



# ATTACHMENTS

## ORDINARY COUNCIL MEETING

### 23 MARCH 2023

MEMBERSHIP: Councillors J Black, L Burns, S Chowdhury, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon, P Wells and M Wright.

The meeting is scheduled to commence at 5.30pm.

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#### INITIAL SECTION

##### **CCL23/62**      **Confirmation of Minutes**

**Attachment 1:** Minutes - Ordinary Council Meeting - 23/02/2023 ..... 2



## REPORT ORDINARY COUNCIL MEETING 23 FEBRUARY 2023

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**PRESENT:** Councillors J Black, L Burns, , M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**ALSO IN ATTENDANCE:**

The Chief Executive Officer, the Acting Director Organisational Performance, the Manager Corporate Governance, the Acting Governance Team Leader, two Governance Officers, the Manager People Culture and Places, the Director Strategy, Partnerships and Engagement, the Communication Services Team Leader, IT Infrastructure Specialist the Director Development and Environment, the Manager Growth Planning, the Director Infrastructure, Manager Infrastructure Strategy and Design, the Manager Greenspace Operations, the Director Community, Culture and Places and the Manager Recreation and Open Space.

Councillor M Dickerson assumed the Chair of the meeting.

The proceedings of the meeting commenced at 5.30pm at the Dubbo Administration Building, Council Chamber, with a prayer for Divine Guidance to the Council in its deliberations and activities read by Councillor V Etheridge. The Welcome to Country was given by Councillor L Burns.

**CCL23/27 LEAVE OF ABSENCE (ID23/57)**

Requests for leave of absence was received from Councillor P Wells and S Chowdhury who was absent from the meeting due to personal reasons.

Councillor D Mahon attended the meeting via audio-visual link.

Moved by Councillor J Black and seconded by Councillor J Gough

**MOTION**

**That such requests for Leave of Absence be accepted and Councillors P Wells and S Chowdhury be granted leave of absence from this meeting.**

**CARRIED**

**CCL23/28 Conflict of Interest (ID23/58)**

There were no conflicts of interest declared.

ORDINARY COUNCIL MEETING - 23 FEBRUARY 2023  
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**CCL23/29 PUBLIC FORUM (ID23/59)**

The Council reports having met with the following person during Public Forum:

- Kate Richardson – Dubbo Rehabilitation Centre location.

**CCL23/30 CONFIRMATION OF MINUTES (ID23/282)**

Confirmation of the minutes of the proceedings of the Ordinary Council meeting held on 9 February 2023.

Moved by Councillor L Burns and seconded by Councillor J Black

**MOTION**

**That the minutes of the proceedings of Dubbo Regional Council at the Ordinary Council meeting held on 9 February 2023 comprising pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22 of the series be taken as read, confirmed as correct minutes and signed by the Mayor and the Chief Executive Officer.**

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/31 PRESENTATION OF THE AUSTRALIA DAY YOUNG SPORTSPERSON – JACK DEVESON (ID23/123)**

At this juncture, the Council presented the Australia Day Young Sportsperson Award to Jack Deveson.

**CCL23/32 PRESENTATION WESTHAVEN (ID23/248)**

This presentation was postponed and not discussed at the meeting.

ORDINARY COUNCIL MEETING - 23 FEBRUARY 2023  
REPORT**INFORMATION ONLY MATTERS:****CCL23/33     MACQUARIE REGIONAL LIBRARY PERFORMANCE REPORT - OCTOBER 2022 TO DECEMBER 2022 (ID23/45)**

The Council had before it the report dated 12 January 2023 from the Manager Macquarie Regional Library regarding Macquarie Regional Library Performance Report - October 2022 to December 2022.

Moved by Councillor J Gough and seconded by Councillor V Etheridge

**MOTION**

**That the Macquarie Regional Library Quarterly Performance Report for October 2022 to December 2022, be noted.**

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/34     MAYORAL APPOINTMENTS AND MEETINGS (ID23/214)**

The Council had before it the report dated 9 February 2023 from the Chief Executive Officer regarding Mayoral Appointments and Meetings.

Moved by Councillor V Etheridge and seconded by Councillor R Ivey

**MOTION**

**That the information contained within the report of the Chief Executive Officer dated 9 February 2023, be noted.**

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

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**MATTERS CONSIDERED BY COMMITTEES:****CCL23/35     REPORT OF THE AUDIT AND RISK MANAGEMENT COMMITTEE - MEETING 7  
FEBRUARY 2023 (ID23/249)**

The Council had before it the report of the Audit and Risk Management Committee meeting held 7 February 2023.

Moved by Councillor J Black and seconded by Councillor R Ivey

**MOTION**

**That the report of the Audit and Risk Management Committee meeting held on 7 February 2023, be adopted.**

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/36     REPORT OF THE FINANCIAL PERFORMANCE COMMITTEE - MEETING 15  
FEBRUARY 2023 (ID23/250)**

The Council had before it the report of the Financial Performance Committee meeting held 15 February 2023.

Moved by Councillor M Wright and seconded by Councillor V Etheridge

**MOTION**

**That the report of the Financial Performance Committee meeting held on 15 February 2023, be adopted.**

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

ORDINARY COUNCIL MEETING - 23 FEBRUARY 2023  
REPORT**CCL23/37 REPORT OF THE CULTURAL AND TOURISM FACILITY COMMITTEE - MEETING 8  
FEBRUARY 2023 (ID23/270)**

The Council had before it the report of the Cultural and Tourism Facility Committee meeting held 8 February 2023.

Moved by Councillor D Mahon and seconded by Councillor V Etheridge

**MOTION**

**That the report of the Cultural and Tourism Facility Committee meeting held on 8 February 2023, be adopted.**

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/38 REPORT OF THE FLOODPLAIN MANAGEMENT COMMITTEE - MEETING 8  
FEBRUARY 2023 (ID23/271)**

The Council had before it the report of the Floodplain Management Committee meeting held 8 February 2023.

Moved by Councillor M Wright and seconded by Councillor L Burns

**MOTION**

**That the report of the Floodplain Management Committee meeting held on 8 February 2023, be adopted.**

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/39 REPORT OF THE MULTICULTURAL ADVISORY COMMITTEE - MEETING 6  
FEBRUARY 2023 (ID23/272)**

The Council had before it the report of the Multicultural Advisory Committee meeting held 6 February 2023.

Moved by Councillor M Wright and seconded by Councillor R Ivey

**MOTION**

**That the report of the Multicultural Advisory Committee (Liaison Officer) meeting held on 6 February 2023, be adopted.**

**CARRIED**

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**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/40      REPORT OF THE WIRADJURI TOURISM PROJECT COMMITTEE - MEETING 13  
FEBRUARY 2023 (ID23/274)**

The Council had before it the report of the Wiradjuri Tourism Project Committee meeting held 13 February 2023.

Moved by Councillor L Burns and seconded by Councillor V Etheridge

**MOTION**

**That the report of the Wiradjuri Tourism Project Committee meeting held on 13 February 2023, be adopted.**

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/41      REPORT OF THE MULTICULTURAL ADVISORY COMMITTEE - MEETING 13  
FEBRUARY 2023 (ID23/275)**

The Council had before it the report of the Multicultural Advisory Committee meeting held 13 February 2023.

Moved by Councillor M Wright and seconded by Councillor J Gough

**MOTION**

**That the report of the Multicultural Advisory Committee meeting held on 13 February 2023, be adopted.**

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

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## REPORTS FROM STAFF:

**CCL23/42 2022/2023 DELIVERY PROGRAM AND OPERATIONAL PLAN – PROGRESS REPORT – JULY TO DECEMBER 2022 (ID22/2660)**

The Council had before it the report dated 14 February 2023 from the Director Strategy, Partnerships and Engagement regarding 2022/2023 Delivery Program and Operational Plan – Progress Report – July to December 2022.

Moved by Councillor J Black and seconded by Councillor V Etheridge

## MOTION

1. That the 2022/2023 Delivery Program and Operational Plan – Progress Report – July to December 2022 (attached as Appendix 1 to the report of the Director Strategy, Partnerships and Engagement dated 14 February 2023), be noted.
2. That the actions that are listed as cancelled/deferred for reasons outlined in the report of the Director Strategy, Partnerships and Engagement dated 14 February 2023, be noted.

CARRIED

**CCL23/43 ACQUISITION OF CROWN LAND FOR PUBLIC ROAD, UPGRADE OF GOOLMA ROAD AND TWELVE MILE ROAD INTERSECTION (ID22/2490)**

The Council had before it the report dated 28 November 2022 from the Property Development Officer regarding Acquisition of Crown Land for Public Road, Upgrade of Goolma Road and Twelve Mile Road Intersection.

Moved by Councillor R Ivey and seconded by Councillor J Gough

## MOTION

1. That Council approve the compulsory acquisition of the whole of Lot 2 on DP1141897, and 2,703m<sup>2</sup> of Lot 1 on DP1141897, and upon acquisition, classify the land as operational land.
2. That Council register an acquisition plan in accordance with the details outlined in the body of this report, against Lot 1 on DP1141897 and Lot 2 on DP1141897.
3. That Council agrees to enter into an agreement with Squadron Energy Pty Ltd for the maintenance of part of the acquisition areas described in no. 1 (above) for the life of the Uungula Wind Farm, and to register such agreement against the relevant title/s upon acquisition.
4. That a further report be submitted to Council when all pre-acquisition procedures for the acquisition areas described in no. 1 (above) have been undertaken.
5. That it be noted that Squadron Energy Pty Ltd shall cover all Council's costs in the matter.

CARRIED



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**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/44 RESULTS OF PUBLIC EXHIBITION - PLANNING PROPOSAL R22-004 - 13L NARROMINE ROAD, DUBBO (ID23/102)**

The Council had before it the report dated 7 February 2023 from the Growth Planner regarding Results of Public Exhibition - Planning Proposal R22-004 - 13L Narromine Road, Dubbo.

Moved by Councillor J Gough and seconded by Councillor M Wright

**MOTION**

1. That Council adopt the Planning Proposal to amend the Dubbo Local Environmental Plan 2022 by realigning the zoning and minimum lot size boundaries at 13L Narromine Road, Dubbo (attached in Appendix 1).
2. That Council prepare drafting instructions and liaise with the NSW Government Department of Planning and Environment to arrange finalisation of the proposed amendment to the Dubbo Regional Local Environmental Plan 2022 and request gazettal of the Plan.
3. That the Chief Executive Officer be authorised to execute any required documentation to finalise the amendment to the Dubbo Local Environmental Plan 2022.

