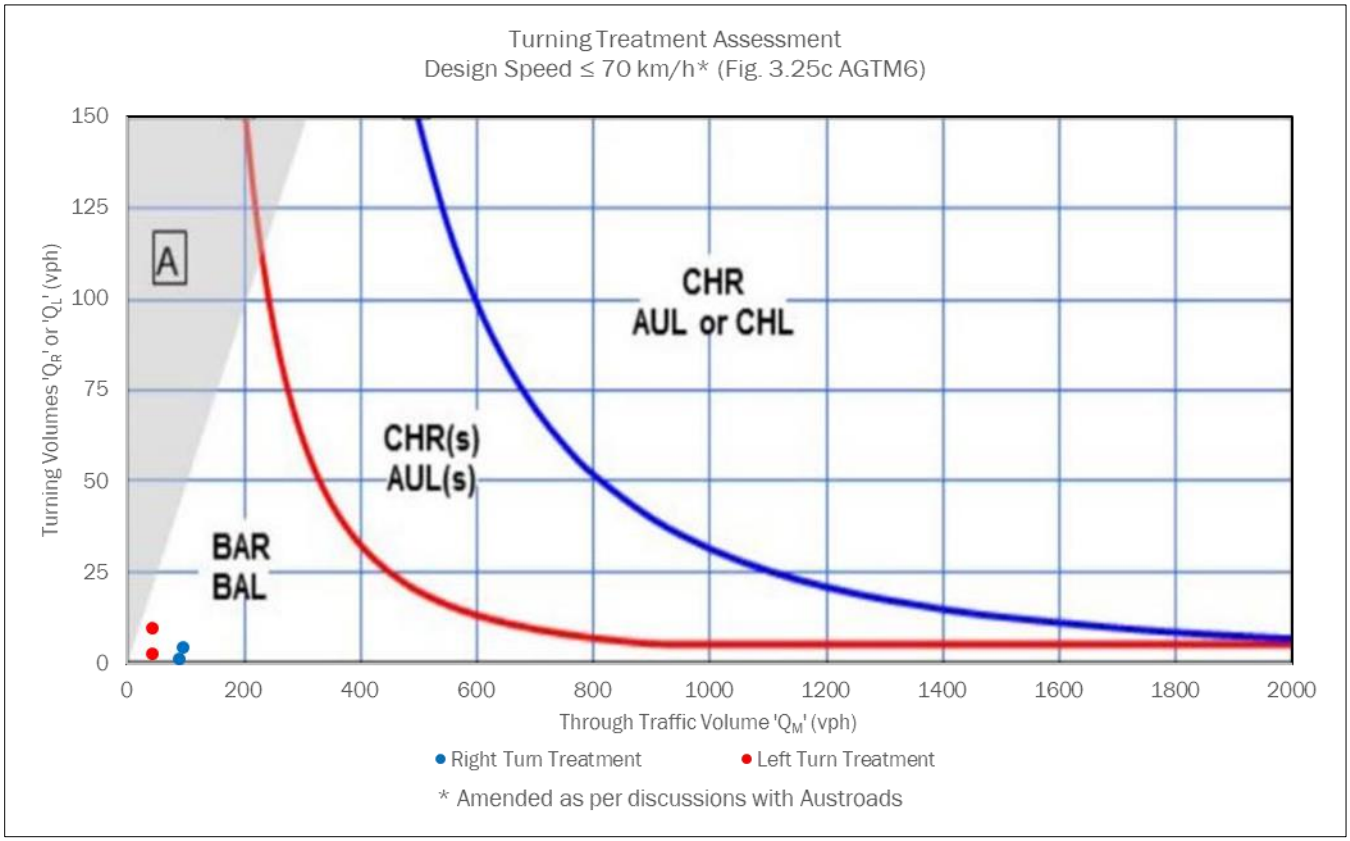


Figure 17: Graph used to determine the turn treatment warrants for Commercial Street at the subject site access intersection – anticipated conditions.

Based on the data presented in Figure 17, our key observations are:

- the right turn from Commercial Street into the subject site access will meet the warrants for a BAR treatment in the morning and afternoon peak periods
- the left turn from Commercial Street into the subject site access will meet the warrants for a BAL treatment in the morning and afternoon peak periods

Conclusion 5: The Commercial Street / site access intersection meets the turn warrants for BAR/BAL turn lanes.

The site access along Commercial Street is within a low speed, low volume urban environment. Furthermore, the surrounding local residential roads along Commercial Street such as Scholz Street, Howard Street and Edward Street do not have turn lanes. It is likely that council would prefer to keep the development's frontage consistent with surrounding roads.

Conclusion 6: No additional work is required at the intersection of Commercial Street and proposed site access to accommodate the development traffic.

4.5.3 Anticipated conditions for Walla Walla Road / site access intersection

To determine the turn warrants at the intersection for the anticipated conditions, traffic volumes from Figure 8 were applied in Table 5 and Figure 18.

Table 5: Traffic volumes on Walla Walla Road at the subject site access intersection – anticipated conditions

Road	Peak Period	Left Turn Q_L (vph)	Right Turn Q_R (vph)	Through Q_T (vph)		Q_M Left Turn	Q_M Right Turn
Walla Walla Road	AM	3	1	Q_{T1}	44	44	91
				Q_{T2}	44		
	PM	10	5	Q_{T1}	44	44	98
				Q_{T2}	44		

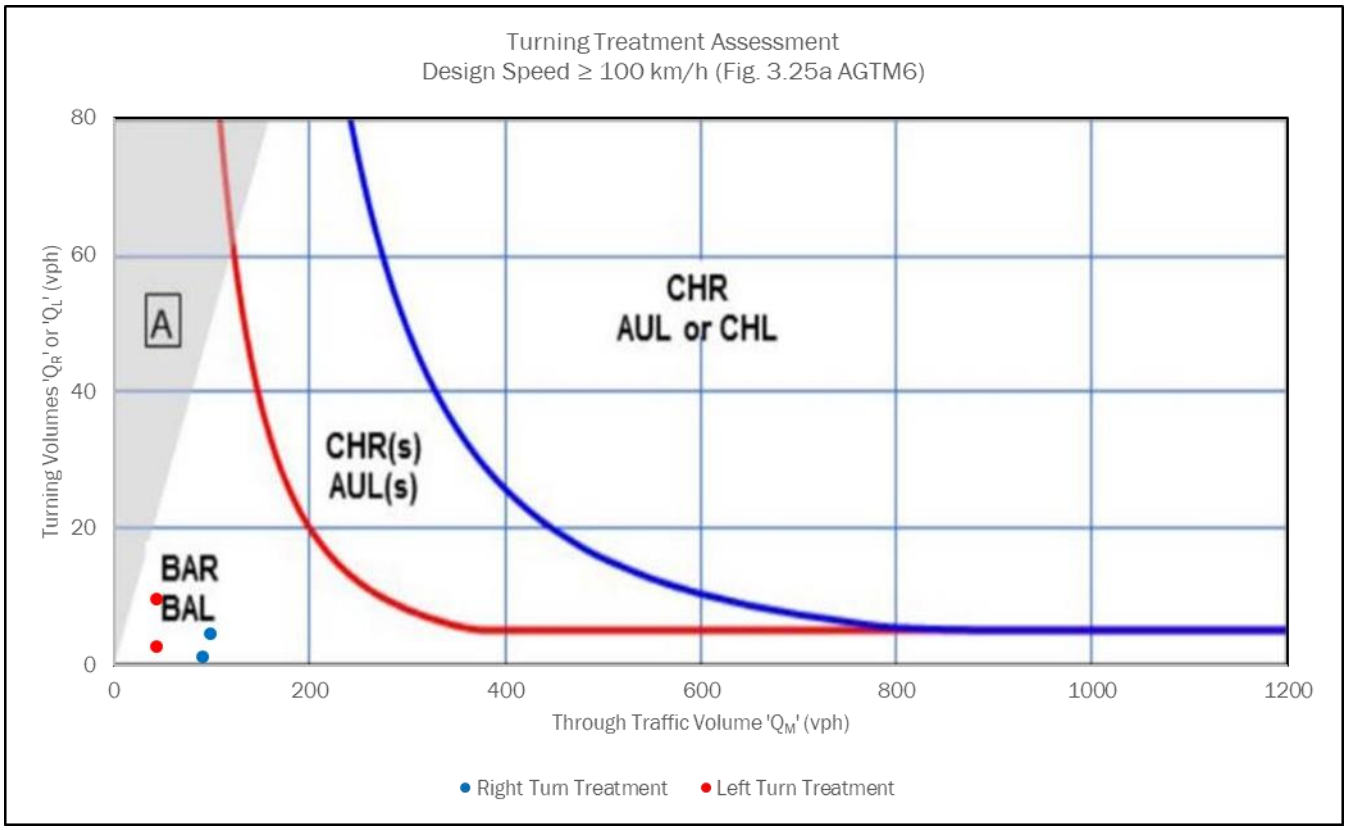


Figure 18: Graph used to determine the turn treatment warrants for Walla Walla Road at the subject site access intersection – anticipated conditions.

Based on the data presented in Figure 18, our key observations are:

— the right turn from Walla Walla Road into the subject site access will meet the warrants for a BAR treatment in the morning and afternoon peak periods

— the left turn from Walla Walla Road into the subject site access will meet the warrants for a BAL treatment in the morning and afternoon peak periods.

Conclusion 7: The Walla Walla Road and the proposed subject site access intersection meets the turn warrants for BAR/BAL turn lanes.

The site access along Walla Walla Road is subject to low turning/through volumes, with the majority of vehicles turning left-in. Furthermore, it is expected that vehicles approaching from the west including those turning left in (3-10 vph) will be travelling at low speeds due to the transition from 50 km/h to 100 km/h approximately 100 m west of the proposed access. Considering the low-speed, low-volume environment the provision of a left turn treatment is not necessary.

In regard to right turning movements (1-5 vph), although vehicles approaching from the east will be travelling at high speeds, the expected right turning movements are minimal and as a result do not warrant the provision of a BAR. In addition, Recommendation 1 includes the extension of the 50 km/h speed limit to the east of the subject site.

Conclusion 8: No additional work is required at the intersection of Walla Walla Road and proposed site access to accommodate the development traffic.

5 Conclusions and recommendations

We conclude there are no traffic engineering reasons that would prevent the development from proceeding, as outlined below:

- The SISD requirement of 97 m for a 50 km/h design speed is satisfied along Commercial Street north and south of the proposed site access location.
- The sight distance available east and west of the proposed access along Walla Walla Road is appropriate.
- Traffic calming devices should be considered on the development's internal road as it has a straight section of road that exceeds 250 m.
- The site's frontage along Walla Walla Road within the land zoned R5: Large Lot Residential will likely remain unchanged post-development to ensure it reflects a rural type of environment (i.e. no footpaths and kerb and channel) expected within a low-density residential area.
- Both the site accesses along Commercial Street and Walla Walla Road meet the turn warrants for BAR/BAL turn lanes.
- No additional work is required at both the proposed site access along Commercial Street and Walla Walla Road to accommodate the development traffic.

However, this TIA has identified a number of recommendations that need to be addressed:

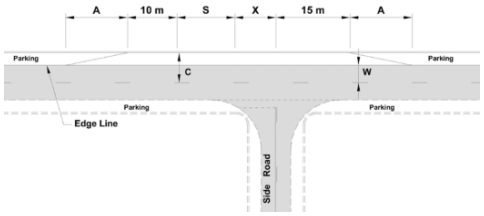
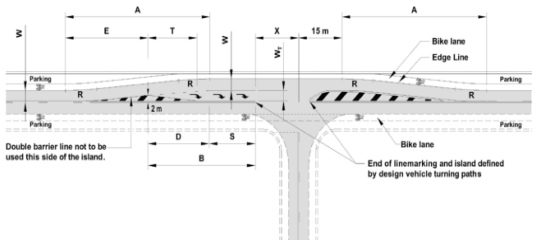
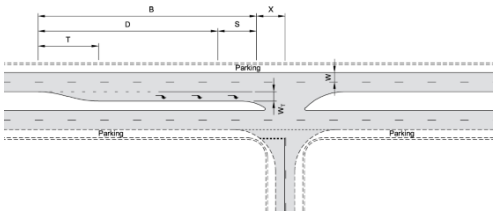
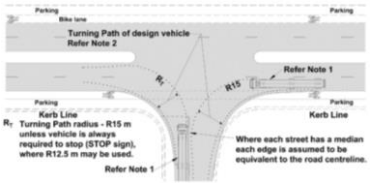
- **Recommendation 1:** the 50 km/h speed zone on Walla Walla Road is extended east of the site post development.
- **Recommendation 2:** During detailed design, the shared driveways along Commercial Street and the individual driveways along the development's internal road should be checked to confirm they meet the ESD requirements of 40 m as stipulated in AS/NZS 2890.1.
- **Recommendation 3:** Lot boundary fence design should achieve the sight distance to pedestrians required in AS/NZS 2890.1.
- **Recommendation 4:** All internal roads, court bowls and driveway accesses should be constructed to the Greater Hume Shire Engineering Guidelines for Subdivisions and Development Standards.
- **Recommendation 5:** All residential lots will have direct kerbside waste collection either along Commercial Street or the internal road network depending on their location.
- **Recommendation 6:** Traffic calming treatments should be installed at spacings of 80 m – 120 m on subdivision roads with straight lengths greater than 250 m.
- **Recommendation 7:** The site's frontage along Walla Walla Road and Commercial Street within zone RU5: Village should be constructed consistent with an urban environment, including footpath and kerb and channel.

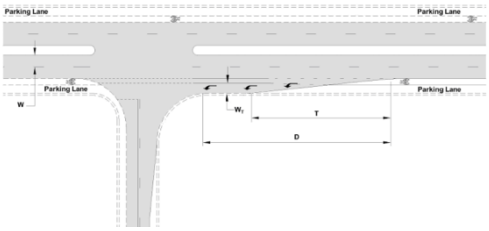
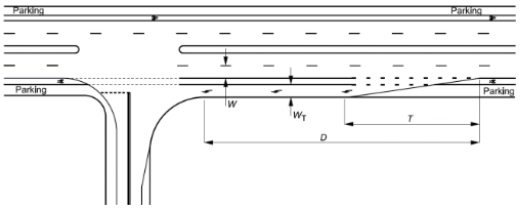
Appendix 1 – Proposed zoning plan with proposed lots

Appendix 2 – Turn treatments

A2.1 – Urban turn treatments

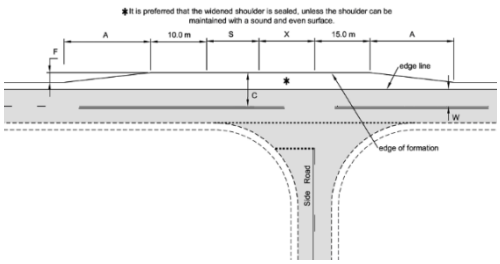
Table 6: Turn Treatment Descriptions **(Urban)** (Source: Section 7.7, 7.8 and 8.3 of Austroads Guide to Road Design Part 4A)

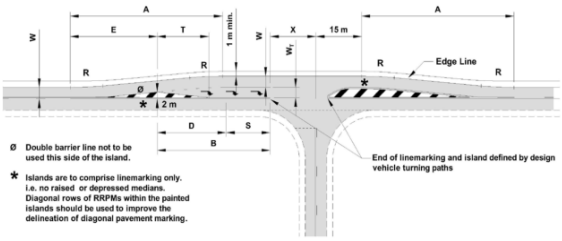
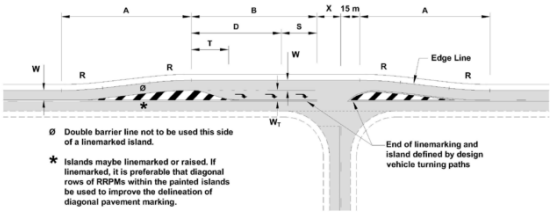
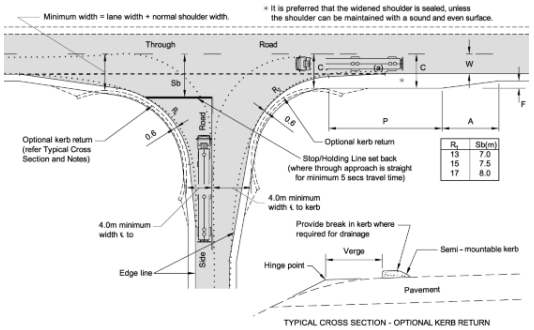
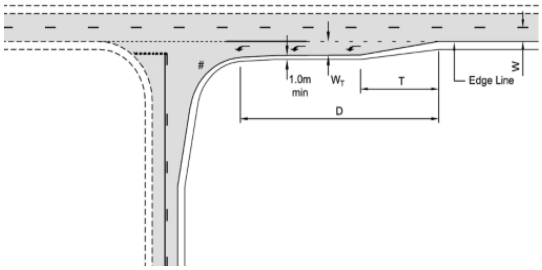
Turn treatment	Description	
BAR	**BA**sic **R**ight turn treatment on the major road, features a widened area (usually in place of parking) on the major road that allows through vehicles to pass to the left of turning vehicles *(Figure 7.6 of Austroads Guide to Road Design Part 4A).*	
CHR(S)	**CH**annelised **R**ight (Short) turn is a shorter version of the Channelised Right turn treatment which is reduced by removing space provided for storage in the right lane. This treatment type can only be used with line marking *(Figure 7.7 of Austroads Guide to Road Design Part 4A).*	
CHR	**CH**annelised **R**ight turn treatment has two vehicle travel paths (through and right turns) separated by physical or painted medians or islands *(Figure 7.8 of Austroads Guide to Road Design Part 4A).*	
BAL	**BA**sic **L**eft turn treatment on the major road has a radius large enough to accommodate a design vehicle turning left into the minor road without crossing the centre line of the minor road (*Figure A15 of Austroads Guide to Road Design Part 4).*	

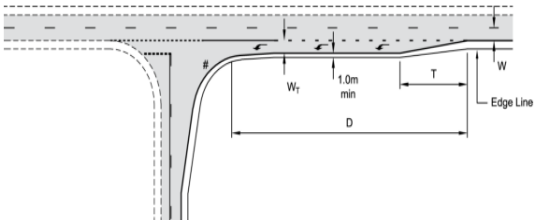
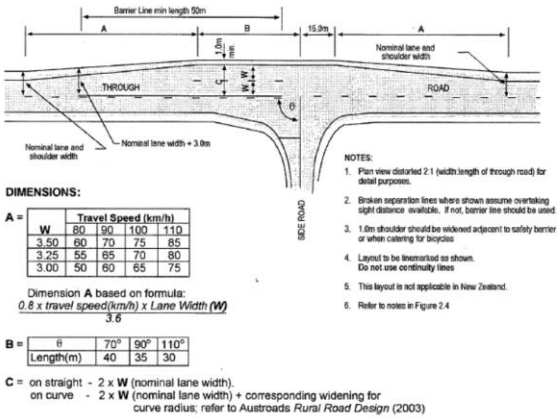
Turn treatment	Description	
AUL(S)	**AU**xiliary **L**eft (**S**hort) turn treatment is a shorter version of the Auxiliary Left turn treatment which is reduced by allowing some deceleration to occur in the through lane on the major road. This turn treatment also allows through vehicles to pass to the right of turning vehicles *(Figure A17 of Austroads Guide to Road Design Part 4)*.	
AUL	**AU**xiliary **L**eft turn treatment is a left turn lane on the major road that allows through vehicles to pass to the right of turning vehicles *(Figure 8.6 of Austroads Guide to Road Design Part 4A)*.	

A3.2 – Rural turn treatments

Table 7: Turn Lane Treatment Descriptions **(Rural)** (Source: *Section 7.5 and 8.2 of Austroads Guide to Road Design Part 4A*)

Turn treatment	Description	
BAR	**BA**sic **R**ight turn treatment on the major road, features a widened area (usually in place of parking) on the major road that allows through vehicles to pass to the left of turning vehicles *(Figure A6 of Austroads Guide to Road Design Part 4)*.	

Turn treatment	Description	
CHR(S)	**CH**annelised **R**ight (**S**hort) turn is a shorter version of the Channelised Right turn treatment which is reduced by removing space provided for storage in the right lane. This treatment type can only be used with line marking *(Figure A7 of Austroads Guide to Road Design Part 4).*	
CHR	**CH**annelised **R**ight turn treatment has two vehicle travel paths (through and right turns) separated by physical or painted medians or islands *(Figure A8 of Austroads Guide to Road Design Part 4).*	
BAL	**BA**sic **L**eft turn treatment on the major road has a radius large enough to accommodate a design vehicle turning left into the minor road without crossing the centre line of the minor road (*Figure 8.2 of Austroads Guide to Road Design Part 4A).*	
AUL(S)	**AU**xiliary **L**eft (**S**hort) turn treatment is a shorter version of the Auxiliary Left turn treatment which is reduced by allowing some deceleration to occur in the through lane on the major road. This turn treatment also allows through vehicles to pass to the right of turning vehicles *(Figure 8.3 of Austroads Guide to Road Design Part 4A).*	

Turn treatment	Description	
AUL	**AU**xiliary **L**eft turn treatment is a left turn lane on the major road that allows through vehicles to pass to the right of turning vehicles *(Figure 8.4 of Austroads Guide to Road Design Part 4A).*	
AUR	In addition to the above, DoT will allow the use of the rural **Au**xiliary lane **R**ight turn treatment (from GTEP Part 5) in lieu of the CHR(s) treatment, (*refer Sections 7.5.2 and 7.7.2 of VicRoads Supplement to AGRD4A*)	

Appendix 3 – Acronyms and terms

Acronyms / terms	Definition
AGRD4	Austroads Guide to Road Design Part 4 – Intersections and crossings
AGRD4A	Austroads Guide to Road Design Part 4A – Unsignalised and signalised intersections
AGTM6	Austroads Guide to Traffic Management Part 6 – Intersections, interchanges and crossings management
AGTM8	Austroads Guide to Traffic Management Part 8 – Local street management
AS/NZS2890.1	Australian Standard / New Zealand Standard 2890.1 Parking facilities Part 1: Off-street car parking
ESD	Entering site distance
SIDRA	SIDRA intersection – micro analytical traffic engineering software to model the performance of intersections
SISD	safe intersection sight distance
TIA	traffic impact assessment
vpd	vehicles per day
vph	vehicles per hour

APPENDIX I:

Preliminary Site Investigation report

McMahon EARTH SCIENCE

COMMERCIAL STREET AND WALLA WALLA ROAD WALLA WALLA NSW 2659

PRELIMINARY SITE INVESTIGATION

FOR A PROPOSED RESIDENTIAL SUBDIVISION

JUNE 2023

REPORT NO: 9380

DM McMahon Pty Ltd
6 Jones St (PO Box 6118)
Wagga Wagga NSW 2650
t (02) **6931 0510** www.dmmcmahon.com.au

Report type

Preliminary Site Investigation

For a proposed residential subdivision

Site address

Commercial Street and Walla Walla Road

Walla Walla NSW 2650

Report number

9380

Prepared for

Annesley Holdings Pty Ltd

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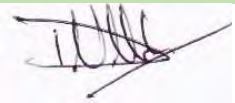
Document control

Role	Name	Signed	Date	Revision
Prepared by	**David McMahon** CEnvP SC BAppSc SA GradDip WRM MEnvMgmt MALGA MEIANZ MSSA		30/06/2023	0

Contents

1.0 Executive summary

DM McMahon Pty Ltd (McMahon) conducted this Preliminary Site Investigation (PSI) at the request of James Laycock of Blueprint Planning on behalf of Annesley Holdings Pty Ltd for a proposed residential subdivision at Commercial Street and Walla Walla Road Walla Walla NSW. The 12ha development area (the site) has a historical broadacre agricultural land use. A map of the site investigated as part of this PSI and the proposed zoning plan can be seen in **Attachment A**.

The issue of potential contamination is required to be considered whenever a planning proposal is presented to a planning authority where the new use may increase risk from contamination if it is present. Therefore, the purpose of this investigation is to provide Annesley Holdings Pty Ltd and the planning authority with a statement of site suitability for the proposed land use and an appropriate risk assessment framework for the management of the site during development.

The scope of work includes:

- A desktop study used to collect basic site information and identify the site characteristics.
- A detailed site inspection to complement the findings of the desktop study and site history and to identify any additional relevant site information.
- Conduct limited soil sampling using Data Quality Objectives to assess the need for further investigation.
- From the information collected, develop a Conceptual Site Model detailing the potential contamination source-pathway-receptor linkages.
- Conduct a risk assessment for site suitability regarding potential contamination and the proposed development.
- Provide a statement of site suitability for the proposed land use and recommendations for further investigation, assessment, and site management if required.

Findings of the investigation include:

- A site inspection was conducted and found the development area was generally well-maintained broadacre farmland with no indicators of gross contamination.
- This PSI identified persistent agricultural chemicals that may have been used as the source of potential contamination that may affect the development.
- The soil analysis returned results below the criteria for residential land use.
- In conclusion the identified potential contamination sources are assessed to be of low significance in terms of risk to future site users and the site is suitable for the proposed development.

This executive summary and the findings of this PSI are subject to the recommendations in **Section 10.0** and limitations as stated in **Section 11.0**. A protocol for unexpected finds as outlined in **Section 12.0** has also been developed as part of this risk assessment framework if additional potential contamination sources are identified during planning or development.

2.0 Objectives

The objective of this investigation is to:

- Provide information regarding potential contamination on site.
- Provide a factual record of the works completed and results.
- Undertaking a risk assessment for health risk to future site users and the environment.
- Provide a statement of site suitability or recommendations for further investigation and/or site management.
- To prepare the PSI in general accordance with the relevant guidelines and legislation, namely:
    - NSW EPA, Consultants Reporting on Contaminated Land: Contaminated Land Guidelines, (2020).
    - State Environmental Planning Policy (Resilience and Hazards) 2021.
    - National Environment Protection (Assessment of Site Contamination) Measure (NEPM), (2013).

3.0 Scope of work

The scope of work includes the following:

- Review the available information regarding historical, current, and proposed land use of the site and surrounds.
- Review the environmental setting of the site and surrounds.
- Assess the potential contamination sources and chemicals of potential concern.
- Conduct limited soil sampling to assess the need for further investigation.
- Assess the potential contamination source-pathway-receptor linkages from the chemicals of potential concern, environmental setting, and land use.
- Develop a conceptual site model to assess potential contamination risk from the source-pathway-receptor linkages.
- Provide a clear statement on site suitability for the present and future land use and the need for further investigation and/or site management.

4.0 Site identification

The site identification and details are as follows.

- Address:
  - 104 Commercial Street Walla Walla NSW 2659.
  - 116 Commercial Street Walla Walla NSW 2659.
  - 29 Walla Walla Road NSW Walla Walla 2659 (part of).
- Real property description:
  - Lot 2 DP 1287711.
  - Lot 3 DP 1287711.
  - Lot 1 DP 1287711 (part of).
- Site centre co-ordinate: 491140E 6041460N MGA GDA z55.
- Property size: 12ha (approximate development area).
- Owner:
  - Annesley Holdings Pty Ltd (Lots 2 & 3).
  - Russell Wayne Shroeter (Lot 1).
- Local Government Area: Greater Hume Shire Council.
- Current zoning: RU5 Village.
- Present use: Broadacre agriculture.
- Proposed use: Residential subdivision.
- Development Application reference: Not known.

5.0 Site history

From research of the available resources, the following site history is offered.

Historical owners and occupiers

As follows are the registered owners and occupiers:

- 1874 owned by Franz Hanckel. Known as Portions 158 and 159.
- 1883 owned by Michael Wenke (farmer).
- 1912 owned by Johann Wenke and Andreas Jacob Wenke (farmers).
- 1912 owned by Ernest Gottlieb Wenke (farmer).
- 1951 owned by Hermann Traugott Wenke and Ernst Wilhelm Wenke (farmers).
- 1982 owned by Theodore Benjamin Wenke and Graham Ortlipp.
- 1986 owned by Neville Eric Schroeter and Stella Nevia Schroeter.
- Current owners are Annesley Holdings Pty Ltd (Lots 2 & 3), and Russell Wayne Schroeter (Lot 1).

Council records

A Section 10.7 Planning Certificate (Certificate No: 5157) was obtained from Council on 29 June 2023 and the certificate states that Council has nil relevant information regarding matters prescribed within the meaning of the Contaminated Land Management Act 1997.

EPA records

There are no records on the Contaminated Land Record Database for the site or adjacent properties pertaining to Preliminary Investigation Orders, Declaration of Significantly Contaminated Land, Approved Voluntary Management Plans, Management Orders, Ongoing Maintenance Orders, Repeal Revocation or Variation Notice, Site Audit Statement, or Notice of Completion or Withdrawal of Approved VMP. The site or adjacent properties have not been "notified" to the EPA on the list of NSW Contaminated sites as of June 2023.

Internet search

- Daily Advertiser (Wagga Wagga) May 1924. Obituary-Mr A. J. Wenke. The death occurred on Sunday night of Mr Andreas Jacob Wenke. Mr Wenke was the son of the late Michael Wenke, who, when his son was four years of age, brought his family across country to Walla Walla, where they took up land. Growing up Mr A. J Wenke followed his father's footsteps and became an expert agriculturalist. Mr A. J Wenke has been affectionately described as the 'Father of Walla'.
- The Corowa Free Press (NSW) March 1927. An event not likely to be forgotten took place when Alma Maria and Mr. Benjamin Theodor Wenke, third son of Mr and Mrs E. G Wenke of 'Sunnyside' Walla Walla, were united in the holy bonds of matrimony.
- Border Morning Mail (Albury) March 1944. 75th Anniversary of the Walla Lutheran Congregation. The camp at Four Mile Creek was the birth place of Ernst Gottlieb Wenke, the youngest son of Mr and Mrs Michael Wenke. Photo: Mr. E. G Wenke of 'Sunnyside', Walla, who was born at Four Mile Creek, Jindera in 1868 during the journey by first Walla settlers from South Australia.

- The Henty Observer and Culcairn Shire Register (NSW) August 1946. Executors, E. G. Wenke, ‘Sunnyside’ Walla Walla, applied for the purchase of road on the southern side of Walla Walla sportsground, running in an easterly direction. Council decided to refuse consent to the closing of the road.
- New South Wales Government Gazette March 1970 Issue No. 33 *Pastures Protection Act 1934-1954*. Theodore B. Wenke, ‘Sunnyside’ Walla Walla.
- realestate.com.au – Sold June 2003. Sold August 2012. Sold October 2021.
- pjnsheds.com.au – PJN Steel Fabrication. 104 Commercial Street, Walla Walla.

Aerial photographs and satellite images

McMahon observed the following from a review of the available aerial photography.

1961 – The site is open woodland used for broadacre agriculture. The Walla Walla Sports Ground lies to the north, residential land to the west, and farmland to the east and south.

1973 – No significant changes to 1961.

1987 – No significant changes to 1973 other then the site has been extensively cleared of trees and some more residential development has occurred to the west, and netball courts have been built to the north.

1990 – No significant changes to 1987 except for a small shed has been built east of the site.

1996 – No significant changes to 1990.

2010 – No change to 1996 except for an internal fence line erected running east-west. A house, another shed, and cattle yards have been built to the east of the site, and the PJN Sheds building has been built to the north.

2013 – No change to 2010 other than an expansion of the PJN Sheds yard.

2014-2023 – No significant changes to 2013.

The aerial photographs and satellite images can be seen in **Attachment B**.

6.0 Site condition and surrounding environment

McMahon notes the following observations of the site condition as part of this PSI.

- The site is bound by the Walla Walla Sports Ground and PJN Sheds to the north, broadacre farmland to the south and east, and residential land to the west. Some cattle yards lie to the immediate east of the site around 30m from the boundary.
- The site is used for sheep grazing with improved pasture ground cover and scattered paddock trees.
- There are no improvements on site other than boundary farm fencing and one internal farm fence oriented east-west.

Maps of the site features can be seen in **Attachment C**.

Site photographs can be seen in **Attachment D**.

A summary of the site environmental setting is as follows.

Topography

The site is located on a west trending alluvial plain at an elevation of approximately 220m AHD.

Vegetation

The surface is covered in well maintained clover-based ryegrass pasture, with scattered grey and yellow box paddock trees.

Natural Resources Sensitivity

A search of the Greater Hume Local Environment Plan (2012) found the site is not mapped as having any natural resources sensitivity.

Weather

The average rainfall for Burrumbuttock (15km away) is approximately 580mm per annum, with the wettest months being June, July, and August. The local area is characterised by cold wet winters and hot dry summers.

Hydrology

There are no surface water features on site. The nearest waterway is a third order ephemeral drainage around 500m to the west that drains into Gum Swamp which is around 3.5km to the north.

Soil

Soils are deep brown loamy topsoils overlying a bleached eluvial layer underlain by imperfectly drained reddish and yellowish clays and silty clays.

Geology

The local geology is Quaternary alluvium comprising of sand, silt, and clay overlying the Devonian aged Tocumwal Granite.

Hydrogeology

Groundwater beneath the site is likely to exist as local to intermediate systems that are loosely defined by topographic catchments. Aquifers are likely to be semi confined with groundwater in alluvial sediments and the underlying geology. Depth to groundwater is likely to be deep but some localised perching is likely to occur after periods of extended wet weather. There are no registered groundwater bores on site, but a test bore was drilled at the adjacent Walla Walla Sports Ground and found no groundwater to the drilled depth of 96m. The geology of this test bore was clay to 78m and decomposed granite from 79m to 96m.

7.0 Sampling and analysis quality plan and sampling methodology

The Data Quality Objectives (DQOs) of the site assessment have been developed to define the type and quality of data to meet the project objectives. The DQOs have been developed generally in accordance with the seven step DQO process as outlined in AS 4482.1 (2005) and the USA EPA Guidance on Systematic Planning Using the Data Quality Objectives Process (2006a). These DQOs are as follows:

1. **The problem**
2. **The goal of the study**
3. **Information inputs**
4. **Study boundaries**
5. **The analytical approach**
6. **Performance and acceptance criteria**
7. **Obtaining data**

These objectives have been further outlined in the following sections.

DQO 1 - The problem

Potential contamination from previous land use may be present across the site and insufficient data relating to this source is available to determine land use suitability and the need for further investigation with the necessary level of confidence.