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**ORDINARY COUNCIL MEETING - 23 FEBRUARY 2023  
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**CCL23/45 REGIONAL AND LOCAL ROADS REPAIR PROGRAM (RLRRP) (ID23/110)**

The Council had before it the report dated 9 February 2023 from the Manager Infrastructure Delivery regarding Regional and Local Roads Repair Program (RLRRP).

Moved by Councillor R Ivey and seconded by Councillor J Gough

**MOTION**

1. The report of the Manager Infrastructure Delivery, dated 23 February 2023, be noted.
2. Expenditure to date of \$209,421, in accordance with conditions of the Funding Deed, be noted.
3. That the Regional and Local Roads Repair Program funding be allocated to:

Road Name	Treatment	Estimate
Benolong Road	Various Heavy Patching	\$1,200,000
Burrendong Way	Various Heavy Patching	\$1,000,000
Collie Road	Various Heavy Patching	\$ 31,000
Dripstone Road	Various Heavy Patching	\$ 350,000
Obley Road	Various Heavy Patching	\$ 205,000
Mogriguy Road	Various Heavy Patching	\$ 47,000
Renshaw-McGirr Way	Various Heavy Patching	\$ 720,000
Saxa Road	Various Heavy Patching	\$1,311,849
<b>Total</b>		<b>\$4,864,849</b>

4. Council continue to pursue other funding streams to supplement Council's income for the purposes of repairing the road network.

**CARRIED**

Moved by Councillor J Black and seconded by Councillor V Etheridge

**AMENDMENT**

1. The report of the Manager Infrastructure Delivery, dated 23 February 2023, be noted.
2. Expenditure to date of \$209,421, in accordance with conditions of the Funding Deed, be noted.
3. That the Regional and Local Roads Repair Program funding be allocated to:

Road Name	Treatment	Estimate
Benolong Road	Various Heavy Patching	\$1,200,000
Burrendong Way	Various Heavy Patching	\$1,000,000
Collie Road	Various Heavy Patching	\$ 31,000
Dripstone Road	Various Heavy Patching	\$ 350,000
Obley Road	Various Heavy Patching	\$ 205,000
Mogriguy Road	Various Heavy Patching	\$ 47,000
Renshaw-McGirr Way	Various Heavy Patching	\$ 720,000
Saxa Road	Various Heavy Patching	\$1,286,849
Boundary Road	Various Heavy Patching	\$25,000
<b>Total</b>		<b>\$4,864,849</b>

4. Council continue to pursue other funding streams to supplement Council's income for the purposes of repairing the road network.

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5. That Boundary Road, near Crown Street be funded from the Local Roads Repair Program with funding in the amount of \$25,000.00 to be taken from the proposed Saxa Road allocation

For: Councillors J Black, L Burns, V Etheridge, and M Wright.

Against: Councillors D Mahon, R Ivey, J Gough and M Dickerson

As there were an equal amount of votes for and against, the Mayor, Councillor M Dickerson, used his casting vote to vote against the amendment.

The amendment on being put to the meeting was lost.

LOST

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/46 BIOSECURITY - WEED MANAGEMENT (ID23/178)**

The Council had before it the report dated 3 February 2023 from the Manager Operations regarding Biosecurity - Weed Management.

Moved by Councillor J Black and seconded by Councillor J Gough

**MOTION**

**That the information contained within the report of the Manager Operations dated 3 February 2023, noted.**

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

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**CCL23/47 DRAFT DEVELOPMENT CONTROL PLAN - MIRIAM HILL - 2R OLD DUBBO ROAD, DUBBO (ID23/186)**

The Council had before it the report dated 10 February 2023 from the Team Leader Growth Planning Projects regarding Draft Development Control Plan - Miriam Hill - 2R Old Dubbo Road, Dubbo.

Moved by Councillor J Gough and seconded by Councillor J Black

**MOTION**

1. That the draft Miriam Hill Development Control Plan (attached as Appendix 1 to the report of the Team Leader Growth Planning Projects dated 10 February 2023), be adopted for the purpose of public exhibition.
2. That the draft Miriam Hill Development Control Plan be placed on public exhibition for a period of not less than 28 days in accordance with the requirements of the Environmental Planning and Assessment Act 1979.
3. That following completion of the public exhibition period, a further report be presented to Council for consideration, including the results of public exhibition.

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/48 DRAFT DEVELOPMENT CONTROL PLAN - SOUTHLAKES ESTATE (ID23/55)**

The Council had before it the report dated 9 February 2023 from the Team Leader Growth Planning Projects regarding Draft Development Control Plan - Southlakes Estate.

Moved by Councillor V Etheridge and seconded by Councillor M Wright

**MOTION**

1. That the draft Southlakes Estate Development Control Plan (attached as Appendix 1 of the report of the Team Leader Growth Planning Projects dated 9 February 2023) be adopted for the purpose of public exhibition only.
2. That the draft Southlakes Estate Development Control Plan be placed on public exhibition for a period of not less than 28 days in accordance with the requirements of the Environmental Planning and Assessment Act, 1979.
3. That following completion of the public exhibition period, a further report be presented to Council for consideration, including the results of public exhibition.

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

ORDINARY COUNCIL MEETING - 23 FEBRUARY 2023  
REPORT**CCL23/49 BALLIMORE FLOOD STUDY FOR PUBLIC EXHIBITION (ID23/219)**

The Council had before it the report dated 9 February 2023 from the Manager Infrastructure Strategy and Design regarding Ballimore Flood Study for Public Exhibition.

Moved by Councillor M Wright and seconded by Councillor L Burns

**MOTION**

**That the Ballimore Flood Study be placed on public exhibition for 28 days in March/April 2023.**

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/50 EROSION REPORT UPDATE FOR THE BELL RIVER - DUKE OF WELLINGTON BRIDGE AND PIONEER PARK (ID23/235)**

The Council had before it the report dated 13 February 2023 from the Manager Recreation and Open Space regarding Erosion report update for the Bell River - Duke of Wellington Bridge and Pioneer Park.

Moved by Councillor J Black and seconded by Councillor R Ivey

**MOTION**

1. That at the location within Pioneer Park identified as site 2 (Spillway) in the body of the report, be prioritised for rectification works based on the extent of damage and associated risk.
2. That at the location within Pioneer Park identified as site 1 (Bank Stabilisation) in the body of the report have rectification works undertaken with any remaining funds after the completion of rectifications works on site 2 (Spillway).
3. That it be noted that works shall be commencing for the design and construction of an eastern entry and exit roadway in Pioneer Park with further works on the internal road and pathway to follow.
4. That detailed analysis of options 2 and 4 for the Duke of Wellington Bridge as identified in the report be undertaken including:
  - A structural assessment of the bridge
  - A "do nothing" option as the base case scenario.
5. That the Chief Executive Officer provide a subsequent report to Council that provides the business cases for each option and recommended action.

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

ORDINARY COUNCIL MEETING - 23 FEBRUARY 2023  
REPORT**CCL23/51 DECEMBER 2022 QUARTERLY BUDGET REVIEW STATEMENT (ID23/238)**

The Council had before it the report dated 15 February 2023 from the Chief Executive Officer regarding December 2022 Quarterly Budget Review Statement.

Moved by Councillor J Gough and seconded by Councillor V Etheridge

**MOTION**

1. That the Quarterly Budget Review Statements as at 31 December 2022, as attached to the report of the Chief Executive Officer dated 15 February 2022, be adopted and such sums voted for such purpose.
2. The reallocation of the Local Roads and Community Infrastructure Program Phase 3 funding as detailed in the report for nominated projects be adopted.
3. That the Statement of the Responsible Accounting Officer that Council is in a satisfactory financial position having regard to the changes herewith to the original budget, be noted.

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/52 RELINQUISH CROWN TRUST MANAGEMENT OF BROCKLEHURST RESERVE (R97318) - WAMBIANNA STREET (ID23/242)**

The Council had before it the report dated 14 February 2023 from the Manager Recreation and Open Space regarding Relinquish Crown Trust Management of Brocklehurst Reserve (R97318) - Wambianna Street.

Moved by Councillor J Black and seconded by Councillor M Wright

**MOTION**

1. That the information contained within the report of the Manager Recreation and Open Space dated 14 February 2023, be noted.
2. That trusteeship of Reserve 97318, being the old school ground at Brocklehurst located on Wambianna Street be relinquished.
3. That the Brocklehurst community be informed that Council is relinquishing management of R97318 back to Crown Lands.

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

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**CCL23/53 COMMENTS AND MATTERS OF URGENCY (ID23/60)**

There were no matters recorded under this Clause.

**CONFIDENTIAL ITEMS**

In accordance with Section 9(2A) Local Government Act 1993, in the opinion of the Chief Executive Officer, the following business is of a kind as referred to in Section 10A(2) of the Act, and should be dealt with in a Confidential Session of the Council meeting closed to the press and public.

The items listed come within the following provisions of the Act:

- *CCL23/54 - Construction Of Henty Road As Part Of Land-Swap Agreement With Dubbo Rsl Memorial Club Ltd*  
(Section 10A(2)(c)) - information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposed to conduct) business.
- *CCL23/55 Land Acquisition - Benelong Bridge Replacement Project*  
(Section 10A(2)(c)) - information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposed to conduct) business.
- *CCL23/56 People Culture And Safety Metrics - Quarterly Report*  
(Section 10A(2)(a)) - is closed to the public for the following reason: personnel matters concerning particular individuals (other than Councillors)
- *CCL23/57 Delegated Authority For The Award Of The Tender For New Fluoride Dosing System At John Gilbert Water Treatment Plant*  
Section 10A(2)(d)(ii) – commercial information of a confidential nature that would, if disclosed, confer a commercial advantage on a competitor of the Council
- *CCL23/58 Tender For Purchase Power Agreement - Large Electricity Sites*  
(Section 10A(2)(a)) - is closed to the public for the following reason: personnel matters concerning particular individuals (other than Councillors)

There were no submissions as to whether the meeting should be closed for a particular item.

At this junction it was moved by Councillor M Wright and seconded by Councillor L Burns that the Council resolves into Closed Session, the time being 7.02pm.

The Open Session resumed at 7.53pm.

The Manager Corporate Governance read out the following resolutions made in the closed session of Council.

ORDINARY COUNCIL MEETING - 23 FEBRUARY 2023  
REPORT**CCL23/54 CONSTRUCTION OF HENTY ROAD AS PART OF LAND-SWAP AGREEMENT WITH DUBBO RSL MEMORIAL CLUB LTD (ID22/2624)**

The Council had before it the report dated 15 December 2022 from the Manager Property and Land Development regarding Construction of Henty Road as part of land-swap agreement with Dubbo RSL Memorial Club Ltd.

Moved by Councillor M Wright and seconded by Councillor L Burns

**MOTION**

**That members of the press and public be excluded from the meeting during consideration of this item, the reason being that the matter concerned information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business (Section 10A(2)(c)).**

**CARRIED**

Moved by Councillor J Black and seconded by Councillor J Gough

**MOTION**

1. That Council note the construction of a four-lane road from the roundabout at the intersection of Boundary Road and Stream Avenue, along the entire eastern frontage of the proposed lot the subject of the land-swap deed dated 15 September 2020 between Council and Dubbo RSL Memorial Club Ltd.
2. That all documentation in relation to this matter remain confidential to Council.
3. That any documents arising from this report are signed under the common seal of Council.

Moved by Councillor M Wright and seconded by Councillor L Burns

**AMENDMENT**

1. **That Council does not proceed with a temporary road, and undertakes the construction of a four-lane road as detailed in the report, from the roundabout at the intersection of Boundary Road and Stream Avenue, along the entire eastern frontage of the proposed lot the subject of the land-swap deed dated 15 September 2020 between Council and Dubbo RSL Memorial Club Ltd.**
2. **That works for the construction of the road are not commenced until the land swap is confirmed.**
3. **That all documentation in relation to this matter remain confidential to Council.**
4. **That any documents arising from this report are signed under the common seal of Council.**

The amendment on being put to the meeting was carried.

**CARRIED**

The amendment then became the motion and on being put to the meeting was carried.

**CARRIED**



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**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/55 LAND ACQUISITION - BENOLONG BRIDGE REPLACEMENT PROJECT (ID23/205)**

The Council had before it the report dated 6 February 2023 from the Operations Engineer (West) regarding Land Acquisition - Benolong Bridge Replacement Project.

Moved by Councillor M Wright and seconded by Councillor L Burns

**MOTION**

**That members of the press and public be excluded from the meeting during consideration of this item, the reason being that the matter concerned information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business (Section 10A(2)(c)).**

**CARRIED**

Moved by Councillor R Ivey and seconded by Councillor J Black

**MOTION**

1. That Council acquire part of Lot 139 on DP753257 and Lot 30 on DP 753220 as described in the body of this report and, upon acquisition, dedicate such land as public road reserve in accordance with the *Roads Act 1993*.
2. That Council licence that part of Benolong Road, as described in the body of this report, to the owner of Lot 27 and Lot 63 DP 753220:
3. That all documentation in relation to this matter remain confidential to Council.
4. That all necessary documentation relating to this matter be executed under the Common Seal of Council.

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

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**CCL23/56 PEOPLE CULTURE AND SAFETY METRICS - QUARTERLY REPORT (ID23/244)**

The Council had before it the report dated 14 February 2023 from the Manager People Culture and Safety regarding People Culture and Safety Metrics - Quarterly Report.

Moved by Councillor M Wright and seconded by Councillor L Burns

**MOTION**

**That members of the press and public be excluded from the meeting during consideration of this item, the reason being that the matter concerned personnel matters concerning particular individuals (other than Councillors) (Section 10A(2)(a)).**

**CARRIED**

Moved by Councillor V Etheridge and seconded by Councillor J Gough

**MOTION**

- 1. That the information contained in the People Culture and Safety metrics report be noted.**
- 2. That all documentation in relation to this matter remain confidential to Council.**
- 3. That these reports be provided to Council on a quarterly basis.**

**CARRIED**

**For:** Councillors J Black, L Burns, M Dickerson, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Nil.

**CCL23/57 DELEGATED AUTHORITY FOR THE AWARD OF THE TENDER FOR NEW FLUORIDE DOSING SYSTEM AT JOHN GILBERT WATER TREATMENT PLANT (ID23/240)**

The Council had before it the report dated 13 February 2023 from the Manager Water Supply and Sewerage regarding Delegated Authority for the award of the Tender for New Fluoride Dosing System at John Gilbert Water Treatment Plant.

Moved by Councillor M Wright and seconded by Councillor L Burns

**MOTION**

**That members of the press and public be excluded from the meeting during consideration of this item, the reason being that the matter concerned commercial information of a confidential nature that would, if disclosed, confer a commercial advantage on a competitor of the Council (Section 10A(2)(d)(ii)).**

**CARRIED**

Moved by Councillor J Black and seconded by Councillor L Burns

**MOTION**

- 1. That Council delegate the Chief Executive Officer authority to award the tender up to**

**ORDINARY COUNCIL MEETING - 23 FEBRUARY 2023  
REPORT**

the value defined in the report for the fluoride dosing system at the John Gilbert Water Treatment Plant.

2. That all documentation in relation to this matter remain confidential to Council.
3. That all documentation in relation to this matter be signed under the Common Seal of Council.

LOST

**For:** Councillors L Burns, V Etheridge, and M Wright.

**Against:** Councillors J Black, M Dickerson, J Gough, R Ivey and D Mahon

**CCL23/58 TENDER FOR PURCHASE POWER AGREEMENT - LARGE ELECTRICITY SITES  
(ID23/276)**

The Council had before it the report dated 17 February 2023 from the Manager Procurement regarding Tender for Purchase Power Agreement - Large Electricity Sites.

Moved by Councillor M Wright and seconded by Councillor L Burns

**MOTION**

**The Council recommends that members of the press and public be excluded from the meeting during consideration of this item, the reason being that the matter concerned commercial information of a confidential nature that would, if disclosed, confer a commercial advantage on a competitor of the Council (Section 10A(2)(d)(ii)).**

**CARRIED**

Moved by Councillor R Ivey and seconded by Councillor M Wright

**MOTION**

1. That Council accept the tender from Iberdrola Australia Energy Markets Pty Ltd and enter into a contract for a period of 7.5 years.
2. That council determine that selection of scenario 3 in table 5 be the preferred approach to Large Generation Certificates (LGCs) based on the best financial outcome for Council as well as meeting Council's 50% of electricity from renewable energy requirement by 2025 increasing this to 100% by 2030.
3. That any necessary documents be signed under the Council seal.
4. That the content of this report and associated documents remain confidential to Council.

**CARRIED**

**For:** Councillors J Black, V Etheridge, J Gough, R Ivey, D Mahon and M Wright.

**Against:** Councillor M Dickerson, L Burns.

The meeting closed at 7.57pm.

.....  
CHAIRPERSON

**NOTICES OF MOTION**

**CCL23/68 Notice of Motion of Rescission - CCL22/12 - Motion for National General Assembly**

**Attachment 1:** Notice of Motion of Rescission CCL23/12 - National General Assembly - Councillor S Chowdhury ..... 21

16 March 2023

Mr Murray Wood  
Chief Executive Officer  
Dubbo Regional Council  
PO Box 81  
DUBBO NSW 2830

Dear Murray

**CCL23/12 – NOTICE OF MOTION OF RESCISSION**

**NATIONAL GENERAL ASSEMBLY CALL FOR MOTIONS**

We, the undersigned, give notice that we intend to move the following Notice of Motion of Rescission:

*“That the following Notice of Motion, as resolved on 9 February 2023 being CCL23/12 be rescinded:*

1. *That the CEO submit the following motion to the Local Government Association for inclusion on the agenda for the National General Assembly for 2023.*

*“That the Federal Government undertake a scope analysis on how to actively support Regional Councils in the settlement of skilled and non-skilled migrants in the regional areas and let the councils advocate regional migration issues with the authorities”.*

Yours faithfully

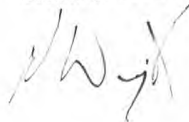


Councillor Shibli Chowdhury

Councillor Damien Mahon



Councillor Matt Wright



**CCL23/69 Notice of Motion for National General Assembly**

**Attachment 1:** Notice of Motion - 23.03.2023 - Clr S Chowdhury -  
Motion for National General Assembly..... 23

**Councillor Shibli Chowdhury**  
PO Box 81  
DUBBO NSW 2830

---

16 March 2023

The Chief Executive Officer  
Dubbo Regional Council  
PO Box 81  
DUBBO NSW 2830

Dear Murray

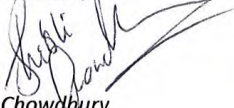
**NOTICE OF MOTION – NATIONAL GENERAL ASSEMBLY CALL FOR MOTIONS**

I would like to place the following notice of motion on the agenda for the 23 March 2023 Ordinary meeting of Council.

1. *That the CEO submit the following motion to the Local Government Association for inclusion on the agenda for the National General Assembly for 2023.*

*“That the Federal Government undertake a scope analysis and develop an action plan for the settlement of skilled and non-skilled migrants in regional areas”.*

Yours faithfully

  
**Shibli Chowdhury**  
Councillor

16 March 2023

Mr Murray Wood  
Chief Executive Officer  
Dubbo Regional Council  
PO Box 81  
DUBBO NSW 2830

Dear Murray

**CCL23/12 – NOTICE OF MOTION OF RESCISSION**

**NATIONAL GENERAL ASSEMBLY CALL FOR MOTIONS**

We, the undersigned, give notice that we intend to move the following Notice of Motion of Rescission:

*“That the following Notice of Motion, as resolved on 9 February 2023 being CCL23/12 be rescinded:*

1. *That the CEO submit the following motion to the Local Government Association for inclusion on the agenda for the National General Assembly for 2023.*

*“That the Federal Government undertake a scope analysis on how to actively support Regional Councils in the settlement of skilled and non-skilled migrants in the regional areas and let the councils advocate regional migration issues with the authorities”.*

Yours faithfully



Councillor Shibli Chowdhury

Councillor

Councillor



**CCL23/70      Dubbo Region Christmas Campaign**

**Attachment 1:** Notice of Motion - 23/03/2023 - Clr S Chowdhury -  
Christmas Campaign..... 26

**Councillor Shibli Chowdhury**  
PO Box 81  
DUBBO NSW 2830

---

15 March 2023

The Chief Executive Officer  
Dubbo Regional Council  
PO Box 81  
DUBBO NSW 2830

Dear Murray

**NOTICE OF MOTION – CHRISTMAS CAMPAIGN**


In 2022 Council implemented a number of activities as part of the LGA Christmas program across the region and specifically within the Dubbo and Wellington central business districts. In addition to the two community Christmas trees, the program included a shop local campaign across the LGA, decorations and lighting around the Dubbo CBD, CBD flags promoting and celebrating community heroes. There was also a gift wrapping station undertaken in partnership with local community groups. Investment in the program in 2022 was almost \$25,000.