DQO 2 - The goal of the study

Goals of the study include:

- Undertake limited investigations, based on the data gaps to determine if there is agricultural chemical contamination within the soil associated with the identified contamination sources.
- Determine if any contamination, should it be identified, poses a risk to current and/or future receptors at the site or within potential exposure pathways from the site, and if further investigation is required.
- Determining whether the site is currently, or can be made, suitable for the proposed development regarding contamination.

DQO 3 - Information inputs

- Desktop data including site inspections, site condition, history, geology, hydrogeology, and laboratory analysis to characterise the site.
- Observational data including visual and olfactory conditions obtained from the sampling.
- Analytical data relative to the assessment criteria.

DQO 4 - Study boundaries

- Intrusive investigation across the site.
- Temporal boundaries are limited to the proposed fieldwork timeframes in the second quarter of the year 2023.

DQO 5 - The analytical approach

Samples will be tested for heavy metals and organochlorine and organophosphate pesticides that may be persistent in the soil from the sites historical agricultural land use.

DQO 6 - Performance and acceptance criteria

Specific limits for the investigation are in accordance with the appropriate guidance made or endorsed by state and national regulations, appropriate data quality indicators, and industry standard procedures for field sampling and handling. To assess the validity of data for decision making, the data is assessed against a set of data quality indicators, the following predetermined data quality indicators have been adopted.

The key decision rules for the investigation are:

1) Has the analytical data been collected as part of the testing and met the data quality indicators? If they have then the data can be used to answer the decision rule/s and the decision statements developed in Step 2 of the DQOs. If not, then the need to collect additional data may be required.
2) Do contaminant concentrations exceed the investigation and screening criteria? If not, then the potential contamination does not pose an above low level of risk. Where results exceed the investigation and screening criteria, this may indicate an unacceptable level of risk. Further risk assessment and investigations may be warranted to determine the potential for impacts.

The key decision errors for the investigation are:

i. deciding that the site is contaminated when it truly is not.
ii. deciding that the site is not contaminated when it truly is.

The true state of nature for decision error (i) is that the site is not contaminated.
The true state of nature for decision error (ii) is that the site is contaminated.

The site assessment criteria were specifically derived and incorporate the following:

- The samples are not composited so the direct reading of contaminant levels will be found from each sample point on which an appropriate decision can be based off.
- The duplicate sample should have a Relative Percentage Difference (RPD) of <30%.
- The rinsate sample should return negligible concentrations for all parameters tested to ensure an appropriate sampling and decontamination procedure.
- If contaminant levels exceed the Tier 1 and statistical assessment criteria further investigation, assessment and management may be required.

Specific Tier 1 assessment criteria can be seen below, **Table 1**.

Table 1: *Assessment criteria*

Material	Analytes	Criteria
Soil	Heavy metals Pesticides	**Health Investigation Levels (HILs)** -Residential A NEPM (2013) -Table 1A(1) Heavy metals and pesticides -Soils within 3m of surface **Added Contaminants Limits (ACLs)** -Residential A NEPM (2013) -Table 1B(1) Zinc -Table 1B(2) Copper -Table 1B(3) Nickel -Table 1B(4) Lead -Soils within 2m of surface -pH of 6.0 ($CaCl_2$) and CEC of 10 assumed from local knowledge **Environmental Investigation Levels (EILs)** -Residential A NEPM (2013) -Table 1B(5) Arsenic and pesticides -Soils within 2m of surface **Ecological Screening Levels (ESLs)** -Residential A NEPM (2013) -Clay soils within 2m of surface

The Tier 1 assessment criteria are used as an initial screening of the data to determine whether further assessment is required. Where above criteria exceedance indicates a risk to human health or the environment, site specific risk assessment, statistical analysis, management, or remediation will be undertaken or recommended as appropriate.

DQO 7 - Obtaining data

The sampling pattern and strategy identifies the occurrence of potential contamination for suitable site characterisation. The sampling pattern and strategy has been devised based on site history, land uses, aerial imagery, site inspections, previous investigations and the NEPM (2013). The sampling pattern has been described in more detail below.

Sampling strategy and pattern

A systematic and judgemental sampling pattern has been chosen based on potential contamination sources, previous land use, and requirements to delineate potential contamination. The adopted sampling pattern is suitable to make a quantitative statement about the level of confidence regarding the quality and accuracy of results. McMahon assesses that the sampling pattern is suitable to be used for decision making and site characterisation.

Key features of the sampling pattern include:

- Eight systematic and judgemental soil sample locations taken across the site. Samples will be analysed for heavy metals and pesticides (organochlorines and organophosphates).
- One soil duplicate sample.
- One soil rinsate sample.

By reference to the DQOs, maps of the investigation locations can be seen in **Attachment E**.

Sampling design justification

- Samples 1 - 8: to assess the near surface soil contamination from potential persistent agricultural chemicals from diffuse broadacre application.
- Samples 4 & 6: to assess the near surface soil contamination from potential persistent agricultural chemicals from application in the nearby cattle yards.

Failure to meet objectives procedure

If the procedures undertaken do not satisfy the expected data quality objectives, a review of the sampling plan will be conducted prior to any further works.

Sampling and analysis methodology

The sampling officer wore unused disposable nitrile gloves to extract samples directly from the excavated pit to place into appropriately preserved sample receptacles. Collected sample containers were placed into a chilled esky for preservation prior to analysis. All in-field observations and any relevant comments are detailed in the field sheets and a Chain of Custody form was produced to accompany the samples to the laboratory.

Sampling standards

Sampling was undertaken by reference to:

- AS 4482.1:2005 - Guide to the investigation and sampling of sites with potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds.
- AS 4482.2:1999 - Guide to the sampling and investigation of potentially contaminated soil Part 2: Volatile substances.

Although these standards have recently been withdrawn, they have been used in the absence of other national guidelines.

8.0 Results

The site inspection and sampling for this PSI was conducted over one day on 20 April 2023. The weather was mild with light winds. A summary of the field observations and sample analytical results are as follows.

Soil and site surface

- Soils are deep brown loamy topsoils overlying a bleached colluvial layer underlain by imperfectly drained reddish and yellowish clays and silty clays.
- There were no visual or olfactory indicators of chemical contamination on site.

Soil analysis

- Heavy metals are below the Limits of Reporting (LORs) and/or the adopted criteria.
- Pesticides are below LORs and the adopted criteria.

Quality control and quality assurance results

- The duplicate sample (8) returned relative percent differences of <30%.
- The rinsate sample returned results below the LOR.
- There were no laboratory outliers.

Tabulated results can be seen in **Attachment F**.

Laboratory reports can be seen in **Attachment G**.

9.0 Conceptual site model

A conceptual site model is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors and is presented and follows.

Summary

The site has been used for farming and grazing agriculture as far as records can ascertain. Chemicals associated with agricultural pesticide use may have accumulated in the soil. Receptors include future construction workers, site users, and the environment. Pathways are from soil disturbance during development and occupation. Short to medium-term soil contact is likely for future construction workers, and long-term soil contact is possible for future occupants. Concentrations of contaminants were well below levels that warrant further investigation or other site management measures. If elevated concentrations of contaminants were identified then they could present potential health risks to construction workers or future site occupants (through dermal contact, ingestion, or inhalation of contaminated soils), if not adequately managed during development.

Potential and known sources of contamination

- Persistent agricultural chemicals.

List of chemicals of potential concern

From the potential contamination sources, the Chemicals of Potential Concern (COPCs) are heavy metals and pesticides.

Mechanism of contamination

The mechanism of contamination is predominantly top-down vertical and lateral migration into soil.

Potentially affected environmental media

- Soil.
- Surface water is unlikely to be impacted owing to the distance to waterways.
- Groundwater is unlikely to be impacted owing to the deep depths.

Consideration of spatial and temporal variations

Spatial variation in potential contamination is possible. Temporal variation is unlikely owing to the aged nature of potential contaminants.

Actual or potential exposure pathways

- Direct skin contact with soil for future construction workers, and future on-site occupants.
- Inhalation and/or ingestion of soil, vapour, and dust.
- Direct surface water contact but there is no surface water on site.
- Groundwater ingestion, however, the site is connected to town water.

Human and ecological receptors

- Future on-site users.
- Construction workers.
- Domestic groundwater users. No domestic groundwater bores currently exist on site.
- Down gradient ecological receptors.
- Future landscaping and ecological receptors.

Frequency of exposure

- Construction workers are assessed to be a short-term exposure risk.
- Future on-site users are assessed to have a long-term exposure risk.
- Future groundwater users are a medium to long-term exposure risk.
- Ecological receptors are assessed to be a medium to long-term exposure risk.

Source pathway receptor linkage assessment

- Future on-site construction workers have a risk of contact with potentially contaminated during construction and maintenance.
- Future on-site users have a risk of dermal contact with potentially contaminated soil during occupation and maintenance.
- Future on-site users have a risk of inhalation of potentially contaminated soil and dust.
- Groundwater use is unlikely.
- On site ecological receptors are limited at present but this could change with landscaping and land use.
- There is a low risk to down gradient ecological receptors from the migration of potentially contaminated surface water and groundwater if gross soil contamination is found.
- The site is assessed to be suitable for the development given the adoption of the recommended site management strategies during development.

Discussion of multiple lines of evidence

A multiple lines of evidence approach is the process for evaluating and integrating information from different sources of data and uses best professional judgement to assess the consistency and plausibility of the conclusions which can be drawn, NEPM (2013).

Definitive information concerning the sources of potential contamination on site is satisfactory therefore the risk assessment relies heavily on the information provided by this PSI and is supplemented by data collected during sampling.

10.0 Conclusions and recommendations

This investigation met the objective of investigating and assessing potential contamination and providing a statement of site suitability for the proposed land use and an appropriate risk assessment framework for the management of the site during development.

The results of the investigation conclude that the identified potential contamination sources are assessed to be of low significance in terms of risk to current and future site users and the site is suitable for the proposed development.

Although no septic systems, filled gullies, and dams were identified as part of this PSI, it is not uncommon to find these on agricultural land. Care must be taken to identify and evaluate unexpected finds such as these during development under the unexpected finds protocol in **Section 12.0**.

This executive summary and the findings of this PSI are subject to the limitations as stated in **Section 11.0**.

11.0 Limitations and disclaimer

DM McMahon Pty Ltd has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Blueprint Planning, Annesley Holdings Pty Ltd and only those third parties who have been authorised by DM McMahon Pty Ltd to rely on this report.

The information contained in this report has been extracted from field and laboratory sources believed to be reliable and accurate. DM McMahon Pty Ltd does not assume any responsibility for the misinterpretation of information supplied in this report. The accuracy and reliability of recommendations identified in this report need to be evaluated with due care according to individual circumstances. It should be noted that the recommendations and findings in this report are based solely upon the said site location and conditions at the time of assessment. The results of the said investigations undertaken are an overall representation of the conditions encountered. The properties of the soil, vapour and groundwater within the location may change due to variations in ground conditions outside of the assessed area. The author has no control or liability over site variability that may warrant further investigation that may lead to significant design and land use changes.

12.0 Unexpected findings

If any unconsolidated, odorous, stained, or deleterious soils, or suspect bonded/friable/fibrous asbestos containing material, fuel tanks, or septic systems are encountered during any further excavation, suspected historical contaminating activities are encountered, or conditions that are not alike the above descriptions, the site supervisor should be informed, the work stopped, and this office be contacted immediately for further evaluation by an appropriately qualified environmental consultant. The unexpected findings may trigger the need for more investigation and assessment dependant on the scope and context of the unexpected finding.

13.0 Notice of Copyright

14.0 Attachments

Attachment A : *Site location and proposed zoning plan*

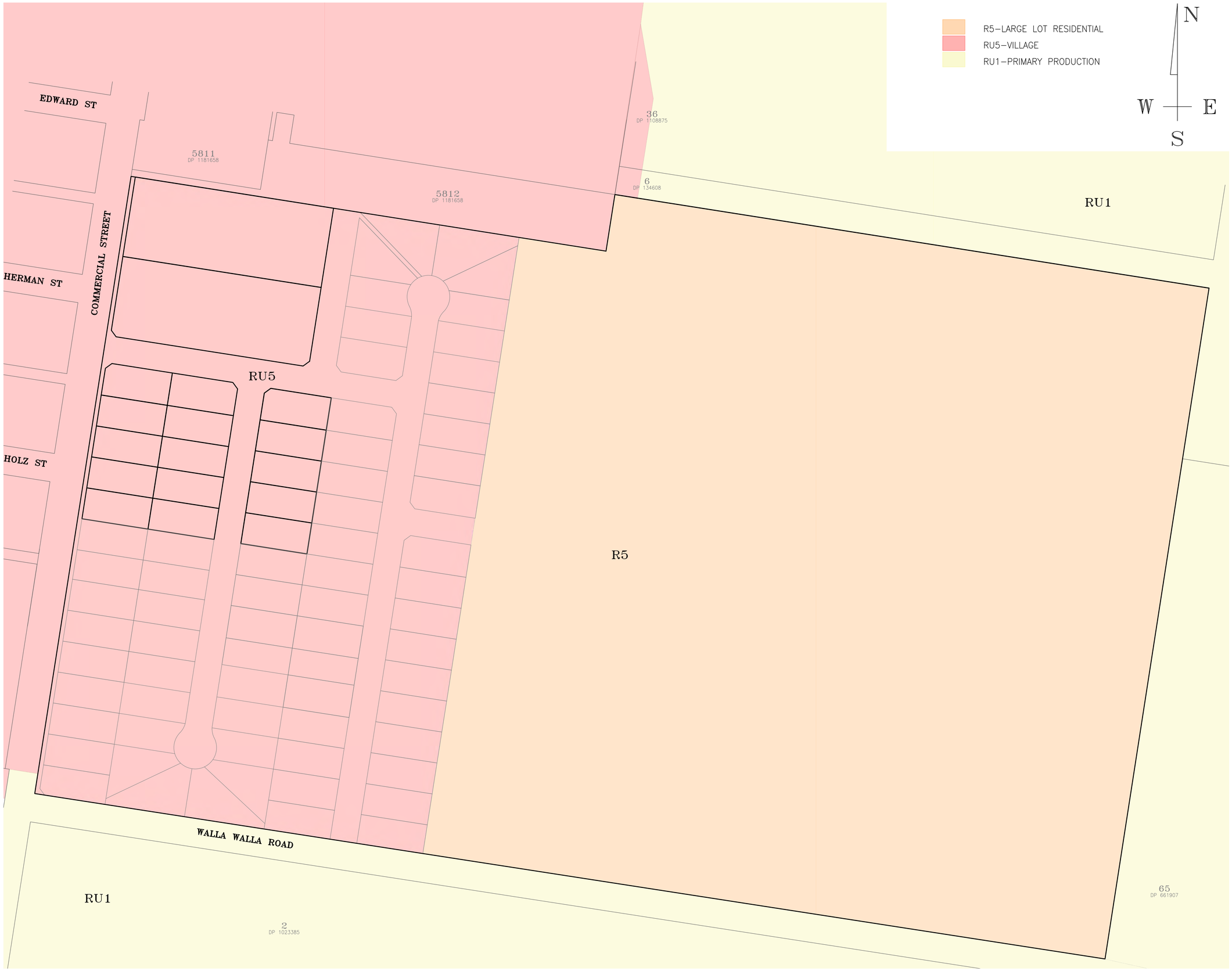
Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2023

Legend

Boundary

Pioneer Dr
Walla W Rd
Commercial St
Walla Walla Rd
Walla Walla Jindera Rd
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd
Google Earth
N
1 km



29 WALLA WALLA ROAD STAGE 1 WALLA WALLA

PROPOSED ZONING PLAN WITH PROPOSED LOTS

eslers LAND CONSULTING

SURVEYORS CIVIL ENGINEERS
DEVELOPMENT CONSULTANTS

598 MACAULEY STREET, ALBURY
PHONE: (02) 6058–0100

64 HAMMOND AVE, WAGGA WAGGA
PHONE: (02) 6921–3312

3/15 FORD STREET, WANGARATTA
PHONE: (03) 5721–5688

WWW.ESLERS.COM.AU
INFO@ESLERS.COM.AU

AMENDMENTS\ACTIONS:–	DATE:
A. FOR DISCUSSION	18/10/22
B.	
C.	
D.	
E.	
F.	

PLEASE NOTE :

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LIAISE WITH ALL SERVICING AUTHORITIES TO DETERMINE THE LOCATION OF ANY SERVICES PRIOR TO ANY EXCAVATION ON THE SITE. THE POSITION OF SERVICES ARE APPROX ONLY. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

THE CONTRACTOR IS TO ENSURE THAT ALL WORKS ARE EXECUTED IN A SAFE MANNER AND IN ACCORDANCE WITH THAT STATES "OCCUPATIONAL HEALTH AND SAFETY ACT". OTHER SAFETY REQUIREMENTS OF RELEVANT AUTHORITIES MUST BE FOLLOWED.

THE CONTRACTOR IS TO LIAISE WITH THE RELEVANT AUTHORITIES REGARDING SEDIMENT CONTROL MEASURES. NO CONSTRUCTION WORK IS TO BEGIN ON SITE UNTIL SUCH MEASURES ARE IN PLACE. ANY DEVIATION FROM THE APPROVED SOIL & WATER MANAGEMENT PLAN MAY INCUR A FINE.

ONLY THOSE TREES & SHRUBS THAT ARE MARKED FOR REMOVAL SHALL BE REMOVED.