I believe there are many social and economic benefits to be gained by Council increasing its investment in place-based activation to celebrate the festive season across our LGA. This could include renewing decorations on the community Christmas trees, new festive decorations to attract visitation to our CBDs and greater engagement with local business community.

I would like to place the following notice of motion on the agenda for the 23 March 2023 Ordinary meeting of Council.

1. *That as part of the draft 2023/2024 operational plan and budget process the covering report from the CEO identify potential options and costs to for improving place-based activation to celebrate the festive season within the Dubbo and Wellington central business districts, in addition to increasing engagement with local business community through campaigns and collaboration.*
2. *That budget to increase place-based activation to celebrate the festive season be considered by Council in the drafting of the 2023/2024 operational budget.*

Yours faithfully

  
Shibli Chowdhury  
Councillor

REPORTS FROM STAFF

**CCL23/71 Boil Water Alert Review**

<b>Attachment 1:</b>	Boil Water Alert - Dubbo Emergency Management Debrief Output - December 2022 .....	28
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<b>Attachment 3:</b>	Boil Water Alert - Water Quality Action Plan.....	72



Dubbo Boil Water July 2022

# EMERGENCY MANAGEMENT DEBRIEF OUTPUT REPORT

**Dubbo Regional Council and Department of Planning and Environment**

December 2022

3.0

Emergency Management Debrief Output report

<b>Document Status:</b>	Version:	3.0		
	<i>Status</i>	<i>Reviewer</i>	<i>Version</i>	<i>Date</i>
<b>Document History:</b>	Internal draft		1.0	06/09/2022
	For comment	Annalisa Contos, Lucy Parsons	2.0	17/10/2022
	For issue	Update with comments from Luke Ryan (DRC)	3.0	14/12/2022
<b>Authors:</b>	Natalie Crawford, Dr Annalisa Contos			
<b>Contact:</b>	Annalisa Contos Atom Consulting 65 Cambourne Ave St Ives NSW 2075 annalisa@atomconsulting.com.au 02 9488 7742			
<b>File Name:</b>	PIE211 Dubbo Emergency management debrief output v3.docx			



## Executive Summary

### Background

In July 2022, rainfall in the Macquarie River catchment caused high turbidity, colour and manganese in the raw water at John Gilbert Water Treatment Plant (WTP) operated by Dubbo Regional Council. This resulted in high turbidity in the treated water and a boil water notice being issued for the Dubbo drinking water system.

Dubbo Regional Council liaised with government agencies including NSW Health and NSW Department of Planning and Environment in calling and managing the boil water alert.

NSW Department of Planning and Environment engaged Atom Consulting to facilitate a debrief on the emergency management response to the event.

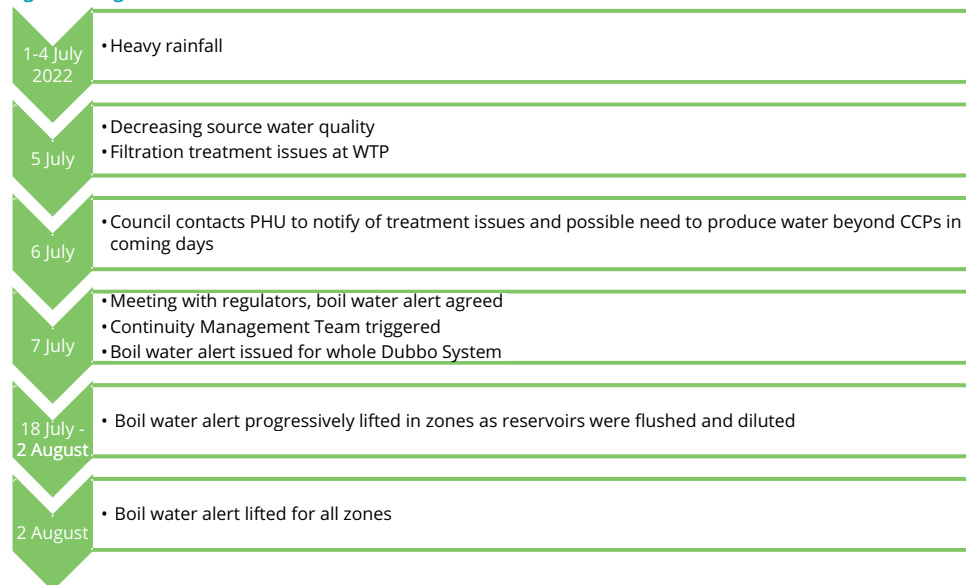
### Workshop Purpose

A facilitated emergency management debrief was undertaken on the 31 August 2022 for the Dubbo boil water alert with key members of the incident and emergency response management team. The debrief scope included:

- Coordination and leadership of emergency response by Dubbo Regional Council (DRC)
- Communication with public and key stakeholders
- Emergency response actions in the community.

A summary incident timeline is included in Figure i-i.

Figure i-i. High-level incident timeline



Atom Consulting for Dubbo Regional Council and Department of Planning and Environment

Emergency Management Debrief Output report

## Incident management response debrief

The workshop identified effective emergency management response activities in the following areas:

- Continuity Management Team (CMT) involvement and oversight
- Operational response
- Internal communication
- External communications
- Interagency cooperation
- Local Emergency Management Committee (LEMC) engagement

Recommendations from the incident response debrief include:

1. Develop and implement a process for understanding and assessing risk and response for drinking water supply incidents and emergencies. This should consider internal systems and knowledge (e.g. network modelling) and external subject matter experts for critical knowledge gaps.
2. Develop and implement a process to assess the event risk profile after a drinking water supply incident is identified to better plan operations. This should be consistent with council's enterprise risk process.
3. Ensure the changing nature of the catchment risk profile is understood and documented, for example developing an ongoing catchment threat assessment (*to be discussed in boil water alert operational workshop*)
4. Council to seek better clarification from NSW Health on the risk and actions required as part of future boil water alert responses.
5. Develop plans for different scenarios on how to manage distribution of out-of-specification water
6. Liaise with WaterNSW on operational data gaps (*to be discussed in boil water alert operational workshop*)
7. Review and more clearly define the role of the incident controller in incident documentation (*to be discussed in boil water alert operational workshop*)
8. WTP Supervisor to be engaged as part of interagency communications for future boil water alerts
9. Ensure that IT systems capability support the use of interactive tools, such as checking band width of website for any interactive tools developed to ensure it is appropriate for expected website traffic.

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# 1 Introduction

## 1.1 Background

In July 2022, rainfall in the Macquarie River catchment caused high turbidity, colour and manganese in the raw water at John Gilbert Water Treatment Plant (WTP) operated by Dubbo Regional Council. This resulted in high turbidity in the treated water and a boil water notice being issued for the Dubbo drinking water system.

Dubbo Regional Council (DRC) liaised with government agencies including NSW Health and NSW Department of Planning and Environment in calling and managing the boil water alert.

NSW Department of Planning and Environment engaged Atom Consulting to facilitate a debrief on the emergency management response to the event.

## 1.2 Workshop purpose

A facilitated emergency management debrief was undertaken on the 31 August 2022 for the July 2022 Dubbo boil water alert with key members of the incident and emergency response management team. The debrief scope included:

- Coordination and leadership of emergency response by DRC
- Communication with public and key stakeholders
- Emergency response actions in the community.

Items that were out of scope for this debrief included:

- Response to rain forecasts, rainfall and flooding
- Operation of treatment plants before and during incident
- Dilution of reservoirs to reduce risk.

## 1.3 Report purpose

The purpose of this report is to document the outcomes of the debrief including:

- Incident management response details
- Learnings and recommendations for improvement.

## 1.4 Attendees

A summary of workshop attendees is shown in Table 1-1. Workshop sign in sheets are included in Appendix A.

Table 1-1. Incident debrief workshop attendees

Organisation	Name	Position	Role during event
Dubbo Regional Council	Abbey Rouse	Manager Governance	CMT member
	Luke Ryan	Director Infrastructure	CMT member, Operational Incident Controller

Emergency Management Debrief Output report

Organisation	Name	Position	Role during event
	Murray Wood	Chief Executive Officer	CMT Chair. Council liaison.
	Caitlin Colliver	Manager Customer Experience	CMT member
	Hendrik Gouws	Water and Sewer Operations, Specialist Reticulation	CMT member
	Bec Eade	Water and Sewer Client Services Coordinator	CMT member
	Pip Laskowski	Emergency and Risk, Local Emergency Management Officer (LEMO)	LEMO
	Prakashbabu Radhakrishnan	Water Treatment Coordinator	Coordinator WTP
	Stephen Carter	Manager Water Sewer	Overseer Acting
Department of Planning and Environment	Matt Parmeter	Senior Project Officer	DPE Liaison
	Brendan Miller*	Regional Manager	Technical Support
	Mark Watson*	Regional Engineer	-
Department of Planning and Environment / NSW Health	Josh Tickell	Senior Project Officer	Health regulatory advice
NSW Health	Mark Nave	Public Health Unit	On leave during the incident; some advice provided
	Tim Brokenshire	Public Health Unit Manager	Health advice
	Priscilla Stanley *	Public Health Unit	Health advice
	Gerard van Yzendoorn	Senior Environmental Health Officer   WNSWLHD Public Health Unit	-
Atom Consulting	Annalisa Contos	Workshop Facilitator	-
	Natalie Crawford	Workshop Recorder	-

\*Attended online

## 1.5 Methodology

The emergency management debrief was held as a facilitated workshop and included:

- Incident timeline development and discussions
- Incident management roles and response management
- Incident management learnings facilitated discussion.

A summary of the agenda is included in Appendix A.



## 2 Timeline

A summary of the incident timeline is included in Figure. 2-1 with further details of the response included in Table 2-1.

Figure. 2-1 High-level incident timeline

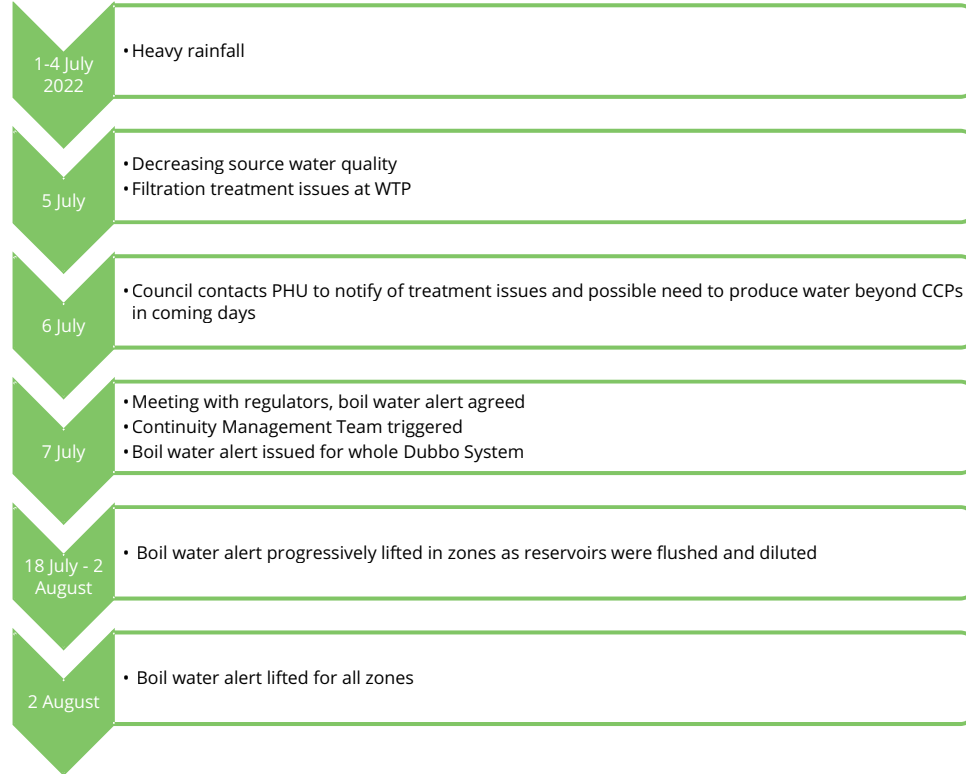


Table 2-1. Emergency management response timeline

Date (2022)	Internal	External
1- 4 July	Heavy rainfall in Macquarie catchment led to localised flooding in Dubbo LGA	School holidays, full motels
Tuesday 5 July	River rose from 2 m to 7 m in one day Decreasing source water quality (turbidity, colour, manganese) Filtration treatment issues at WTP due to poor raw water quality. Filters were struggling with increased backwashing (reduced filter run time). Internal notifications made from WTP to Manager Water Supply and Sewerage	
Wednesday 6 July	4:30 pm: Internal notifications.	Council contacted PHU to notify of treatment issues and possible

Emergency Management Debrief Output report

Date (2022)	Internal	External
	<p>Manager Water Supply and Sewerage to CEO advising river conditions had changed and the WTP was struggling to keep within the filtration CCPs limits.</p> <p>Decision was made to shut down the plant</p> <p>Early boil water alert communications were drafted (referencing a minimum 7-day boil water).</p>	<p>need to produce water beyond CCPs in coming days</p>
Wednesday 6 July evening		<p>Meeting held with DRC, Health and DPE to discuss treatment issues</p> <p>Agreed to not produce water overnight and reassess in morning.</p> <p>WTP shutdown</p>
Thursday 7 July morning	<p>WTP restarted early in the morning; treatment continued to be difficult.</p>	<p>Meeting with DRC water and emergency management team, NSW Health and DPE</p> <p>DRC advised water needed to be produced beyond CCPs to avoid critical low levels in reservoirs</p> <p><b>Boil water alert agreed</b></p>
	<p>Business Continuity Management Team (CMT) triggered</p> <p>8:00 am: CMT meeting. Responsibilities and actions were allocated. <i>Critical Incident Management Communication Procedure</i> detailed the actions needed</p>	
Thursday 7 July	<p>LEMO called the emergency services in the area prior to boil water alert releases going out (in case they needed to get stores of water)</p> <p><b>DRC communicates boil water alert and begins emergency response</b></p> <p>Meetings were held throughout the day</p> <p>Supermarkets were contacted to advise of the boil water alert</p> <p>Communications team (Manager Corporate Image and Communication) arranged communications to businesses (liaised with the Economic Development Team and Environmental Health Branch who holds this data), organised radio advertising and communication of media alerts</p> <p>Water Sewer Client Services Coordinator (WSCSC) managed:</p> <ul style="list-style-type: none"> <li>• Communication with critical customers (including childcare, age care, kindergarten, nursing homes, hospitals, vacation care)</li> <li>• Arranged provision of water to primary schools and day-care centres</li> <li>• Communications sent to all DRC staff</li> <li>• Isolated and put signs up at bulk water filling stations. SMS to water carters (through the IT department; spreadsheet kept of contact details)</li> <li>• Liaised with Liveability Section to isolate bubblers and put signs up</li> </ul>	<p>Parallel messaging also provided by the Department of Educations to schools</p>



Timeline

Date (2022)	Internal	External
	<ul style="list-style-type: none"> <li>Fliers were created and delivered to the motels to put in the rooms</li> <li>Reached out to the Aboriginal communities (activated communication channels established during COVID)</li> </ul> <p>Director Infrastructure (DI) arranged for VMS signs across town.</p> <p>Manager Customer Experience (two contact centres):</p> <ul style="list-style-type: none"> <li>Team briefing meeting: discussed Frequently Asked Questions and critical touch points</li> <li>Resources increased to the phone network (about 9am) generally with the use of part time staff</li> <li>Increased calls received</li> <li>FAQ section created on DRC website</li> <li>Pre-recorded an IBR message saying that there was a boil water alert and referenced the website</li> <li>Emails sent out to registered users of the online portal (approximately 10,000)</li> </ul> <p>3:00 pm: CMT meeting held. Reported back on the actions</p>	
Friday 8 July	<p>Increased resourcing provided (including shifts at WTP)</p> <p>Internal meeting in advance of 11 July press conference</p>	
Sunday 10 July	<p>Change of operational strategy following interagency meeting on the need for dilution.</p> <p>Media release. Change in communications, with messaging around increased boil water alert timings and zoned approach to lifting the boil water alert.</p> <p>CEO updated Council</p> <p>CEO contacted EPA about water flushing and potential impacts associated with this</p>	<p>Interagency meeting (2pm) on dilution</p>
Monday 11 July	<p>8 am Operations meeting</p> <p>9 am CMT meeting</p> <p>10 am Media conference at WTP</p> <p>10 am Media release. Communicated information on a zoned approach to lift the boil water alert. This included notice to expect water over the roads.</p> <p>Signs put out warning of water over the road (from flushing activities)</p> <p>4 pm CMT meeting. Included update from Incident Controller (DI)</p> <p>Critical customers and emergency services were updated</p> <p>EPA monitoring undertaken.</p>	<p>Media conference (10am) at the WTP. Priscilla Stanley was there on behalf of NSW Health. Video footage provided of WTP. Joint approach to get information out.</p>
Tuesday 12 July	<p>Interactive map went up for the zones approach to lifting the boil water alert</p>	
Thursday 14 July	<p>Media release: boil water alert remains in place, reinforcing zoned approach and that DRC were working with NSW Health.</p>	

Emergency Management Debrief Output report

Date (2022)	Internal	External
Friday 15 July	Advice from external expert requested by Manager Water Supply and Sewerage on dilution	
Monday 18 July	<p><b>Started to progressively lift the boil water alert</b> (zoned approach as reservoirs and networks were flushed and diluted).</p> <p>10 am: Boil water alert lifted in first zone</p> <p>10 am: Map went live on the 18th at 9:58 am</p> <p>Media release, update to social media and radio ads to communicate boil water alert lifting organised by the communications team</p>	Schools went back
Wednesday 20 July		Interagency meeting on dilution, amendments to requirements agreed
Tuesday 2 August	<b>Boil water lifted all zones</b>	

### 3 Incident structure

#### 3.1 CMT structure

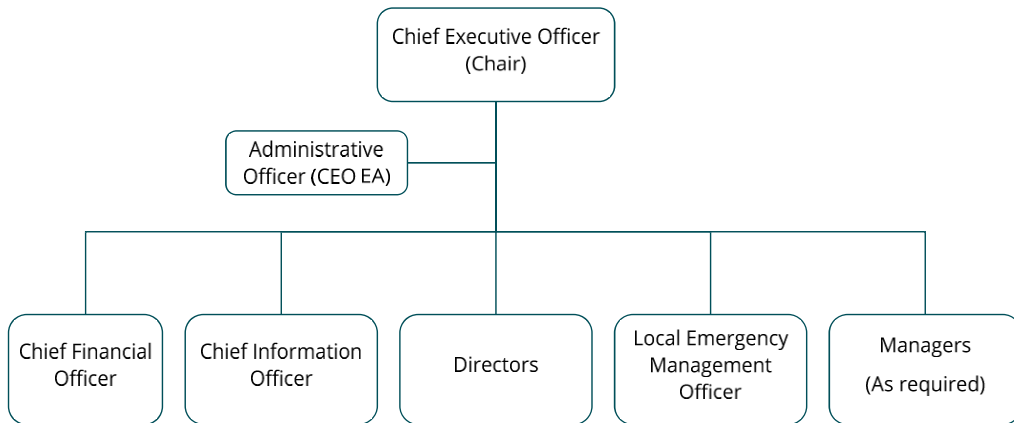
The incident response was managed by the CMT. The CMT is made up of senior executives with other roles bought in as required, dependent on the nature of the incident.

The CMT was already in place at the time of the incident, in response to the COVID 19 pandemic and previous flooding events. This resulted in an effective response process and clearly understood roles.

Annual CMT scenario training is held by Council to ensure people have ongoing training and clearly understand their roles.

The CMT structure is shown in Figure 3-1.