ALL TRENCHES IN LOTS/NATURE STRIPS ARE TO BE RESTORED WITH A MINIMUM OF 100mm THICK TOPSOIL.

THE FACE OF KERBS ABOVE CONDUIT LOCATIONS ARE TO BE MARKED WITH A NEAT 'E' 'W' 'G' AND 'T' AS APPROPRIATE.

THE CONTRACTOR IS TO NOTIFY,
- –LOCAL WATER AUTHORITY 48HRS PRIOR TO COMMENCEMENT.
- –MUNICIPAL AUTHORITY 1WEEK PRIOR TO COMMENCEMENT.
- –SUPERINTENDENT 1WEEK PRIOR TO COMMENCEMENT.

THE PRINCIPAL CONTRACTOR IS RESPONSIBLE FOR CO–ORDINATION WITH SERVICE AUTHORITIES IN RELATION TO INSTALLATION OF THEIR SERVICES. THIS INCLUDES SETTING FINISHED LEVELS OF PITS AND STRUCTURES

ONLY SPECIFIC PLANS TO BE USED FOR CONSTRUCTION OF SPECIFIC SERVICES.

BEFORE YOU DIG www.byda.com.au

FOR DISCUSSION
DATE:– 18/10/2022

ESLER CHECKED:
IAN BIGNELL

AUTHORITY APPROVED:

DATUM:	DRAWN:	DATE:
A.H.D	A.VARGHESE	OCT–2022

PROJECT No: 00032742 REV: A

SHEET 4 OF 4 A1

FILE PATH:– P:\00032742\Engineering\02 Drawing ARD\27 Other Drawings\Zoning\32742_Eng_Zoning.dwg DATE SHEET PRINTED:– (Friday, November 11, 2022)

Attachment B : *Aerial photographs and satellite images*

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Aerial photograph 1961

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Townview Ave
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd

N

300 m

Google Earth

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Aerial photograph 1973

Legend
Boundary

Edward St
Commercial St
Herman St
Scholz St
Townview Ave
Commercial St
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd
N
300 m
Google Earth

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Aerial photograph 1987

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Townview Ave
Commercial St
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd

N

300 m

Google Earth

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Aerial photograph 1990

Legend
Boundary

Edward St
Commercial St
Herman St
Scholz St
Townview Ave
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd

N

300 m

Google Earth

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Aerial photograph 1996

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Lowanmew Ave
Commercial St
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd

N

300 m

Google Earth

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2010

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Townview Ave
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd

N

300 m

Google Earth

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2013

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Town View Ave
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd

N

300 m

Google Earth

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2014

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Townview Ave
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd

N

300 m

Google Earth

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2015

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Oak Mews Ave
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd
Google Earth
300 m
N

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2016

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Townview Ave
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd
Commercial St
Google Earth
Image © 2023 Maxar Technologies
300 m
N

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2017

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Townview Ave
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd

N

300 m

Google Earth

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2019

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Townview Ave
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd

N

300 m

Google Earth

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2020

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Townview Ave
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd

N

300 m

Google Earth

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2021

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Townview Ave
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd

N

300 m

Google Earth

Image © 2023 Airbus

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2022

Legend

Boundary

Edward St
Commercial St
Herman St
Scholz St
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd
Google Earth
Image © 2023 Airbus
300 m
N

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2023

Legend
Boundary

Edward St
Commercial St
Herman St
Scholz St
Townview Ave
Commercial St
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd
N
300 m
Google Earth
Image © 2023 Airbus

Attachment C : *Site features*

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2023

Legend
Boundary

Edward St
Commercial St
PJN Sheds
Sports ground
Herman St
Scholz St
Townview Ave
Yards
House and sheds
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd
N
300 m
Google Earth
Image © 2023 Airbus

Attachment D : *Site photographs*

Photograph 1: Walla Walla Sports Ground to the north of the site.

Photograph 2: PJN Sheds to the north of the site.

Photograph 3: Residential land to the west of the site.

Photograph 4: Cattle yards to the immediate east of the site.

Photograph 5: Sheep grazing with improved pasture ground cover and scattered paddock trees.

Photograph 6: Boundary farm fencing.

Attachment E : *Sampling map*

Commercial Street and Walla Walla Road Walla Walla NSW 2659

Preliminary Site Investigation
June 2023
Report No. 9380
Satellite image 2023

Legend

- Boundary
- Sample location

Edward St
Commercial St
PJN Sheds
Sports ground
Herman St
Scholz St
Townview Ave
1
2
3
4
5
6
7
8
Yards
House and sheds
Walla Walla Rd
Walla Walla Rd
Walla Walla Rd
N
300 m
Google Earth
Image © 2023 Airbus

Attachment F : *Tabulated results*

Page: 1 of 1
Job number: 9380
Project: Preliminary Site Investigation - Commercial Street & Walla Walla Road Walla Walla NSW

		Sample date	20/6/23	20/6/23	20/6/23	20/6/23	20/6/23	20/6/23	20/6/23	20/6/23	-	-	-	-	**Recreational Criteria**	
		Sample location	Paddock	Paddock	Paddock	Yards	Paddock	Yards	Paddock	Paddock	-	-	-	-		
		Sample ID	1	2	3	4	5	6	7	8	-	-	-	-		
		Sample depth (m)	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	-	-	-	-		
Compound	**LOR**	**Unit**	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	**HILs**	**HSLs**	**EILs/ESLs**
Arsenic	5	mg/kg	<5	6	<5	<5	<5	<5	<5	<5	-	-	-	-	300	-	100
Cadmium	1	mg/kg	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	90	-	-
Chromium	2	mg/kg	19	38	29	26	33	21	21	25	-	-	-	-	-	-	400
Copper	5	mg/kg	8	10	8	12	9	9	7	8	-	-	-	-	17000	-	190
Lead	5	mg/kg	14	12	16	14	12	16	10	11	-	-	-	-	600	-	1100
Nickel	2	mg/kg	9	7	11	12	5	6	4	5	-	-	-	-	1200	-	170
Zinc	5	mg/kg	12	9	10	16	11	14	10	11	-	-	-	-	30000	-	400
Mercury	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	80	-	-
Chromium (VI)	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	300	-	-
PCBs	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	1	-	-
HCB	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	10	-	-
Heptachlor	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	10	-	-
Chlordane	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	70	-	-
Endrin	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	20	-	-
Endosulfan	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	340	-	-
Mirex	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	20	-	-
Aldrin+dieldrin	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	10	-	-
DDT+DDE+DDD	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	400	-	180
Chlorpyrifos	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	250	-	-
Atrazine	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	400	-	-
Bifenthrin	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	730	-	-
Phenols	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	40000	-	-
PAHs	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	300	-	-
Benzo(a)pyrene TEQ (half LOR)	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-
TRH C6-C10 minux BTEX (F1)	10	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	5100	180
TRH C10-C16 minus napthalene (F2)	50	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	3800	120
TRH C16-C34 (F3)	100	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	5300	1300
TRH C34-C40 (F4)	100	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	7400	5600
Benzene	0.2	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	120	65
Toluene	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	18000	105
Ethylbenzene	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	5300	125
Xylenes	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	15000	45
Napthalene	1	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	1900	0.7/170

Attachment G : *Laboratory reports*

CERTIFICATE OF ANALYSIS

Work Order	: **ES2320775**	Page	: 1 of 8
Client	: **DM MCMAHON PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR DAVID MCMAHON	Contact	: Customer Services ES
Address	: 6 JONES ST Wagga Wagga NSW, AUSTRALIA 2650	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: 02 6931 0510	Telephone	: +61-2-8784 8555
Project	: 9380 Walla Walla	Date Samples Received	: 22-Jun-2023 11:30
Order number	: ----	Date Analysis Commenced	: 23-Jun-2023
C-O-C number	: ----	Issue Date	: 28-Jun-2023 17:01
Sampler	: D. McMahon		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 10		
No. of samples analysed	: 10		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Evie Sidarta	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	1	2	3	4	5
			Sampling date / time	20-Jun-2023 00:00	20-Jun-2023 00:00	20-Jun-2023 00:00	20-Jun-2023 00:00	20-Jun-2023 00:00
Compound	CAS Number	LOR	Unit	ES2320775-001	ES2320775-002	ES2320775-003	ES2320775-004	ES2320775-005
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**19.9**	**14.2**	**16.4**	**16.7**	**16.4**
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	**6**	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**19**	**38**	**29**	**26**	**33**
Copper	7440-50-8	5	mg/kg	**8**	**10**	**8**	**12**	**9**
Lead	7439-92-1	5	mg/kg	**14**	**12**	**16**	**14**	**12**
Nickel	7440-02-0	2	mg/kg	**9**	**7**	**11**	**12**	**5**
Zinc	7440-66-6	5	mg/kg	**12**	**9**	**10**	**16**	**11**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	1	2	3	4	5
			Sampling date / time	20-Jun-2023 00:00	20-Jun-2023 00:00	20-Jun-2023 00:00	20-Jun-2023 00:00	20-Jun-2023 00:00
Compound	CAS Number	LOR	Unit	ES2320775-001	ES2320775-002	ES2320775-003	ES2320775-004	ES2320775-005
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**72.4**	**84.0**	**92.8**	**78.1**	**81.8**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**67.2**	**81.4**	**85.8**	**72.1**	**75.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	6	7	8	Duplicate 1 Received as Duplicate	----
			Sampling date / time	20-Jun-2023 00:00	20-Jun-2023 00:00	20-Jun-2023 00:00	20-Jun-2023 00:00	----
Compound	CAS Number	LOR	Unit	ES2320775-006	ES2320775-007	ES2320775-008	ES2320775-009	--------
				Result	Result	Result	Result	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**17.8**	**15.2**	**15.9**	**16.5**	**----**
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	**----**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	**----**
Chromium	7440-47-3	2	mg/kg	**21**	**21**	**25**	**20**	**----**
Copper	7440-50-8	5	mg/kg	**9**	**7**	**8**	**8**	**----**
Lead	7439-92-1	5	mg/kg	**16**	**10**	**11**	**11**	**----**
Nickel	7440-02-0	2	mg/kg	**6**	**4**	**5**	**6**	**----**
Zinc	7440-66-6	5	mg/kg	**14**	**10**	**11**	**11**	**----**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	**----**
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	**----**	**----**
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	6	7	8	Duplicate 1 Received as Duplicate	----
			Sampling date / time	20-Jun-2023 00:00	20-Jun-2023 00:00	20-Jun-2023 00:00	20-Jun-2023 00:00	----
Compound	CAS Number	LOR	Unit	ES2320775-006	ES2320775-007	ES2320775-008	ES2320775-009	--------
				Result	Result	Result	Result	----
EP068A: Organochlorine Pesticides (OC) - Continued								
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**90.3**	**68.7**	**73.6**	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**89.1**	**65.3**	**67.6**	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	Rinsate	----	----	----	----
			Sampling date / time	20-Jun-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2320775-010	--------	--------	--------	--------
				Result	----	----	----	----
EG020T: Total Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2320775**	Page	: 1 of 5
Client	: **DM MCMAHON PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR DAVID MCMAHON	Telephone	: +61-2-8784 8555
Project	: 9380 Walla Walla	Date Samples Received	: 22-Jun-2023
Site	: ----	Issue Date	: 28-Jun-2023
Sampler	: D. McMahon	No. of samples received	: 10
Order number	: ----	No. of samples analysed	: 10

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
1, 2, 3, 4, 5, 6, 7, 8, Duplicate 1 - Received as Duplicate	**20-Jun-2023**	**----**	----	----	**23-Jun-2023**	04-Jul-2023	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
1, 2, 3, 4, 5, 6, 7, 8, Duplicate 1 - Received as Duplicate	**20-Jun-2023**	**24-Jun-2023**	17-Dec-2023	✓	**27-Jun-2023**	17-Dec-2023	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
1, 2, 3, 4, 5, 6, 7, 8, Duplicate 1 - Received as Duplicate	**20-Jun-2023**	**24-Jun-2023**	18-Jul-2023	✓	**28-Jun-2023**	18-Jul-2023	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
1, 2, 3, 4, 5, 6, 7	**20-Jun-2023**	**26-Jun-2023**	04-Jul-2023	✓	**26-Jun-2023**	05-Aug-2023	✓
Soil Glass Jar - Unpreserved (EP068)							
8	**20-Jun-2023**	**26-Jun-2023**	04-Jul-2023	✓	**27-Jun-2023**	05-Aug-2023	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) 1, 2, 3, 4, 5, 6, 7	**20-Jun-2023**	**26-Jun-2023**	04-Jul-2023	✓	**26-Jun-2023**	05-Aug-2023	✓
Soil Glass Jar - Unpreserved (EP068) 8	**20-Jun-2023**	**26-Jun-2023**	04-Jul-2023	✓	**27-Jun-2023**	05-Aug-2023	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T) Rinsate	**20-Jun-2023**	**26-Jun-2023**	17-Dec-2023	✓	**26-Jun-2023**	17-Dec-2023	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T) Rinsate	**20-Jun-2023**	**----**	----	----	**28-Jun-2023**	18-Jul-2023	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Pesticides by GCMS	EP068	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Pesticides by GCMS	EP068	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Pesticides by GCMS	EP068	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	10	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)

Chain of Custody

DM McMahon Pty Ltd
6 Jones Street
PO Box 6118, Wagga Wagga NSW 2650
Ph: (02) 69 310 510

Turnaround Requirements: ☑ Standard TAT ☐ Non Standard or Urgent TAT (List Due Date):

Relinquished by:	D. McMahon
Date:	20/06/2023
Signature:	DMM
Received by:	
Date:	22/6/23 11:30
Signature:	
Relinquished by:	
Date:	
Signature:	
Received by:	
Date:	
Signature:	

Analysing Laboratory:	ALS Environmental - Sydney
Project:	Walla Walla
Order No.:	9380
Project Manager:	David McMahon
Contact Ph:	(02) 69 310 510
Sampling Officer:	D. McMahon
Report Format:	Default
Email Reports to:	admin@dmmcmahon.com.au
Email Invoice to:	admin@dmmcmahon.com.au
Lab Comments:	

For Laboratory Use Only (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice/ Frozen ice bricks present upon sample	Yes	No	N/A
Random sample temp on receipt:			°C
Other comments:			

QUOTE NO.:

COC SEQUENCE NUMBER

COC:	1	2	3	4	5	6	7	8
OF:	1	2	3	4	5	6	7	8

LAB USE	SAMPLE DETAILS			CONTAINER INFORMATION		ANALYSIS REQUIRED including suites (where metals are required, specify Total or Dissolved)										Additional Information
LAB ID	SAMPLE ID	DATE/TIME	MATRIX (ref below)	TYPE & PRESERVATIVE (see codes below)	TOTAL CONTAINERS	S-2 (metals)	S-12 (OCP/OPP)	W-2 (metals)								Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	1 to 8	20/06/2023	S	Jar	8	✓	✓									
2	Duplicate 1	20/06/2023	S	Jar	1	✓										
3	Rinsate	20/06/2023	W	NP	1			✓								
				TOTAL	10											

Environmental Division
Sydney
Work Order Reference
ES2320775

Telephone : + 61-2-8784 8555

Matrix	Container Codes:
W- Water; S - Soil; Sed - Sediment; SI - Sludge; A - Air; D - Dust.	P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic; V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

APPENDIX J:

Aboriginal Cultural Heritage Due Diligence report

View south across the northern extent of the study area.

ABORIGINAL DUE DILIGENCE ASSESSMENT REPORT

COMMERCIAL STREET, WALLA WALLA

WALLA WALLA, NEW SOUTH WALES

AUGUST 2023

Report prepared by

OzArk Environment & Heritage

For Blueprint Planning on behalf of Annesley Holdings Pty Ltd

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DOCUMENT CONTROLS

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Client	Blueprint Planning
Document Description	Aboriginal Heritage Due Diligence Assessment
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Acknowledgement

OzArk acknowledge the traditional custodians of the area on which this assessment took place and pay respect to their beliefs, cultural heritage, and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the Elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

EXECUTIVE SUMMARY

OzArk Environment & Heritage (OzArk) has been engaged by Blueprint Planning on behalf of Annesley Holdings Pty Ltd (the proponent) to complete an Aboriginal heritage due diligence heritage assessment for the residential subdivision of Lots 1–3 DP1287711 (the proposal).

The study area consists of approximately 13 hectares of relatively flat land on Commercial Street, Walla Walla, New South Wales.

The visual inspection of the study area was undertaken by OzArk Archaeologist Eleanore Martin on 14 July 2023. Albury Local Aboriginal Land Council representative Andom Rendell also assisted with the visual inspection.

No Aboriginal objects were identified within the study area. The lack of Aboriginal objects may be a result of the study area's distance from a water source and the lack of landforms with heightened archaeological potential. The small size of the study area and the widespread agricultural disturbances may have also contributed to the lack of recordings.