Figure 3-1. CMT structure



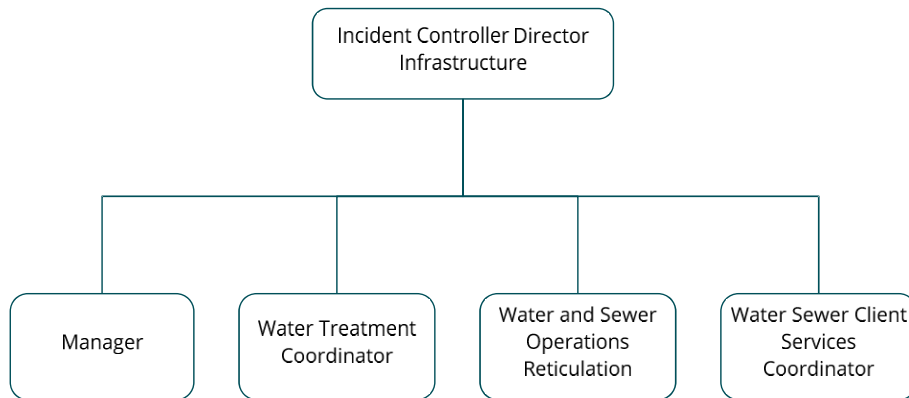
Incident Structure

A summary of the CMT roles involved during the incident included:

- Chief Executive Officer
- Chief Financial Officer
- Chief Information Officer
- Administrative Officer CEO
- Local Emergency Management Officer (LEMO)
- Directors:
  - Director Infrastructure
  - Director Strategy Partnership and Engagement
  - Director Development and Environment
  - Director Community, Culture, and places
  - Director Organisational Performance
- Managers:
  - Manager Water Supply and Sewerage
  - Manager Governance and Internal Control
  - Manager Corporate Image and Communications
  - Manager Customer Experience
  - Manager Green Space and spaces
  - Water and Sewer Client Services Coordinator

The operations' incident structure for the Dubbo boil water alert is shown in Figure 3-2. The Incident Controller role was undertaken by the Director Infrastructure who reported directly to the CMT. The boil water procedure was utilised by the incident team during the incident.

**Figure 3-2. Operations incident structure for the Dubbo boil water alert**





Emergency Management Debrief Output report

The CMT utilised a running register of actions for tracking purposes. While resourcing is managed through each individual section, the CMT was utilised to prioritise resourcing decisions during the incident.

The level of response by the CMT is based on:

- Scale (time of event, population, response required)
- Industry
- Economic impact
- Reputational impact.

For smaller scale incidents (such as for the Wellington water supply); the response would be similar but would be scaled down. This would likely include less direct involvement from CEO and more from the Operational Incident Controller.

Council may consider if it would be helpful to more clearly articulate reputational triggers. In practice, this may be assessed on a case-by-case basis.

### 3.2 Interagency meetings

Interagency meetings were held with Dubbo Regional Council, NSW Health and DPE throughout the boil water event. Key attendees at the interagency meetings included:

- Dubbo Regional Council: Director Infrastructure, Chief Executive Officer, Manager Water Sewer, LEMO, Communication Co-ordinator
- Police LECON
- NSW Health: Public Health Unit and Water Unit (on call resource)
- DPE: Regional Engineer, Water and Sewer Inspector and representatives from the water utilities team
- Expert Panel: Council and NSW Health expert

## 4 Incident management response debrief

A summary of the incident management learnings is discussed in the following sections:

- What worked (Section 4.1)
- Improvements (Section 4.2)

### 4.1 What worked

A summary of the areas of incident response that worked well is shown in Table 4-1.

**Table 4-1. Incident management response - what worked well**

Area	What worked well
Operational response	System knowledge was key in determining a plan for lifting the boil water alert.
	Zones were well known (issues in connection valves solved from last boil water alert)
	Already had a boil water / do not drink procedure in place



Incident Management Response Debrief

Area	What worked well
CMT	Action tracking spreadsheet Procedures were honed due to COVID (e.g. texting schools)
Internal communication	Good constant level of communication with all branches in Council
External communications	Regular communications and upfront on issues with customers (business and users) Online communications of zoned approach to lifting the boil water alert, through use of an interactive map Critical customers spreadsheet already in place – continually updated and in zone feed areas. Early drafting of webpage and development of FAQs Automatic recording on phone line, directed residents to website reduced the number of calls to be answered
Interagency cooperation	Joint press conference with NSW Health was successful Interagency meetings: <ul style="list-style-type: none"> <li>• Consistency of people attending the meetings</li> <li>• Didn't have to repeat the message</li> <li>• Trust and understanding were consistent</li> </ul>
LEMC	Updates were provided to the LEMC. LEMC were happy with their level involvement in the incident.
Expertise	Brought in technical expertise from external consultants

## 4.2 Improvements

A summary of areas noted for improvement and the associated recommendations are shown in Table 4-2.

**Table 4-2. Incident management response – areas for improvement**

Area	Areas for improvement	Recommendations
Expertise	Earlier involvement of subject matter experts (dependent on data availability).	1. Develop and implement a process for understanding and assessing risk and response for drinking water supply incidents and emergencies. This should consider internal systems and knowledge (e.g. network modelling) and external subject matter experts for critical knowledge gaps.

Emergency Management Debrief Output report

Area	Areas for improvement	Recommendations
Understanding the risk profile	<p>Understanding the risk earlier is key. DRC's initial approach was based on previous experience rather than a risk-based approach of the catchment risk</p> <p>Could have had a different operational approach to how out of specification water was distributed through the reticulation (e.g. shutting off reservoirs to protect zones).</p> <p>NSW Health more clearly being able to articulate <i>cryptosporidium</i> risks and dilution early in event</p>	<p>2. Develop and implement a process to assess the event risk profile after a drinking water supply incident is identified to better plan operations. This should be consistent with councils enterprise risk process.</p> <p>3. Ensure the changing nature of the catchment risk profile is understood and documented, for example developing an ongoing catchment threat assessment (<i>to be discussed in boil water alert operational workshop</i>)</p> <p>4. Council to seek better clarification from NSW Health on the risk and actions required as part of future boil water alert responses.</p> <p>5. Develop plans for different scenarios on how to manage distribution of out of specification water</p>
Early warning of flooding	<p>Early notification of potential flooding was not being sent to water treatment staff.</p> <p><b>Outcome:</b> LEMO has since developed an email distribution list within Council, with flood bulletin of early warning now provided to WTP</p> <p>Water gauges not working on river (gauges get washed away). Responsibility of WaterNSW</p>	<p>6. Liaise with WaterNSW on operational data gaps (<i>to be discussed in boil water alert operational workshop</i>)</p>
Incident structure	<p>The role of the incident controller role was not clearly defined</p>	<p>7. Review and more clearly define the role of the incident controller in incident documentation (<i>to be discussed in boil water alert operational workshop</i>)</p>
Interagency meetings	<p>A WTP operator was not present at interagency meetings to provide technical advice</p>	<p>8. WTP Supervisor to be engaged as part of interagency communications for future boil water alerts</p>
Communication	<p>Political messaging diverged from advice given by the operational team.</p> <p>Interactive map crashed on loading; issues were noted with band width.</p>	<p>9. Ensure that IT systems capability support the use of interactive tools, such as checking band width of website for any interactive tools developed to ensure it is appropriate for expected website traffic</p>



## Appendix A Workshop details

### A.1 Workshop agenda

Table A-1. Workshop Information

Item	Detail
Date	31 August 2022, 9am - 12pm
Venue	Conference Room Ground Floor West, Dubbo Regional Council, Corner Church and Darling Streets / MS Teams

Table A-2. Workshop agenda

Time	Details
9:00	Introductions
9:10	Workshop methodology Workshop outcomes (workshop summary and case study write up)
9:20	Incident timeline facilitated discussion: <ul style="list-style-type: none"><li>• Individual reflection:<ul style="list-style-type: none"><li>– What was everyone's role in incident management response?</li><li>– Key events that you were involved in?</li></ul></li><li>• Incident timeline development</li></ul>
10:20	Break
10:40	Incident management learnings facilitated discussion: <ul style="list-style-type: none"><li>• What worked?</li><li>• What didn't work?</li><li>• What could have been done better?</li><li>• Was your role predetermined or taken on during the incident?</li></ul>
11:45	Summary of workshop outcomes
12:00	End

## Debrief Summary Report

Item	Description			
Purpose:	Debrief and Root Cause Analysis of Dubbo Water Supply System Boil Water Alert 2022 Risk Edge Project: #315			
Document:	315 Debrief Workshop Summary Paper RevA.1.docx (workshop capture)			
	315 Debrief Workshop Summary Paper RevA.2.docx (post workshop synthesis for internal review)			
	315 Debrief Workshop Summary Paper RevA.3.docx (QA)			
	315 Debrief Workshop Summary Paper RevB.1.docx (Water Unit review)			
	315 Debrief Workshop Summary Paper RevB.2.docx (for participant review)			
	315 Debrief Workshop Summary Paper RevB.2.docx (with comments incorporated from DPE))			
	Date:	2022-11-10	Author:	Annalisa Contos
		2022-11-15		Annette Davison
		2022-11-15		Sarah Loder
		2022-11-15		Annette Davison
		2022-11-28		Annette Davison
		2022-12-14		Annette Davison

### 1 Overview

Dubbo Regional Council (DRC) is responsible for drinking water quality management under its Drinking Water Management System (DWMS), which needs to be consistent with the Framework for Management of Drinking Water Quality (Framework) within the Australian Drinking Water Guidelines.

The Framework applies across the whole of the catchment to consumer supply chain and therefore, also applies to parties operating any part of that supply chain, on DRC's behalf.

The Framework consists of 12 elements (Figure 1-1). Of particular importance for this debrief are Element 3 (critical control points), Element 4 (operational control and procedures), Element 6 (incident management) and Element 7 (training) – along with Element 12 for any improvement actions noted.

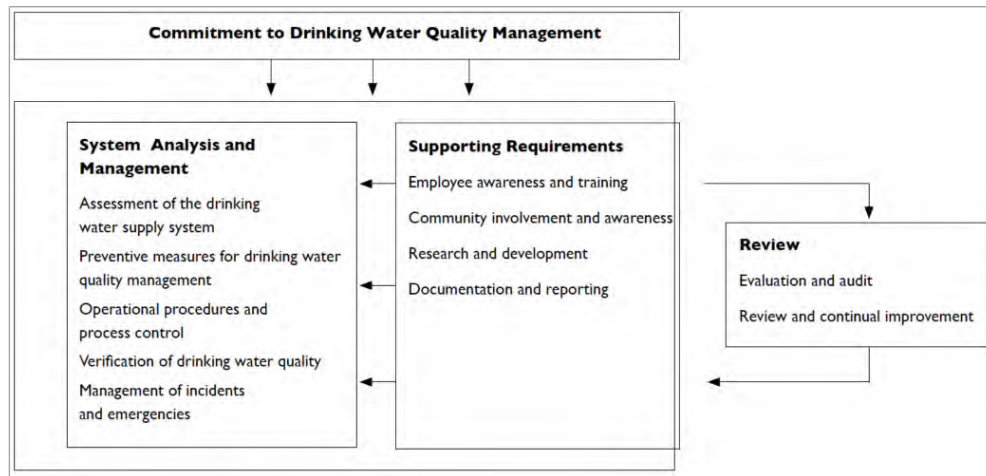


Figure 1-1. Framework for Management of Drinking Water Quality.<sup>1</sup>

<sup>1</sup> NHMRC and NRMCMC (National Health and Medical Research Council and Natural Resource Management Ministerial Council) (2011) Australian Drinking Water Quality Guidelines Version 3.8. ISBN Online: 1864965118.