The undertaking of the due diligence process resulted in the conclusion that the proposal will have an impact on the ground surface; however, no Aboriginal objects or intact archaeological deposits will be harmed by the proposal. This moves the proposal to the following outcome:

> *Aboriginal Heritage Impact Permit application not necessary. Proceed with caution. If any Aboriginal objects are found, stop work, and notify Heritage NSW (02) 9873 8500 (heritagemailbox@environment.nsw.gov.au). If human remains are found, stop work, secure the site, and notify NSW Police and Heritage NSW.*

To ensure the greatest possible protection to the area's Aboriginal cultural heritage values, the following recommendations are made:

1) The proposed work may proceed at Lots 1–3 DP1287711, on Commercial Street, Walla Walla, NSW without further archaeological investigation under the following conditions:
    a) All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to Aboriginal objects potentially located in adjacent landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.
2) This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites. If during works, however, Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the *Unanticipated Finds Protocol* (**Appendix 2**) should be followed.
3) Inductions for work crews should include a cultural heritage awareness procedure to ensure they recognise Aboriginal artefacts (see **Appendix 3**) and are aware of the

legislative protection of Aboriginal objects under the *National Parks and Wildlife Act 1974* and the contents of the *Unanticipated Finds Protocol.*

4) The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

CONTENTS

FIGURES

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PLATES

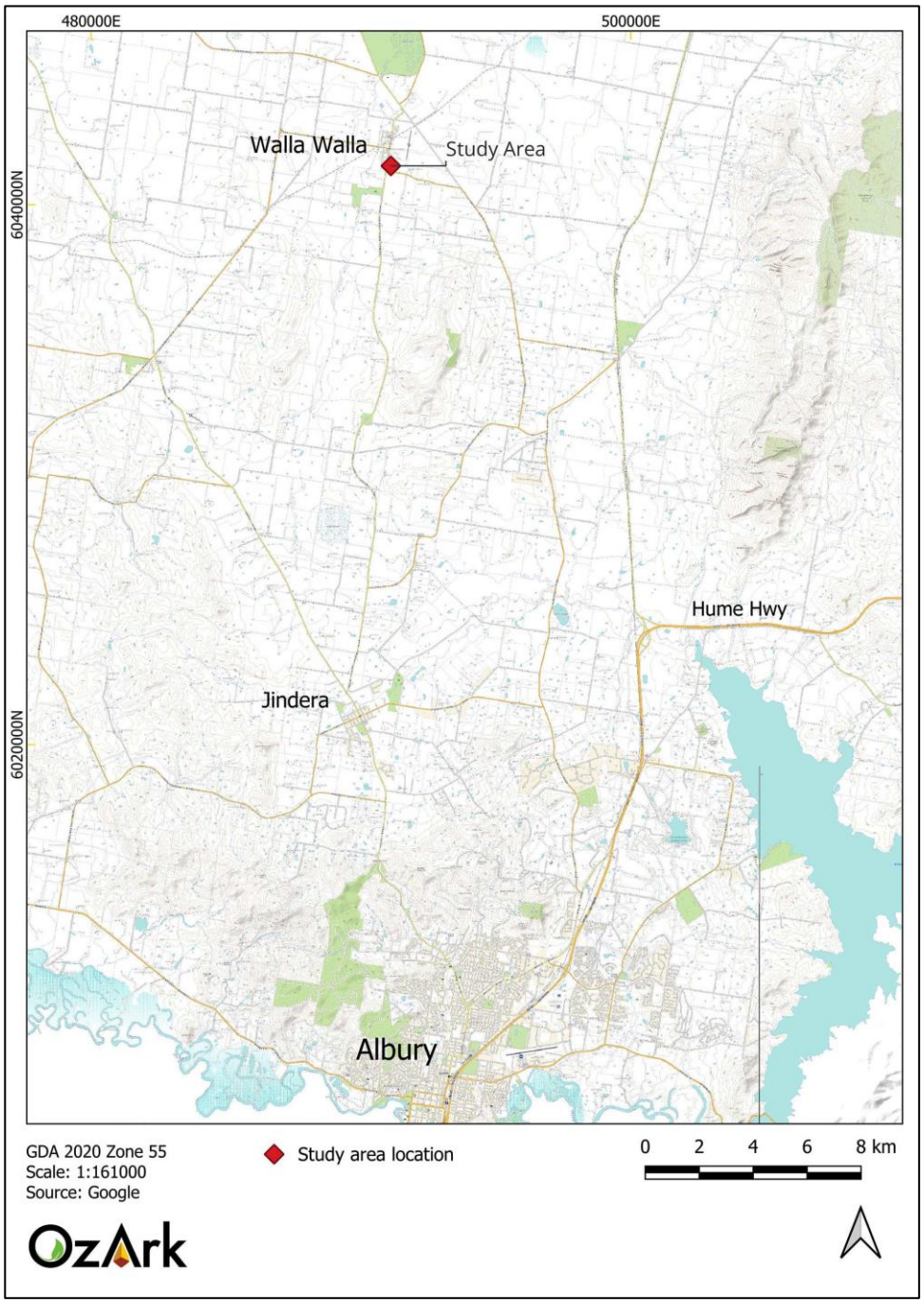
1 INTRODUCTION

1.1 BRIEF DESCRIPTION OF THE PROPOSAL

OzArk Environment & Heritage (OzArk) has been engaged by Blueprint Planning, on behalf of Annesley Holdings Pty Ltd (the proponent) to complete an Aboriginal due diligence heritage assessment for the proposed development of a housing subdivision of Lots 1–3 in DP1287711 on Commercial Street, Walla Walla, New South Wales (NSW) (the proposal).

The study area is located 38 kilometres (km) north of Albury in southern NSW and is in the Greater Hume Local Government Area (LGA) (**Figure 1-1**).

Figure 1-1: Map showing the location of the proposal.



1.2 STUDY AREA

The study area encompasses a rectangular plot of land covering approximately 13 hectares (ha) (**Figure 1-2**). The land is flat and used primarily for agricultural activities.

1.3 ASSESSMENT APPROACH

The desktop and visual inspection component for the study area follows the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (due diligence; DECCW 2010). The field inspection followed the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH 2011).

Figure 1-2: Aerial showing the study area.

2 ABORIGINAL DUE DILIGENCE ASSESSMENT

2.1 INTRODUCTION

Section 57 of the *National Parks and Wildlife Regulation 2019* (NPW Regulation) made under the *National Parks and Wildlife Act 1974* (NPW Act) advocates a due diligence process to determining likely impacts on Aboriginal objects. Carrying out due diligence provides a defence to the offence of harming Aboriginal objects and is an important step in satisfying Aboriginal heritage obligations in NSW.

2.2 DEFENCES UNDER THE NPW REGULATION

2.2.1 Low impact activities

The first step before application of the due diligence process itself is to determine whether the proposed activity is a "low impact activity" for which there is a defence in the NPW Regulation. The exemptions are listed in Section 58 of the NPW Regulation (DECCW 2010: 6).

The proposed activity of rezoning and subdividing the study area is not considered a low impact activity and the due diligence process must be applied.

2.2.2 Disturbed lands

Relevant to this process is the assessed levels of previous land-use disturbance.

The NPW Regulation Section 58 (DECCW 2010: 18) define disturbed land as follows:

> *Land is disturbed if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable.*
>
> *Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure) and construction of earthworks.*

The study area is within previously cleared landforms which have been disturbed by long term agricultural use including grazing and the installation of fencing. It could, therefore, be considered that the proposed work is occurring in 'disturbed land'. However, despite these disturbances, there is potential that small areas of natural vegetation and undisturbed land may remain intact.

In summary, it is determined that the proposal must be assessed under the Due Diligence Code of Practice. The reasoning for this determination is set out in **Table 2-1**.

Table 2-1: Determination of whether Due Diligence Code of Practice applies.

Item	Reasoning	Answer
Is the activity to be assessed under Division 4.7 (state significant development) or Division 5.2 (state significant infrastructure) of the EP&A Act?	The proposal will be assessed under Part 4 of the EP&A Act.	No
Is the activity exempt from the NPW Act or NPW Regulation?	The proposal is not exempt under this Act or Regulation.	No
Do either or both apply: Is the activity in an Aboriginal place? Have previous investigations that meet the requirements of this Code identified Aboriginal objects?	The activity will not occur in an Aboriginal place. No previous investigations have been undertaken for this proposal.	No
Is the activity a low impact one for which there is a defence in the NPW Regulation?	The proposal is not a low impact activity for which there is a defence in the NPW Regulation.	No
Is the activity occurring entirely within areas that are assessed as 'disturbed lands'?	The proposal is not entirely within areas of high modification.	No
Due Diligence Code of Practice assessment is required		

2.3 APPLICATION OF THE DUE DILIGENCE CODE OF PRACTICE TO THE PROPOSAL

To follow the generic due diligence process, a series of steps in a question/answer flowchart format (DECCW 2010:10) are applied to the proposed impacts and the study area, and the responses documented.

2.3.1 Step 1

Will the activity disturb the ground surface or any culturally modified trees?

Yes, the proposal will impact the ground surface and may impact culturally modified trees.

As the proposal is a subdivision, not all impacts are known at this stage. Rather, ground disturbance is assumed to be possible anywhere in the study area. Meanwhile, aerial imagery suggests that scattered trees are situated within the study area which means there is potential for culturally modified trees to be present.

2.3.2 Step 2a

Are there any relevant confirmed site records or other associated landscape feature information on AHIMS?

No, there are no previously recorded sites within the study area.

A search of the Aboriginal Heritage Information Management System (AHIMS) was undertaken on 10 July 2023 over a 20 x 20 km search area centred on the study area (GDA 2020 Zone 55, eastings: 486111–496111, northings: 6036444–6046444). Forty-one Aboriginal sites have been previously identified within the search area, although none are within or near the study area. **Table 2-2** shows the type of AHIMS sites that are close to the study area and **Figure 2-1** shows all previously recorded sites in relation to the study area.

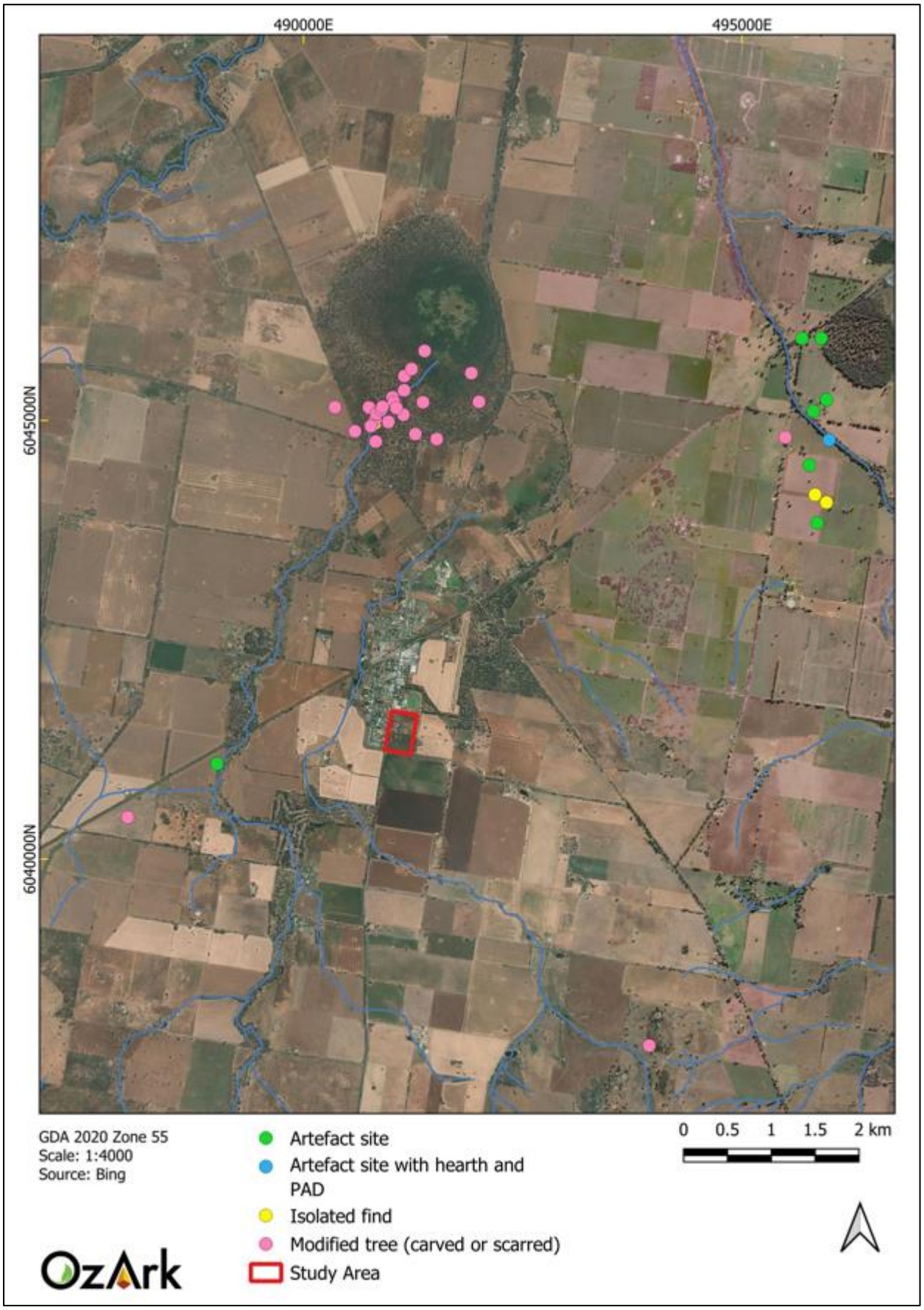
Table 2-2: Site types and frequencies of AHIMS sites near the study area.

Site Type	Number	% Frequency
Modified tree (carved or scarred)	30	73%
Artefact site	7	17%
Isolated find	3	7%
Artefact site with hearth and Potential Archaeological Deposit (PAD)	1	3%
Total	**41**	**100**

Culturally modified trees comprise 73% of the regional site types making this site type the most common. As shown on **Figure 2-1**, most of these culturally modified trees exist as part of a cluster approximately 3.5 km north of the study area within the Gum Swamp Reserve. The data is therefore skewed for this ecologically conserved zone and the high percentage of culturally modified trees will not be taken as likely to reflect the archaeological potential of the study which, as mentioned in **Section 2.2.2**, contains mostly cleared agricultural land.

The second most common site type within the vicinity of the study area is artefact sites (quantity unspecified), which contribute to 17% of site types (**Table 2-2**). This site type has been predominantly recorded in cleared agricultural land within 500 metres (m) of a water source (**Figure 2-1**). The study area is 500 m away from the nearest non-perennial waterway, and over 1.5 km from the nearest permanent watercourse at Petries Creek. The study area's flat landform and lack of water sources suggest that the study area has a low archaeological potential and any sites, if present, probably reflect travelling or transitory activities. Sites resulting from these activities are likely to be low density artefact scatters and isolated finds.

Figure 2-1: Previously recorded sites in relation to the study area.



2.3.3 Step 2b

Are there any other sources of information of which a person is already aware?

No, there are no other sources of information that would indicate the presence of Aboriginal objects in the study area.

Ethnohistoric Context

The study area is situated within the territory of the people belonging to the *Wiradjuri* tribal and linguistic group (Tindale 1974). The study area is located at the southern extent of the Wiradjuri territory, boarded by the Murray River (White 1986).

The Aboriginal groups along the Murray River used it extensively, often travelling the river in bark canoes. The Murray River was a means of communication and trade for the Wiradjuri people and other neighbouring tribes such as the Bangerang. The Murray River would have provided the local people with Murray cod and shellfish, and with nuts, fruits and tubers that are found in the areas surrounding the river. It is also likely that the Wiradjuri, Bangerang, and Monaro groups joined together for summer feasts of bogong moths in the alpine country (NPWS 2003).

As in most parts of NSW, European introduced diseases were a precursor to actual British settlement and this was already having an impact on the population encountered by early settlers. By the 1820s, the history of British settlement includes stories of clashes, including massacres, of the Aboriginal population, as well as reciprocal Aboriginal attacks on the British community (NPWS 2003).

Throughout the following decades, significant numbers of Aboriginal people continued to follow a traditional lifestyle; with the expansion of agriculture and pastoralism, however, many traditional practices became increasingly difficult. A census of Aboriginal people in 1845 estimated there were around 100 living at a station near what is now Albury and 200 near Deniliquin. The establishment of reserves and missions from the 1890s emphasised the segregation of Indigenous and non-Indigenous communities and exacerbated poverty and lack of access to services. However, it also enabled Wiradjuri families to remain intact and develop a sense of identity and resilience (Kass 2003).

Regional Archaeological Context

No previous assessments or Aboriginal archaeological contexts pertain directly to the location of the proposed work. However, the following review of archaeological investigations in the region is provided to generally inform estimations of archaeological probability.

A regional survey of the Upper Murray around Albury-Wodonga was carried out by Witter in 1976. The survey focused on Thurgoona in NSW and Baranduda in Victoria for the purposes of intensive residential development by the Albury-Wodonga Development Corporation. The area surveyed in NSW during this study was in Thurgoona, north of the Riverina highway, and between

St Johns Road and what is now Table Top Road. Three sites were recorded in this area, all artefact scatters primarily made up of quartz debitage.

In 1978, Crosby conducted a pedestrian survey of six areas around the Albury region, including one area next to where the study area is located. Crosby recorded seven Aboriginal sites and ten historical sites during the survey. One historical site was in Crosby's survey area closest to the study area. Overall, Crosby noted a concentration of scarred trees recorded in locations at the junction between geologically different rocks where water springs were also present. Crosby also noted that quartz was prevalent throughout the survey areas, especially in the form of small pebbles. During the field survey in 1978, all Aboriginal sites recorded by Crosby were scarred trees. Crosby also highlights the lack of surface camp sites in the areas surveyed (Crosby 1978).

In the early 2000s a series of archaeological investigations were conducted by Kelly (2001a, 2001b, and 2002) and Kelly and Price (2003, 2004) at the location of the Thurgoona Park Estate, NSW.

Kelly (2001a) undertook monitoring of the vegetation striping in relation to the Thurgoona Park Estate development. During the monitoring, one Aboriginal object was identified but subsequently impacted by contractors and destroyed or lost. Further monitoring was undertaken at Thurgoona Park Estate development by Kelly in 2001b, where further deposits were identified, and work was stopped for investigation. The investigation of these deposits is outlined in Kelly (2002) where subsurface excavation resulted in 115 Aboriginal artefacts being identified and subsequently recorded as a site and recommended for salvage.

In 2003, Kelly and Price conducted a survey using 50 m pedestrian transects on either side of both Eight Mile Creek and Woolshed Creek assisted by members of the Aboriginal community as part of field training. This survey covered the creeks approximately 1.5 km north of the study area. During the survey 43 isolated finds and low-density artefact scatters were recorded. Of these, 33 sites were recorded along Woolshed Creek and 10 sites were along Eight Mile Creek. The 10 sites next to Eight Mile Creek consisted of pieces of debitage and one flake. Most of these sites (n=7) were in the Eight Mile Creek bed.

In 2004, Kelly and Price focused on the salvage conducted at the Thurgoona Park Estate residential development. The salvage took place in association with the construction of roadways and services infrastructure trenching. As a results of the salvage, 131 Aboriginal artefacts were identified. Of these, 99.5% were quartz. There were few formal tool types represented and most identified artefacts were debitage. As a result of the salvage and analysis of the recovered Aboriginal artefacts, Price and Kelly (2004) concluded that raised level landforms in association with water sources are archaeologically sensitive in the Albury area and that the likelihood of quartz artefacts and debitage is high.

Brown (2011) conducted a preliminary assessment of Aboriginal cultural heritage within an area proposed for residential rezoning in Thurgoona, near Albury, NSW. The preliminary assessment included a site inspection during which two sites were recorded: one scarred tree and one artefact scatter. Brown (2011) further predicted based on the desktop and site inspection that further subsurface archaeological deposits were likely to occur upon higher landforms within 500 m of watercourses.

Conclusion

The regional archaeological context demonstrates that there is a general likelihood of Aboriginal objects being recorded in the study area; although previous investigations have demonstrated that landforms closely associated with permanent waterways have a heightened archaeological potential. Landforms of this description are absent from the study area.

Culturally modified trees and artefact scatters (commonly comprising of quartz artefacts) are the most common site types recorded in the region. Generally, artefact sites in the immediate region have a low artefact density.

2.3.4 Step 2c

Are there any landscape features that are likely to indicate presence of Aboriginal objects?

No, the study area does not contain landforms with identified archaeological sensitivity.

The study area is located in the South Western Slopes Bioregion: a large area comprising of foothills and ranges. The topography of the study area is consistent with the Albury–Oaklands Hills and Foothills landscape unit as described by Mitchell (2002). This area consists of isolated hills and rises.

Soils in this landform tends to be shallow, gritty loams amongst rock outcrops on hills and red-brown texture-contrast soil on slopes with a bleached Horizon A2 and structured subsoil (Mitchell 2002). According to the Great Soil Group Classification, most of the study area is classified as having red podzolic soils with granites and metasediments, while a small section along the western boundary is classified as being red brown earths.

The Murray River is located approximately 35 km south of the study area. Hydrological features near the study area are all non-perennial and include Petries Creek, Back Creek, and several small unnamed tributaries.

The topography, hydrology and climate of the study area would have been conducive to nearly year-round occupation by Aboriginal people. It is likely that creeks and tributaries were used as travel routes towards more permanent sources of water such as the Murray River. In such a relatively hospitable environment one could expect wide-spread, general evidence of Aboriginal occupation. However, within the specific study area there are no known natural resource sites that may have been a focus for past Aboriginal occupation.

Soils present in the study area are likely to have been affected by sheet wash erosion and are poor draining. The erosional qualities of the soils present will have influenced the likelihood for in situ archaeological deposits being present. Furthermore, the widespread and comprehensive use of most of the study area for tree clearing and grazing would have further promoted soil erosion and loss.

The study area would have once supported an open woodland which would have provided some resources for Aboriginal subsistence in the past. However, the broad-scale vegetation clearance which has taken place across the study area for agricultural purposes reduces the likelihood that any culturally modified trees remain present.

Ground surface disturbances caused by vegetation clearance and grazing exist throughout the study area. These activities may have displaced Aboriginal objects and are likely to have reduced the potential for intact subsurface archaeological material. However, disturbance at a given location does not necessarily mean that there will be no cultural material present, as often a disturbed context will reveal objects which may have previously been subsurface.

2.3.5 Step 3

Can harm to Aboriginal objects or disturbance of archaeologically sensitive landscape features be avoided?

There are no AHIMS registered sites or landforms with identified archaeological sensitivity within or near the study area.

No AHIMS registered sites were recorded within or near the study area. Additionally, no landforms with heightened archaeological potential were identified within the study area. Therefore, there is low risk of harm to Aboriginal objects.

2.3.6 Step 4

Does a desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely?

No, there were no Aboriginal objects identified within the study area.

The visual inspection of the study area was undertaken by OzArk Archaeologist, Eleanore Martin, on 14 July 2023 (**Figure 2-2**). Albury Local Aboriginal Land Council (LALC) representative Andom Rendell assisted with the visual inspection.

Standard archaeological field survey and recording methods were employed. The study area, including portions of the Walla Walla Road and Commercial Street transport corridors, was inspected on foot to ground-truth levels of disturbance and assess the archaeological potential of landforms. It was noted during the survey that the paddock had been ripped for cropping and allowed to grow over with grassy vegetation for livestock grazing. Meanwhile, the Walla Walla

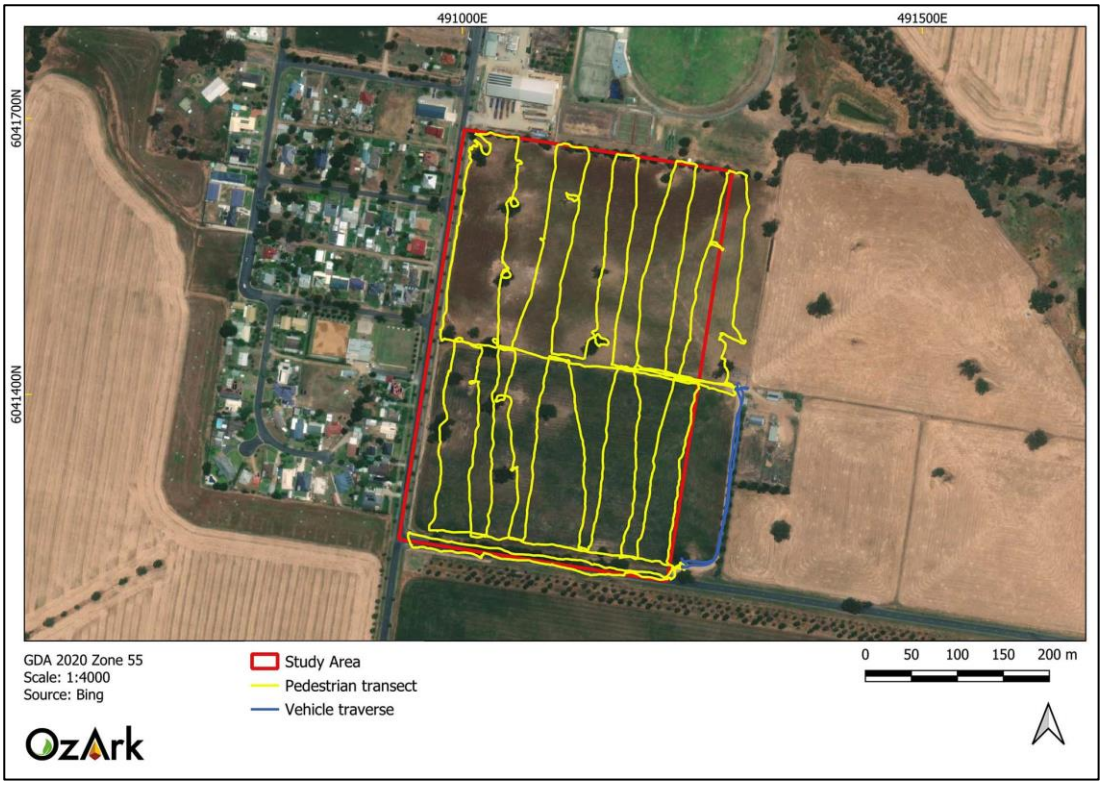
Road and Commercial Street transport corridors directly associated with the study area had been considerably disturbed through the construction of drainage channels (**Plate 1**, **Plate 2** and **Plate 3**).

Ground surface visibility (GSV) across the study area was very low, averaging 10% due to long grasses (**Plate 4** and **Plate 5**). However, there were several areas of exposure throughout the study area where GSV increased to approximately 40%. These exposed areas were limited to along property fencing, surrounding large trees and where woodpiles had been placed (**Plate 6** and **Plate 7**).

No Aboriginal sites were identified or recorded within the study area. However, the Albury LALC representative identified a 'bird scar' on a mature Red Gum (Eucalyptus) in the north-western most corner of the study area. It was suggested the scar was relatively new, as it was small and solely located on the western facing side of the tree trunk. It was stated that the 'bird scars' are formed by birds pulling off the bark to protect a nest from predators. Due to the age and lack of associated human activities the scar on this tree cannot be considered as archaeologically significant.

The lack of Aboriginal objects in the study area may be a result of distance from a water source, lack of landforms with heightened archaeological potential, the small size of the area assessed or disturbance through long-term agricultural practices.

Figure 2-2: Survey coverage within the study area.



2.4 CONCLUSION

The due diligence process has resulted in the outcome that an Aboriginal Heritage Impact Permit (AHIP) is not required. The reasoning behind this determination is set out in **Table 2-3**.

Table 2-3: Due Diligence Code of Practice application.

Step	Reasoning	Answer
Step 1 Will the activity disturb the ground surface or any culturally modified trees?	The proposed works will not disturb the ground surface initially through fencing, although other impacts as a result of the subdivision are likely to cause further disturbance. The proposal will not impact mature, native vegetation and therefore will not harm culturally modified trees.	Yes
If the answer to Step 1 is 'yes', proceed to Step 2		
Step 2a Are there any relevant records of Aboriginal heritage on AHIMS to indicate presence of Aboriginal objects?	AHIMS indicated that there are no Aboriginal sites within the study area. None of the nearby Aboriginal sites are in close enough to be harmed by the proposal.	No
Step 2b Are there other sources of information to indicate presence of Aboriginal objects?	There are no other sources of information to indicate that Aboriginal objects are likely in the study area, although it is noted that there is a general likelihood for landforms in the region to contain Aboriginal objects.	No
Step 2c Will the activity impact landforms with archaeological sensitivity as defined by the Due Diligence Code?	There are no landforms with identified archaeological sensitivity present within the study area.	No
If the answer to any stage of Step 2 is 'yes', proceed to Step 3		
Step 3 Can harm to Aboriginal objects listed on AHIMS or identified by other sources of information and/or can the carrying out of the activity at the relevant landscape features be avoided?	There are no AHIMS listed sites within or near the study area. There are no other sources of information that suggest archaeological potential. The proposal will not impact landforms with archaeological sensitivity as identified in the Due Diligence Code of Practice.	Yes
If the answer to Step 3 is 'no', a visual inspection is required. Proceed to Step 4.		
Step 4 Does the visual inspection confirm that there are Aboriginal objects or that they are likely?	Although not required by the Due Diligence Code of Practice, the visual inspection recorded no Aboriginal objects in the study area. It was assessed that landforms within the study area have a low potential to contain intact archaeological deposits.	No
Conclusion		
AHIP not necessary. Proceed with caution.		

3 MANAGEMENT RECOMMENDATIONS

The undertaking of the due diligence process resulted in the conclusion that the proposed works will have an impact on the ground surface, however, no Aboriginal objects or intact archaeological deposits will be harmed by the proposal. This moves the proposal to the following outcome:

> *AHIP application not necessary. Proceed with caution. If any Aboriginal objects are found, stop work, and notify Heritage NSW (02) 9873 8500 (heritagemailbox @environment.nsw.gov.au). If human remains are found, stop work, secure the site, and notify NSW Police and Heritage NSW.*

To ensure the greatest possible protection to the area's Aboriginal cultural heritage values, the following recommendations are made:

1) The proposed work may proceed at Lots 1–3 DP1287711, on Commercial Street, Walla Walla, NSW without further archaeological investigation under the following conditions:
    a) All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to Aboriginal objects potentially located in adjacent landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.
2) This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites. If during works, however, Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the *Unanticipated Finds Protocol* (**Appendix 2**) should be followed.
3) Inductions for work crews should include a cultural heritage awareness procedure to ensure they recognise Aboriginal artefacts (see **Appendix 3**) and are aware of the legislative protection of Aboriginal objects under the NPW Act and the contents of the *Unanticipated Finds Protocol.*
4) The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

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PLATES

Plate 1: View east of drainage channel along southern-most side of Walla Walla Road transport corridor.

Plate 2: View east of drainage channel along northern-most side of Walla Walla Road transport corridor.

Plate 3: View south of the drainage channel along Commercial Street Walla Walla. Note the transmission lines along the property fence and planted tree vegetation.

Plate 4: View east along fence line showing grazing pastures and grass density.

Plate 5: Ground surface in north-western corner of the study area. Note the dense grass vegetation and limited ground surface visibility.

Plate 6: View west along northern-most boundary of the study area. Note the exposure along the property fence.

Plate 7: View northwest of open exposure within the study area. Note: this is near a mature tree and is the result of wood stockpiling.

APPENDIX 1: AHIMS SEARCH RESULTS

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : Walla Walla Commercial St
Client Service ID : 798889

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
55-6-0027	WW23;Back Creek Swamp 1;	AGD	55	495850	6045050	Open site	Valid	Artefact : -	Open Camp Site	98638
Contact		Recorders	Mr.Kelvin Officer					Permits		
55-6-0031	Petries creek 1;	AGD	55	488900	6040900	Open site	Valid	Artefact : -	Open Camp Site	
Contact		Recorders	Kerry Navin,Mr.Kelvin Officer					Permits		
55-6-0088	Gum Swamp Mt 11	GDA	55	490588	6044877	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
Contact		Recorders	Mr.Dean Freeman					Permits		
55-6-0247	Walla Wetlands 5	GDA	55	491015	6045263	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Mr.Mark Saddler					Permits		
55-6-0248	Walla Wetlands 6	GDA	55	491141	6045340	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Mr.Mark Saddler					Permits		
55-6-0252	Walla Wetlands 10	GDA	55	491914	6045540	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Mr.Mark Saddler					Permits		
55-6-0026	WW22;Back Creek;	AGD	55	495700	6044920	Open site	Valid	Artefact : -	Open Camp Site	98638
Contact		Recorders	Mr.Kelvin Officer					Permits		
55-6-0189	Walla Walla SF IF 18	GDA	55	495834	6044153	Open site	Destroyed	Artefact : -		
Contact		Recorders	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					Permits		
55-6-0076	Gum Swamp	AGD	55	490632	6044962	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
Contact	T Russell	Recorders	Mr.Graham Moore					Permits		
55-6-0087	Gum Swamp Mt 13	GDA	55	490810	6044965	Open site	Valid	Artefact : 1		
Contact		Recorders	Miss.Kaleana Reyland					Permits		
55-6-0253	Walla Wetlands 11	GDA	55	491363	6045208	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Mr.Mark Saddler					Permits		
55-6-0251	Walla Wetlands 9	GDA	55	491382	6045793	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Mr.Mark Saddler					Permits		
55-6-0001	Hopefield;Scoffs Rd No.2;	AGD	55	493828	6037687	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	276

Report generated by AHIMS Web Service on 10/07/2023 for Eleanore Martin for the following area at Datum :GDA, Zone : 55, Eastings : 486111.0 - 496111.0, Northings : 6036444.0 - 6046444.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 41

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AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : Walla Walla Commercial St
Client Service ID : 798889

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
Contact		Recorders	ASRSYS					Permits		
55-6-0246	Walla Wetlands 4	GDA	55	491030	6045208	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Mr.Mark Saddler					Permits		
55-6-0245	Walla Wetlands	GDA	55	491140	6045066	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Mr.Mark Saddler					Permits		
55-6-0254	Walla Wetlands 12	GDA	55	491520	6044788	Open site	Valid	Modified Tree (Carved or Scarred) : -		
Contact		Recorders	Mr.Mark Saddler					Permits		
55-6-0165	Walla Walla SF AFT 3	GDA	55	495857	6043833	Open site	Destroyed	Artefact : -		
Contact		Recorders	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					Permits		
55-6-0270	Walla Walla SF PAD 1	GDA	55	495994	6044777	Open site	Partially Destroyed	Artefact : -, Hearth : -, Potential Archaeological Deposit (PAD) : -		
Contact		Recorders	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					Permits		
55-6-0089	Gum Swamp Mt 1	GDA	55	490359	6045151	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
Contact		Recorders	Mr.Dean Freeman					Permits		
55-6-0083	Gum Swamp Modified Tree 3	GDA	55	490824	6044760	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
Contact		Recorders	Miss.Kaleana Reyland					Permits		
55-6-0079	Gum Swamp MT10	AGD	55	490857	6044793	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
Contact	Sarah Colley	Recorders	Mr.Dean Freeman					Permits		
55-6-0080	Gum Swamp MT4	AGD	55	491161	6044659	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
Contact	Sarah Colley	Recorders	Mr.Dean Freeman					Permits		
55-6-0085	Gum Swamp Mt 6	GDA	55	492001	6045212	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
Contact		Recorders	Mr.Dean Freeman					Permits		