DRC is bound overall by the recommendations of the Australian Drinking Water Guidelines including the six guiding principles. Fundamental to these principles is the concept of the multiple barrier approach whereby a range of controls (preventive, reactive, detective, informative and supportive) are implemented across the supply chain to ensure fitness for purpose. Barriers across the system should include redundancy, in case one of the controls should fail.

## 2 John Gilbert WTP and Dubbo Water Supply System

### 2.1 Overview

A summary description of the treatment process is provided in Table 2-1, an overview flow diagram in Figure 2-1 and detailed flow diagrams in Appendix B.

**Table 2-1. Summary description of the treatment process.**

Step	Description
Overview	The design capacity of the Water Treatment Plant (WTP) is 80 ML/d.
Raw water intake	Bore water passes through an aeration tower and combines with raw water from Macquarie River.
Adsorption	Blended raw water is dosed with Powdered Activated Carbon (PAC) for adsorption of taste and odour compounds. Contact time is provided in the PAC Contact Tank, which contains two mixers and aeration stones.  There is a bypass channel between the inlet and outlet chambers of the PAC Contact Tank.
Coagulation and Flocculation	The coagulation process involves dosing the water entering each clarifier with ferric chloride, polymer as a coagulant aid and slaked lime for pH adjustment. This enables the particles in the water to coagulate and form floc.  Flocculation takes place in flocculation chamber of each clarifier.
Clarification	In this process the floc is removed by means of a settling-based clarification in which gravity is used to draw heavy particles down and this then is removed from the bottom of the tank by a scraper while clarified water is removed from top surface of the tank. <sup>2</sup>  Clarifier 2 is a high rate, solids contact and sludge recirculation type clarifier which is designed to achieve a clarified water turbidity < 3 NTU when the feed water turbidity is less than 200 NTU.  If clarifier 1 is running the plant must be producing 380 L/s. If clarifier 2 is running, it can be turned down to 200 L/s.  Stopping and starting the clarifier causes significant issues. In order to establish a stable sludge blanket, the plant must run for at least 4 hours.
Recarbonation	Clarified water in the Recarbonation Tank is dosed with chlorine, mainly for algal control (but also achieves incidental manganese oxidation), carbon dioxide for recarbonation and pH adjustment and polymer as a filter aid.
Filtration	Following clarification and recarbonation, water is passed through dual media (anthracite, sand and gravel) open gravity filters (x6).
Fluoridation	Fluoride is designed for dosing into the filtered water duct for fluoridation but has been offline since 2019.
Disinfection	Treated water is dosed with chlorine for primary disinfection and disinfectant residual. Contact time for primary disinfection is provided by the Chlorine Contact Tank. Finally, disinfected water is sent to the Clear Water Tank and then onto the town reservoirs.
Clear Water Tank	In the current mode of operation the Clear Water Tank is part of the network. It is not possible to isolate the Clear Water Tank from the network as the Clear Water Tank would fill up and shut the plant down, therefore shutting the clarifiers down and leading to operational problems.

<sup>2</sup> Assumed correct for both clarifiers, only clarifier 2 is included in the design specification document (UKG, 2005).

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Step	Description
	Can also end up with the clearwater tank getting full and shutting the plant down mid backwash.
Sludge drying beds	Sludge from the clarifiers and filters is diverted to sludge drying beds (x6). Supernatant is used for irrigation and dewatered sludge is sent to landfill.

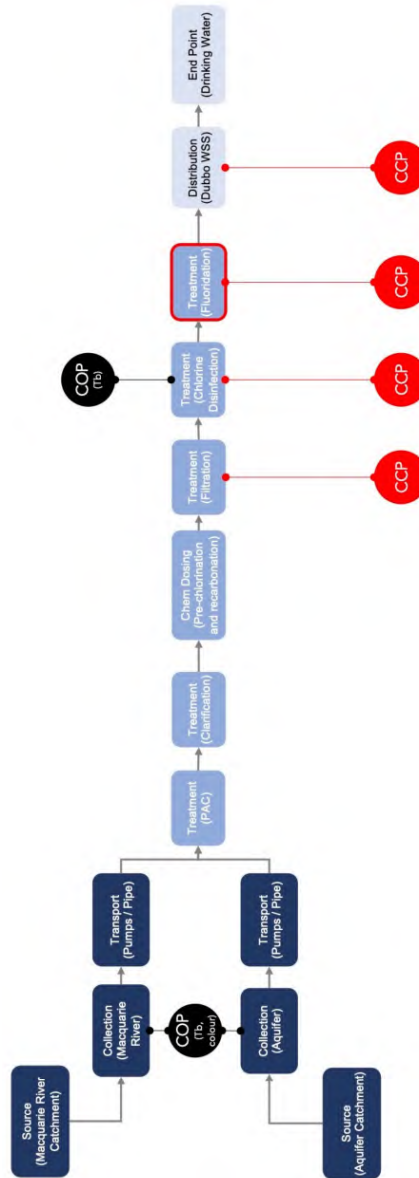


Figure 2-1. High level flow diagram (COP: critical operating point; CCP: critical control point). Note that fluoridation is not currently operational.

**2.2 Critical Control Points and Critical Operating Points**

For the purposes of this workshop, the key critical control point (CCP) and critical operating points (COP) of note are detailed in Table 2-2. These details are taken from actual documentation provided by DRC. At the site visit (2022-10-18), the operators noted there is no formal COP or setpoint for clarified water turbidity, however they target <3 NTU from Clarifier 1 and <2 NTU from Clarifier 2.

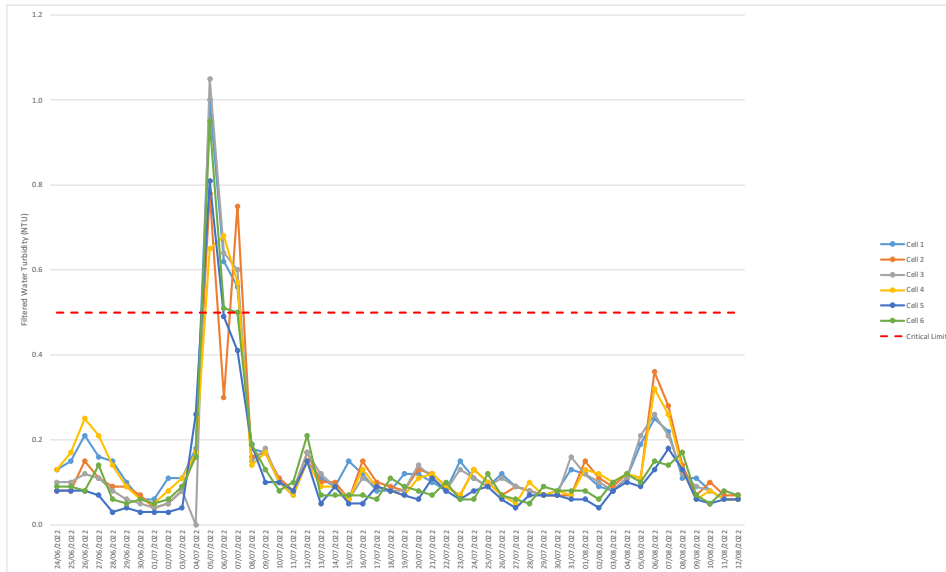
**Table 2-2. CCPs and COPs for the John Gilbert WTP.**

Point	Target Limit	Alert Limit	Critical Limit	
CCP	JGWTP 005 – Filtration	0.2-0.3 NTU	>0.3 NTU (alarmed to pager) (applies if all individual filter turbidity analysers are above 0.3)	> 0.5 NTU for > 15 minutes (presumably when supplying water)
CCP	JGWTP 006A – Free Chlorine (CWT)	1.5 to 3.5 mg/L	<1.5 mg/L	<1.0 mg/L
COP	JGWTP 001 – Colour – Raw	None	>50 HU to 100 HU	>200 HU
COP	JGWTP 002 – Turbidity – Raw	None	>30 NTU to 50 NTU	>300 NTU
COP	JGWTP 003 – Turbidity – CWT	<0.5 NTU	0.5 NTU to 1.0 NTU	>1 NTU

**2.3 Water Quality Analysis**

Water quality data were provided by DRC for a 50-day period straddling the incident.

Filtered water turbidity for each of the six filter cells is graphed against the CCP limit of 0.5 NTU in Figure 2-2. This shows filtration critical limit exceptions on three consecutive days (05 to 07 July 2022). A separate multi-day spike was also noted one month later, although this appeared to peak in the alert limit range and did not trigger a critical limit exception. Note that each data point is a daily average turbidity result and therefore is likely to underestimate the peak of the incident, and does not provide information on minute by minute CCP performance.



**Figure 2-2. Graph of filtered water turbidity (NB: 'cell' = filter).**



Comparing with raw and clarified water turbidity for the same period, spikes were also observed during this time. It is also noted that Clarifier 1 turbidity increased before an increase in raw water turbidity was recorded.

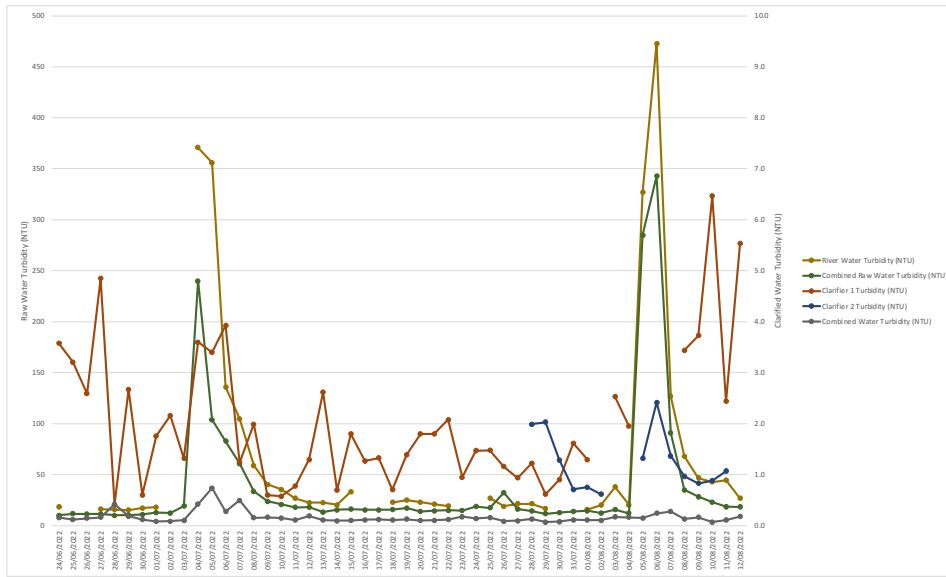


Figure 2-3. Graph of raw and clarified water turbidity.