Report generated by AHIMS Web Service on 10/07/2023 for Eleanore Martin for the following area at Datum :GDA, Zone : 55, Eastings : 486111.0 - 496111.0, Northings : 6036444.0 - 6046444.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 41

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AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : Walla Walla Commercial St
Client Service ID : 798889

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
55-6-0002	Hopefield;Scoffs Rd No3;	AGD	55	493828	6037687	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	276
	Contact	Recorders	ASRSYS					Permits		
55-6-0024	WW21;Sahoffs Road;	AGD	55	487880	6040290	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	98638
	Contact	Recorders	Mr.Kelvin Officer					Permits		
55-6-0074	Gum Swamp Mt2	AGD	55	490704	6044824	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact T Russell	Recorders	Mr.Dean Freeman					Permits		
55-6-0243	Walla Wetlands 1	GDA	55	490968	6044975	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Mark Saddler					Permits		
55-6-0084	Gum Swamp Mt	GDA	55	491059	6045143	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Mr.Dean Freeman					Permits		
55-6-0078	Gum Swamp MT8	AGD	55	491033	6045158	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact Sarah Colley	Recorders	Mr.Dean Freeman					Permits		
55-6-0249	Walla Wetlands 7	GDA	55	491150	6045507	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Mark Saddler					Permits		
55-6-0032	Back Creek 2;	AGD	55	495570	6045750	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Kerry Navin,Mr.Kelvin Officer					Permits		
55-6-0166	Walla Walla SF AFT 4	GDA	55	495771	6044491	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					Permits		
55-6-0033	Back Creek Swamp 2;	AGD	55	495790	6045750	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Kerry Navin,Mr.Kelvin Officer					Permits		
55-6-0190	Walla Walla SF IF 17	GDA	55	495964	6044066	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Mr.Matthew Barber,Mr.Matthew Barber,NGH Heritage - Fyshwick,NGH Heritage - F					Permits		
55-6-0086	Gum Swamp Mt7	GDA	55	490833	6045078	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Mr.Dean Freeman					Permits		

Report generated by AHIMS Web Service on 10/07/2023 for Eleanore Martin for the following area at Datum :GDA, Zone : 55, Eastings : 486111.0 - 496111.0, Northings : 6036444.0 - 6046444.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 41

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AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : Walla Walla Commercial St
Client Service ID : 798889

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
55-6-0077	gum swamp mt5	AGD	55	490769	6044935	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact Sarah Colley	Recorders	Mr.Dean Freeman					Permits		
55-6-0144	Walla Solar Farm 495495	GDA	55	495495	6044807	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Mark Saddler					Permits		
55-6-0082	Gum Swamp Mt 5	GDA	55	490769	6044935	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Mr.Dean Freeman					Permits		
55-6-0075	Gum Swamp Mt12	AGD	55	490785	6044969	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact T Russell	Recorders	Miss.Kaleana Reyland					Permits		
55-6-0244	Walla Wetlands 2	GDA	55	490969	6044984	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Mark Saddler					Permits		
55-6-0250	Walla Wetlands 8	GDA	55	491233	6045586	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Mark Saddler					Permits		

** Site Status
Valid - The site has been recorded and accepted onto the system as valid
Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.
Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground
Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 10/07/2023 for Eleanore Martin for the following area at Datum :GDA, Zone : 55, Eastings : 486111.0 - 496111.0, Northings : 6036444.0 - 6046444.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 41

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APPENDIX 2: ABORIGINAL HERITAGE: UNANTICIPATED FINDS PROTOCOL

An Aboriginal artefact is anything which is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal) remains may also be uncovered while onsite.

Cultural heritage significance is assessed by the Aboriginal community and is typically based on traditional and contemporary lore, spiritual values, and oral history, and may also consider scientific and educational value.

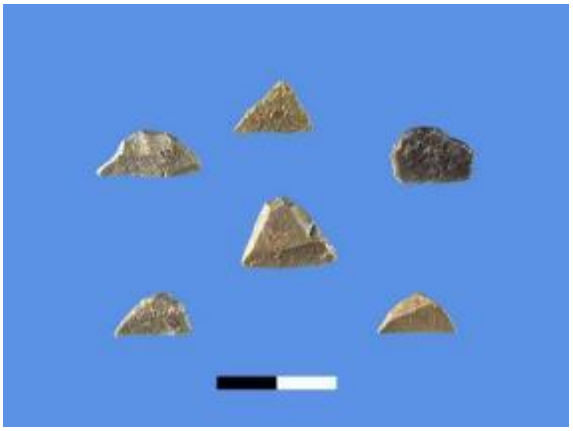
Protocol to be followed if previously unrecorded or unanticipated Aboriginal object(s) are encountered:

1. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:
    a. Not further harm the object
    b. Immediately cease all work at the particular location
    c. Secure the area to avoid further harm to the Aboriginal object
    d. Notify Heritage NSW as soon as practical on (02) 9873 8500 (heritagemailbox @environment.nsw.gov.au), providing any details of the Aboriginal object and its location; and
    e. Not recommence any work at the particular location unless authorised in writing by Heritage NSW.
2. If Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and Heritage NSW contacted.
3. Cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
    a. The recording and assessment of the find(s)
    b. The fulfilment of any legal constraints arising from the find(s), including complying with Heritage NSW directions
    c. The development and implementation of appropriate management strategies, including consultation with stakeholders and the assessment of the significance of the find(s).
4. Where the find(s) are determined to be Aboriginal object(s), recommencement of work in the area of the find(s) can only occur in accordance with any consequential legal requirements and after gaining written approval from Heritage NSW (normally an Aboriginal Heritage Impact Permit).

APPENDIX 3: ABORIGINAL HERITAGE: ARTEFACT IDENTIFICATION

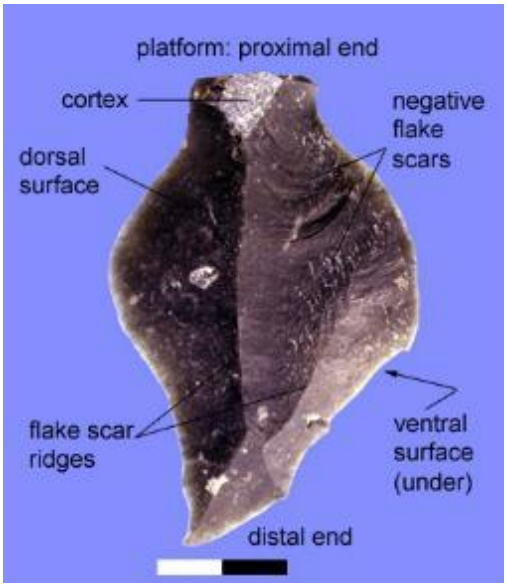
A retouched silcrete flake

A quartz flake



Microliths (scale = 1 cm)

Volcanic flakes



Flake characteristics (scale = 1 cm)

A mudstone/tuff core from which flakes have been removed

APPENDIX K:

Bushfire Assessment Report

BUSHFIRE ASSESSMENT

Greater Hume Local Environmental Plan 2012

Rezoning of R5 Large Lot Residential Zone land to RU5 Village Zone and changes to minimum subdivision lot size

Lots 1-3 DP1287711, Commercial Street and Walla Walla Road, Walla Walla NSW

October 2023

1.0 THE PLANNING PROPOSAL

The Planning Proposal is described and shown in **Section 1.1**, **Section 2.1**, **Table 1**, **Figure 3** and **Figure 4** in the main report.

2.0 THE LAND

The Land is described and shown in **Section 1.3**, **Figure 1**, **Figure 2**, **Appendix A** and **Appendix B** in the main report.

3.0 PLANNING FOR BUSHFIRE PROTECTION

This Bushfire Assessment Report (BAR) has been prepared in accordance with *Local Planning Direction No. 4.3 Planning for Bushfire Protection* under section 9.1(2) of the *Environmental Planning and Assessment Act 1979* –

4.3 Planning for Bushfire Protection
Objectives
The objectives of this direction are to:
(a) protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas, and
(b) encourage sound management of bush fire prone areas.
Application
This direction applies to all local government areas when a relevant planning authority prepares a planning proposal that will affect, or is in proximity to, land mapped as bushfire prone land.
This applies where the relevant planning authority is required to prepare a bush fire prone land map under section 10.3 of the EP&A Act, or, until such a map has been certified by the Commissioner of the NSW Rural Fire Service, a map referred to in Schedule 6 of that Act.
Direction 4.3
(1) In the preparation of a planning proposal the relevant planning authority must consult with the Commissioner of the NSW Rural Fire Service following receipt of a gateway determination under section 3.34 of the Act, and prior to undertaking community consultation in satisfaction of clause 4, Schedule 1 to the EP&A Act, and take into account any comments so made.
(2) A planning proposal must:
(a) have regard to Planning for Bushfire Protection 2019,
(b) introduce controls that avoid placing inappropriate developments in hazardous areas, and
(c) ensure that bushfire hazard reduction is not prohibited within the Asset Protection Zone (APZ).

(3) A planning proposal must, where development is proposed, comply with the following provisions, as appropriate:

(a) provide an Asset Protection Zone (APZ) incorporating at a minimum:

i. an Inner Protection Area bounded by a perimeter road or reserve which circumscribes the hazard side of the land intended for development and has a building line consistent with the incorporation of an APZ, within the property, and

ii. an Outer Protection Area managed for hazard reduction and located on the bushland side of the perimeter road,

(b) for infill development (that is development within an already subdivided area), where an appropriate APZ cannot be achieved, provide for an appropriate performance standard, in consultation with the NSW Rural Fire Service. If the provisions of the planning proposal permit Special Fire Protection Purposes (as defined under section 100B of the Rural Fires Act 1997), the APZ provisions must be complied with,

(c) contain provisions for two-way access roads which links to perimeter roads and/or to fire trail networks,

(d) contain provisions for adequate water supply for firefighting purposes,

(e) minimise the perimeter of the area of land interfacing the hazard which may be developed,

(f) introduce controls on the placement of combustible materials in the Inner Protection Area.

Consistency

A planning proposal may be inconsistent with the terms of this direction only if the relevant planning authority can satisfy the Planning Secretary (or an officer of the Department nominated by the Secretary) that the council has obtained written advice from the Commissioner of the NSW Rural Fire Service to the effect that, notwithstanding the non- compliance, the NSW Rural Fire Service does not object to the progression of the planning proposal.

How this BAR addresses each of the relevant requirements arising from *Local Planning Direction No. 4.3 Planning for Bushfire Protection* is provided at **Table K1**.

This BAR has been prepared with reference to –

- Section 2.3 (p. 19), Section 4 (pp. 33-37), Section 5 (pp. 42-48) and Appendix 2 of *Planning for Bush Fire Protection* (RFS, 2019) (PBP), and
- section 44 of the *Rural Fires Regulation 2013* (the RF Regs).

This BAR intends to demonstrate that the Planning Proposal satisfies the aims and objectives of PBP in relation to the subdivision of bush fire prone land that could lawfully be used for residential purposes. The level of detail provided in this report is consistent with identified bushfire planning risks in relation to the locations and circumstances of such risk and the locations, layout, and design of likely future subdivision lots. This approach is consistent with previous Rural Fire Service (RFS) advice for such situations.

In accordance with information supplied by Council and the RFS, the Site is partly located within 'Bushfire Buffer' as shown in **Figure K1**.

Table K1: Relevant requirements arising from *Planning Direction No. 4.3 Planning for Bushfire Protection*

Planning Direction No. 4.3 Planning for Bushfire Protection	***Response***
(2) A planning proposal must:	
(a) have regard to Planning for Bushfire Protection 2019,	Complies – Refer to **Section 4** below.
(b) introduce controls that avoid placing inappropriate developments in hazardous areas, and	Not relevant – The possible future subdivision and development of the land for residential purposes as indicatively shown in **Figure 5: Possible future subdivision of the Land following implementation of the Planning Proposal (subject to separate DA process)** of the main report is not properly regarded as an "inappropriate development".
(c) ensure that bushfire hazard reduction is not prohibited within the Asset Protection Zone (APZ).	Complies – All and any APZs would be located on RU5 zone land (not C zone land).
(3) A planning proposal must, where development is proposed, comply with the following provisions, as appropriate:	Not relevant (no development is proposed as part of the Planning Proposal at this time). The possible future subdivision and development of the land for residential purposes as indicatively shown in **Figure 5: Possible future subdivision of the Land following implementation of the Planning Proposal (subject to separate DA process)** of the main report has every opportunity of reasonably
(a) provide an Asset Protection Zone (APZ) incorporating at a minimum:	
(i) an Inner Protection Area bounded by a perimeter road or reserve which circumscribes the hazard side of the land intended for development and has a building line consistent with the incorporation of an APZ, within the property, and	

(ii) an Outer Protection Area managed for hazard reduction and located on the bushland side of the perimeter road,	demonstrating compliance with *Planning for Bushfire Protection* (RFS, 2019).
(b) for infill development (that is development within an already subdivided area), where an appropriate APZ cannot be achieved, provide for an appropriate performance standard, in consultation with the NSW Rural Fire Service. If the provisions of the planning proposal permit Special Fire Protection Purposes (as defined under section 100B of the Rural Fires Act 1997), the APZ provisions must be complied with,	
(c) contain provisions for two-way access roads which links to perimeter roads and/or to fire trail networks,	
(d) contain provisions for adequate water supply for firefighting purposes,	
(e) minimise the perimeter of the area of land interfacing the hazard which may be developed,	
(f) introduce controls on the placement of combustible materials in the Inner Protection Area.	

Figure K1: Excerpt of Greater Hume Bushfire Prone Land Map

Source: NSW Planning Portal Spatial Viewer (2023).

4.0 PLANNING FOR BUSHFIRE PROTECTION

4.1 Strategic Principles

With regards to the Planning Proposal, Section 4.1 of PBP requires that strategic planning should provide for the exclusion of inappropriate development in bush fire prone areas as set out in **Table K2**.

Table K2: Exclusion of inappropriate development in bush fire prone areas

Section 4.1: Strategic principles	**Response**
Strategic planning should provide for the exclusion of inappropriate development in bush fire prone areas as follows:	
• *the development area is exposed to a high bush fire risk and should be avoided,*	Complies – All of the Land comprising the Planning Proposal is NOT exposed to a high bush fire risk as demonstrated in this report.
• *the development is likely to be difficult to evacuate during a bush fire due to its siting in the landscape, access limitations, fire history and/or size and scale,*	Complies – All of the Land comprising the Planning Proposal once developed for residential purposes is NOT likely to be difficult to evacuate during a bush fire due to landscape, access, fire history and/or size and scale considerations.
• *the development will adversely effect other bush fire protection strategies or place existing development at increased risk,*	Complies – All of the Land comprising the Planning Proposal once developed for residential purposes is NOT likely to adversely affect other bush fire protection strategies or place existing development at increased risk.
• *the development is within an area of high bush fire risk where density of existing development may cause evacuation issues for both existing and new occupants, and*	Complies – All of the Land comprising the Planning Proposal is NOT exposed to a high bush fire risk as demonstrated in this report and once developed for residential purposes the Land would NOT have a density which may cause evacuation issues for both existing and new occupants.
• *the development has environmental constraints to the area which cannot be overcome*	Complies – All of the Land comprising the Planning Proposal does NOT have environmental constraints. Because all of the Land comprising the Planning Proposal does NOT have environmental constraints it is NOT necessary to overcome them.

4.2 Bushfire Assessment

With regards to the Planning Proposal, section 44 of the RF Regs and Appendix 2 (A2.1 and A2.1.1, pp. 95-96) of PBP requires –

- *A description (including the address) of the property on which the development the subject of the application is proposed to be carried out*

  The Land is described and shown in **Section 1.3**, **Figure 1**, **Figure 2**, **Appendix A** and **Appendix B** in the main report.

  A concept subdivision plan showing how the land may be subdivided after the Land is rezoned and its minimum subdivision lots sizes are changed is described and shown in **Figure 5** in the main report.

- *A classification of the vegetation on and surrounding the property (out to a distance of 140 metres from the boundaries of the property) in accordance with the system for classification of vegetation contained in PBP*

  Consistent with the identification key in Keith (2004) and PBP, vegetation within 140 metres from the Land is classified as (refer to **Figure K1** above and to relevant photographs in **Appendix B** in the main report) –

  - **East and south** quadrant directions – "**grassland**" comprising agricultural grass pasture with limited trees with no connecting canopy (refer to **Figure K1** and to relevant photographs in **Appendix B** in the main report).

    Grassland
    Maritime Grasslands, Temperate Montane Grasslands, Western Slopes Grassland, Riverine Plain Grasslands and Semi-arid Floodplain Grasslands. Dominated by perennial grasses and the presence of broad-leaved herbs on flat topography. Lack of woody plants. Plants include grasses, daisies, legumes, geraniums, saltbushes and copperburrs.

  - All other quadrant directions – "**managed land**" comprising non-vegetated or reduced vegetation areas such as actively grazed pastures, maintained urban yards, maintained lawns, crops, playing fields, cleared parks, non-vegetated areas, and formed roads and footpaths including cleared verges (refer to **Figure K1** and to relevant photographs in **Appendix B** in the main report).

    Managed Land
    Non-vegetated or reduced vegetation areas such as: actively grazed pastures, maintained urban yards, maintained lawns, crops, orchards, vineyards, commercial nurseries, playing fields, golf course fairways, cleared parks, non-vegetated areas, formed roads and footpaths including cleared verges, waterways, etc.

  There are no known future disturbance factors or future intended land uses that could alter the vegetation classifications.

- *An assessment of the slope of the land on and surrounding the property (out to a distance of 100 metres from the boundaries of the property)*

  The slope of the land on and surrounding the property with 100m is generally flat.

  Table K3 below provides slope assessments and the locations and widths of required APZs, which should be read in conjunction with **Figure K2**.

- *Identification of any significant environmental features on the property*

  The Land is not affected by any known significant environmental features.

- *The details of any threatened species or threatened ecological community under the Biodiversity Conservation Act 2016 that is known to the applicant to exist on the property*

  Future development of the Land in accordance with the Planning Proposal is NOT likely to significantly affect any known threatened species, population or ecological community or habitat.

- *The details and location of any Aboriginal object (within the meaning of the National Parks and Wildlife Act 1974) or Aboriginal place (within the meaning of that Act) that is known to the applicant to be situated on the property*

  The Land is NOT known to be affected by Aboriginal cultural heritage significance consistent with the report at **Appendix J: Aboriginal Cultural Heritage Due Diligence report**.

- *A bush fire assessment for the proposed development (including the methodology used in the assessment) that addresses the following matters—*
  - *(i) the extent to which the development is to provide for setbacks, including asset protection zones,*
  - *(ii) the siting and adequacy of water supplies for fire fighting,*
  - *(iii) the capacity of public roads in the vicinity to handle increased volumes of traffic in the event of a bush fire emergency,*
  - *(iv) whether or not public roads in the vicinity that link with the fire trail network have two-way access,*
  - *(v) the adequacy of arrangements for access to and egress from the development site for the purposes of an emergency response,*
  - *(vi) the adequacy of bush fire maintenance plans and fire emergency procedures for the development site,*
  - *(vii) the construction standards to be used for building elements in the development,*
  - *(viii) the adequacy of sprinkler systems and other fire protection measures to be incorporated into the development,*
  - *(ix) any registered fire trails on the property,*

  Refer to **Section 4.3** and **Section 4.4** below.

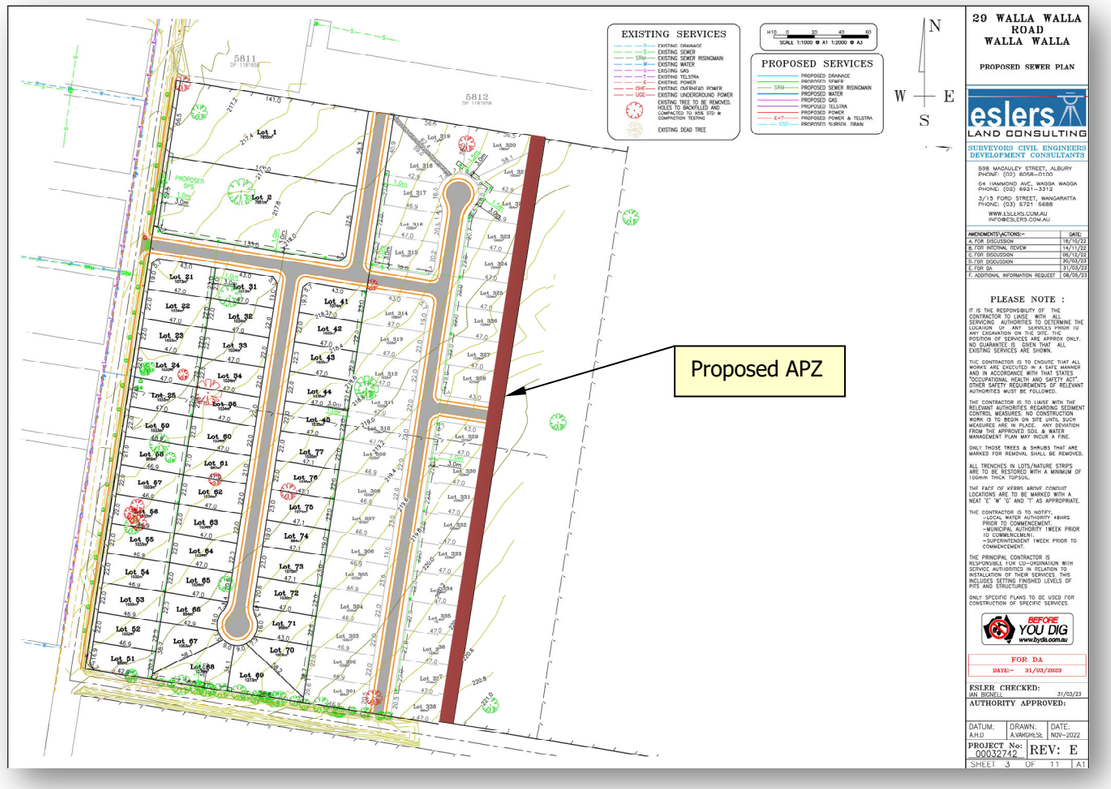
- *An assessment of the extent to which the proposed development conforms with or deviates from PBP.*

  Refer to **Section 4.3** and **Section 4.4** below.

Table K3: APZ assessments based on slope and vegetation classifications

Location	*Existing vegetation hazard type*	*Direction of existing vegetation hazard from the proposed residential lots*	*Existing vegetation hazard is level, upslope or downslope from proposed residential lots*	*Aspect of slope under existing vegetation hazard*	*Slope under the existing vegetation hazard*	*Required APZ[6] width located within proposed residential lots (maintained to IPA standards)*	*Future disturbance factors or future intended land uses that could alter the vegetation classification*
East lot boundary	Grassland	**East**	Upslope	West	<1% or <0.6°	**10m** (located within the Land)	Nil identified
South lot boundary	Grassland	**South**	Upslope	West	<1% or <0.6°	**10m** (located within the Walla Walla Road road reserve)	

Figure K2: APZ locations – possible future subdivision of the Land following implementation of the Planning Proposal (subject to separate DA process)



[6] FDI 80 applies to the Greater Hume LGA.

4.3 Aim and objectives of PBP

The following assessment has been undertaken in accordance with Section 1.1: *Aim and objectives* of PBP.

	Response
The aim of PBP is to provide for the protection of human life and minimise impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment. The objectives are to:	
• *afford buildings and their occupants protection from exposure to a bush fire;*	Complies – Refer to **Table K3** and **Figure K2** (10m wide APZ required).
• *provide for a defendable space to be located around buildings;*	
• *provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;*	
• *ensure that appropriate operational access and egress for emergency service personnel and occupants is available;*	Complies – Adequate access to all proposed lots is available from the public road network.
• *provide for ongoing management and maintenance of BPMs; and*	Complies – Refer to further comment below.
• *ensure that utility services are adequate to meet the needs of firefighters.*	Complies – The Land is or will be connected to mains pressure reticulated water with fire hydrants.

4.4 Objectives and standards for residential and rural residential subdivisions

The following assessment has been undertaken in accordance with Section 5.2: *Specific objectives* of PBP.

	Response
The specific objectives for residential and rural residential subdivisions with a dwelling entitlement are as follows:	
• *minimise perimeters of the subdivision exposed to the bush fire hazard (hourglass shapes, which maximise perimeters and create bottlenecks should be avoided);*	Complies.
• *minimise vegetated corridors that permit the passage of bush fire towards buildings;*	Complies.
• *provide for the siting of future dwellings away from ridge-tops and steep slopes, within saddles and narrow ridge crests;*	Complies.
• *ensure that APZs between a bush fire hazard and future dwellings are effectively designed to address the relevant bush fire attack mechanisms;*	Complies – Refer to **Table K3** and **Figure K2** (10m wide APZ required).
• *ensure the ongoing maintenance of APZs;*	Complies.
• *provide adequate access from all properties to the wider road network for residents and emergency services;*	Complies.
• *provide access to hazard vegetation to facilitate bush fire mitigation works and fire suppression; and*	Complies.
• *ensure the provision of an adequate supply of water and other services to facilitate effective firefighting.*	Complies – Refer below.

The following assessment has been undertaken in accordance with Section 5.3: *Bush fire protection measures* of PBP.

ASSET PROTECTION ZONES – Table 5.3a

Intent of measures: *to provide sufficient space and maintain reduced fuel loads to ensure radiant heat levels at the buildings are below critical limits and prevent direct flame contact.*

	Performance Criteria	Acceptable solutions	Response
The intent may be achieved where:			
Asset Protection Zones	• *potential building footprints must not be exposed to radiant heat levels exceeding 29 kW/m² on each proposed lot.*	• *APZs are provided in accordance with Tables A1.12.2 and A1.12.3 based on the FFDI.*	Complies – Refer to **Table K3** and **Figure K2** (10m wide APZ required).
	• *APZs are managed and maintained to prevent the spread of a fire towards the building.*	• *APZs are managed in accordance with the requirements of Appendix 4.*	Complies
	• *the APZs is provided in perpetuity.*	• *APZs are wholly within the boundaries of the development site*	Complies.
	• *APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised.*	• *APZs are located on lands with a slope less than 18 degrees.*	Complies.
Landscaping	• *landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.*	• *landscaping is in accordance with Appendix 4; and*	Not relevant at this time.
		• *fencing is constructed in accordance with section 7.6.*	Not relevant at this time.

ACCESS – Table 5.3b

Intent of measures: *to provide safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area.*

	Performance Criteria	Acceptable solutions	Response
The intent may be achieved where:			
Access (general requirements)	• *firefighting vehicles are provided with safe, all-weather access to structures.*	• *property access roads are two-wheel drive, all-weather roads;*	Complies.
		• *perimeter roads are provided for residential subdivisions of three or more allotments;*	Justifiably inconsistent – Whilst all APZs (incorporating IPAs and OPAs) can be adequately provided within indicative future residential lots, no perimeter road is proposed to be provided on the hazard side of the lots due to the relevant hazard being "grasslands" and a 10m wide APZ can be provided within each lot (east) or within the Walla Walla Road road reserve (south).
		• *subdivisions of three or more allotments have more than one access in and out of the development;*	Complies.
		• *traffic management devices are constructed to not prohibit access by emergency services vehicles;*	Complies.
		• *maximum grades for sealed roads do not exceed 15 degrees and an average*	Complies.

	grade of not more than 10 degrees or other gradient specified by road design standards, whichever is the lesser gradient;	
	• *all roads are through roads;*	Complies.
	• *dead end roads are not recommended, but if unavoidable, are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end;*	Not relevant.
	• *where kerb and guttering is provided on perimeter roads, roll top kerbing should be used to the hazard side of the road;*	Complies.
	• *where access/egress can only be achieved through forest, woodland and heath vegetation, secondary access shall be provided to an alternate point on the existing public road system; and*	Not relevant to the Land.
	• *one way only public access roads are no less than 3.5 metres wide and have designated parking bays with hydrants located outside of these areas to ensure accessibility to reticulated water for fire suppression.*	Not relevant to the Land.
• *the capacity of access roads is adequate for firefighting vehicles.*	• *the capacity of perimeter and non-perimeter road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges/causeways are to clearly indicate load rating.*	Complies.
• *there is appropriate access to water supply.*	• *hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression;*	Complies.
	• *hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005 - Fire hydrant installations System design, installation and commissioning; and*	Complies.
	• *there is suitable access for a Category 1 fire appliance to within 4m of the static*	Not relevant to the Land.

		water supply where no reticulated supply is available.	
Perimeter roads	• *access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface.*	• *are two-way sealed roads;*	Justifiably inconsistent – Whilst all APZs (incorporating IPAs and OPAs) can be adequately provided within indicative future residential lots, no perimeter road is proposed to be provided on the hazard side of the lots due to the relevant hazard being "grasslands" and a 10m wide APZ can be provided within each lot (east) or within the Walla Walla Road road reserve (south).
		• *minimum 8m carriageway width kerb to kerb;*	
		• *parking is provided outside of the carriageway width;*	
		• *hydrants are located clear of parking areas;*	
		• *are through roads, and these are linked to the internal road system at an interval of no greater than 500m;*	
		• *curves of roads have a minimum inner radius of 6m;*	
		• *the maximum grade road is 15 degrees and average grade of not more than 10 degrees;*	
		• *the road crossfall does not exceed 3 degrees; and*	
		• *a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.*	
Non-perimeter roads	• *access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating.*	• *minimum 5.5m carriageway width kerb to kerb;*	Complies.
		• *parking is provided outside of the carriageway width;*	Complies.
		• *hydrants are located clear of parking areas;*	Complies.
		• *roads are through roads, and these are linked to the internal road system at an interval of no greater than 500m;*	Complies.
		• *curves of roads have a minimum inner radius of 6m;*	Complies.
		• *the road crossfall does not exceed 3 degrees; and*	Complies.

		• *a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.*	Complies.
Property access	• *firefighting vehicles can access the dwelling and exit the property safely.*	• *There are no specific access requirements in an urban area where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles.*	Complies.
		In circumstances where this cannot occur, the following requirements apply:	
		• *minimum 4m carriageway width;*	Not relevant to the Proposal.
		• *in forest, woodland and heath situations, rural property access roads have passing bays every 200m that are 20m long by 2m wide, making a minimum trafficable width of 6m at the passing bay;*	Not relevant to the Proposal.
		• *a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches;*	Not relevant to the Proposal.
		• *provide a suitable turning area in accordance with Appendix 3;*	Not relevant to the Proposal.
		• *curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress;*	Not relevant to the Proposal.
		• *the minimum distance between inner and outer curves is 6m;*	Not relevant to the Proposal.
		• *the crossfall is not more than 10 degrees;*	Not relevant to the Proposal.
		• *maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads; and*	Not relevant to the Proposal.

	• *a development comprising more than three dwellings has access by dedication of a road and not by right of way.*	Not relevant to the Proposal.
	Note: Some short constrictions in the access may be accepted where they are not less than 3.5m wide, extend for no more than 30m and where the obstruction cannot be reasonably avoided or removed. The gradients applicable to public roads also apply to community style development property access roads in addition to the above.	Noted.

SERVICES – WATER, ELECTRICITY AND GAS – Table 5.3c

Intent of measures: *to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building.*

	Performance Criteria	**Acceptable solutions**	**Response**
The intent may be achieved where:			
Water supplies	• *adequate water supplies is provided for firefighting purposes.*	• *reticulated water is to be provided to the development where available;*	Complies.
		• *a static water and hydrant supply is provided for non-reticulated developments or where reticulated water supply cannot be guaranteed; and*	Not relevant to the Land.
		• *static water supplies shall comply with Table 5.3d.*	
	• *water supplies are located at regular intervals; and*	• *fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard AS 2419.1:2005;*	Complies.
	• *the water supply is accessible and reliable for firefighting operations.*	• *hydrants are not located within any road carriageway; and*	Complies.
		• *reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.*	Complies.

	• *flows and pressure are appropriate.*	• *fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2005.*	Complies.
	• *the integrity of the water supply is maintained.*	• *all above-ground water service pipes are metal, including and up to any taps; and*	Not relevant to the Land.
		• *above-ground water storage tanks shall be of concrete or metal.*	Not relevant to the Land.
Electricity services	• *location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings.*	• *where practicable, electrical transmission lines are underground;*	Complies.
		• *where overhead, electrical transmission lines are proposed as follows:*	
		➢ *lines are installed with short pole spacing of 30m, unless crossing gullies, gorges or riparian areas; and*	Not relevant to the Land.
		➢ *no part of a tree is closer to a power line than the distance set out in ISSC3 Guideline for Managing Vegetation Near Power Lines.*	Not relevant to the Land.
Gas services	• *location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.*	• *reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 - The storage and handling of LP Gas, the requirements of relevant authorities, and metal piping is used;*	Not relevant to the Land.
		• *all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side;*	Not relevant to the Land.
		• *connections to and from gas cylinders are metal;*	Not relevant to the Proposal.
		• *polymer-sheathed flexible gas supply lines are not used; and*	Not relevant to the Proposal.
		• *above-ground gas service pipes are metal, including and up to any outlets.*	Not relevant to the Proposal.

SERVICES – WATER, ELECTRICITY AND GAS – Table 5.3d		
Development type	**Water requirements**	**Response**
Residential lots (<1,000m2)	*5,000L/lot*	To be complied with for east and south interface lots.
Rural-residential lots (1,000-10,000m2)	*10,000L/lot*	Not relevant to the Proposal.
Large rural/lifestyle lots (>10,000m2)	*20,000L/lot*	Not relevant to the Proposal.
Multi-dwelling housing (including dual occupancies)	*5,000L/dwelling*	Not relevant to the Proposal.

5.0 CONCLUSIONS

This report concludes that the Planning Proposal generally complies with PBP.

The future residential subdivision of the Land requires APZs consistent with **Table K3** and **Figure K2** when developed in due course subject to separate RFS and Council approval.

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