### 3 Parties

There are several key parties for consideration in the provision of drinking water:

- **Dubbo Regional Council:** DRC is responsible for the operation and maintenance of its water supply systems in accordance with its Drinking Water Management System.
- **NSW Health:** Regulation of health-related aspects of DRC's water supply system operations. Water supplies must have and comply with a DWMS that meets the requirements of the Regulation. Provides advice to water utilities on water quality risk management.
- **NSW Department of Planning and Environment (DPE):** Technical advice as required. Infrastructure approval process through the requirements of section 60 of the *Local Government Act 1993* (NSW).
- **NSW Environment Protection Authority (EPA):** Regulator responsible for environmental protection and oversight.

### 4 Incident

#### 4.1 Stakeholders

A range of stakeholders was involved in the incident or were informed as part of actions arising from the incident, these are detailed below in Table 4-1.

**Table 4-1. Incident parties.**

Organisation	Roles / Groups Involved
Dubbo Regional Council	Manager Governance Director Infrastructure Chief Executive Officer Manager Customer Experience Water and Sewer Operations, Specialist Reticulation Water and Sewer Client Services Coordinator Emergency and Risk, Local Emergency Management Officer (LEMO) Water Treatment Coordinator Manager Water Supply and Sewerage
DPE Water	Senior Project Officer Regional Manager Regional Engineer Senior Technical Assessor Manager Water and Sewerage
NSW Health	Public Health Unit Manager Environmental Health Officer Senior Project Officer Water Unit
EPA	Of relevance where non-conforming water has to be discarded to the environment
Atom Consulting	Workshop Facilitator Workshop Recorder

**4.2 Timeline**

In reviewing the incident, it is necessary to understand its history. A snapshot is provided below in Table 4-2 and a summarised timeline of the incident is in Table 4-3.

Table 4-2. High-level incident timeline (Atom Consulting 2022).

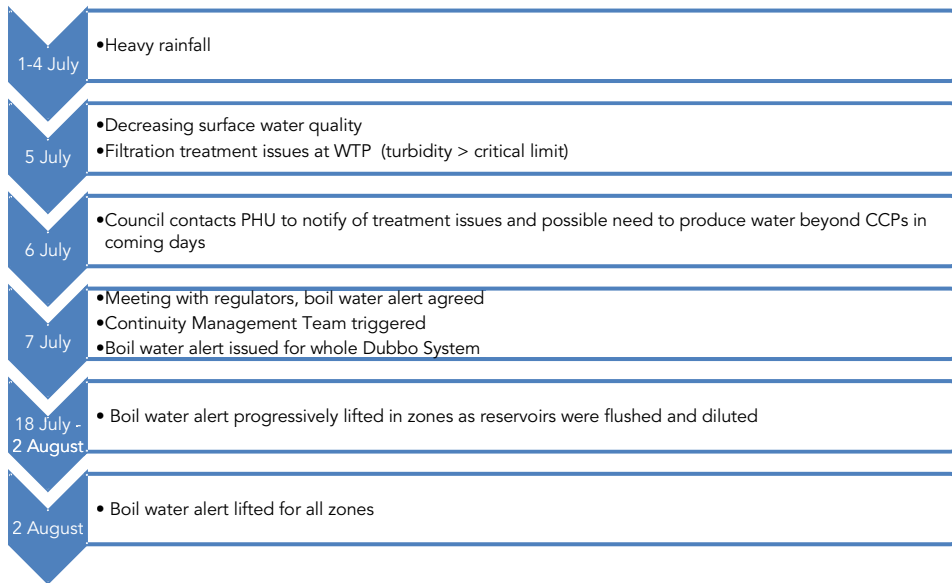


Table 4-3. Emergency management response timeline (original from Atom Consulting 2022, updated in the workshop).

Date (2022)	Internal	External
1- 4 July	Heavy rainfall in Macquarie catchment led to localised flooding in Dubbo LGA.	School holidays, full motels.
Tuesday 5 July	River rose from 2 m to 7 m in one day. Decreasing surface water quality (turbidity, colour, manganese). Filtration treatment issues at WTP due to poor raw water quality. Filters were struggling with increased backwashing (reduced filter run time). Internal notifications made from WTP to Manager Water Supply and Sewerage.	
Wednesday 6 July	4:30 pm: Internal notifications. Manager Water Supply and Sewerage to Chief Executive Officer (CEO) advising river conditions had changed and the WTP was struggling to keep within the filtration CCPs limits. Decision was made to shut down the plant. Early boil water alert communications were drafted (referencing a minimum 7-day boil water).	Council contacted Public Health Unit (PHU) to notify of treatment issues and possible need to produce water beyond CCPs in coming days.
Wednesday 6 July evening		Meeting held with DRC, Health and DPE to discuss treatment issues. Agreed to not produce water overnight and reassess in morning. WTP shutdown.
Thursday	WTP restarted early in the morning; treatment continued to be difficult.	Meeting with DRC water and emergency management team, NSW Health and DPE.

Date (2022)	Internal	External
7 July morning		<p>DRC advised water needed to be produced beyond CCPs to avoid critical low levels in reservoirs<sup>3</sup>.</p> <p>DPE advised DRC to increase polymer dose to 0.5 mg/L to prevent filter turbidity breakthrough.</p> <p>Note that DPE was not aware that polymer can be dosed as coagulant aid (dose to raw water) or as a filter aid (dose to settled water). This should be confirmed and included in lessons learnt.</p> <p><b>Boil water alert agreed.</b></p>
Thursday 7 July <sup>4</sup>	<p>Business Continuity Management Team (CMT) triggered.</p> <p>8:00 am: CMT meeting. Responsibilities and actions were allocated. <i>Critical Incident Management Communication Procedure</i> detailed the actions needed.</p> <p>LEMO called the emergency services in the area prior to boil water alert releases going out (in case they needed to get stores of water).</p> <p><b>DRC communicates boil water alert and begins emergency response.</b></p> <p>Meetings were held throughout the day.</p> <p>Supermarkets were contacted to advise of the boil water alert.</p> <p>Water Sewer Client Services Coordinator (WSCSC) managed:</p> <ul style="list-style-type: none"> <li>• Communication with critical customers (including childcare, age care, kindergarten, nursing homes, hospitals, vacation care).</li> <li>• Arranged provision of water to primary schools, day-care centres and aged care facilities.</li> <li>• Sent communications to businesses (liaised with the Economic Development Team and Environmental Health Branch who holds this data).</li> <li>• Communications sent to all DRC staff.</li> <li>• SMS to water carters (through the IT department; spreadsheet kept of contact details).</li> <li>• Liaised with Liveability Section to isolate bubblers and put signs up.</li> <li>• Flyers were created and delivered to the motels to put in the rooms.</li> <li>• Reached out to the Aboriginal communities (activated communication channels established during COVID).</li> </ul> <p>Director Infrastructure (DI) arranged:</p> <ul style="list-style-type: none"> <li>• Isolated filling stations and put signs.</li> </ul>	<p>Parallel messaging also provided by the Department of Educations to schools.</p>

<sup>3</sup> Low level is considered to be: 60% reservoir levels in winter and 80% in summer. If reservoir levels drop to 40% some areas would not receive water e.g. Richmond Estate. This would exceed DRC's customer service standard and there would also be issues near the reservoir

<sup>4</sup> Note: the activities of this day have been well covered in the incident response debrief already held. The focus of this debrief and root cause analysis should be on the activities of the water utility staff i.e. what they were doing on this day.

Date (2022)	Internal	External
	<ul style="list-style-type: none"> <li>• For Variable Message Signs (VMS) signs to be across town.</li> </ul> <p>Manager Customer Experience (two contact centres):</p> <ul style="list-style-type: none"> <li>• Team briefing meeting: discussed Frequently Asked Questions and critical touch points.</li> <li>• Resources increased to the phone network (about 9am) generally with the use of part time staff.</li> <li>• Increased calls received.</li> <li>• Frequently Asked Questions (FAQ) section created on DRC website.</li> <li>• Pre-recorded an IBR message saying that there was a boil water alert and referenced the website.</li> <li>• Emails sent out to registered users of the online portal (approximately 10,000).</li> </ul> <p>3:00 pm: CMT meeting held. Reported back on the actions.</p>	
Friday 8 July	<p>Increased resourcing provided (including shifts at WTP).</p> <p>Internal meeting in advance of 11 July press conference.</p>	<p>Online meeting between DRC, DPE and NSW Health. NSW Health raise possibility that the full volume of the reservoir may need to be turned over 3 times as they could not be drained. NSW Health received information on the distribution storage volume (70-80 ML storage) and volumes produced.</p>
Saturday 9 July		<p>DPE and NSW Health develop advice for DRC on how to restore distribution system water quality. This advice was provided to DRC. DRC developed their own calculations and came to a similar solution.</p>
Sunday 10 July	<p>Change of operational strategy following interagency meeting on the need for dilution.</p> <p>Media release. Change in communications, with messaging around increased boil water alert timings and zoned approach to lifting the boil water alert.</p> <p>CEO updated Council.</p> <p>CEO contacted EPA about water flushing and potential impacts associated with this.</p>	<p>Interagency meeting (2 pm) on dilution (NSW Health, DRC, DPE). This meeting was when all parties understood the magnitude that the management of chlorine resistant pathogens required removal (i.e. dilution). Up to this point DRC thought the response would be similar to previous events (<i>E. coli</i>) where management was achieved through increasing chlorine.</p>
Monday 11 July	<p>8 am Operations meeting.</p> <p>9 am CMT meeting.</p> <p>10 am Media conference at WTP.</p> <p>10 am Media release. Communicated information on a zoned approach to lift the boil water alert. This included notice to expect water over the roads.</p> <p>Signs put out warning of water over the road (from flushing activities).</p>	<p>Media conference (10am) at the WTP. Priscilla Stanley was there on behalf of NSW Health. Video footage provided of WTP. Joint approach to get information out.</p>

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Date (2022)	Internal	External
	5 pm CMT meeting. Included update from Incident Controller (DI). Critical customers and emergency services were updated. EPA monitoring undertaken.	
Tuesday 12 July	Interactive map went up for the zones approach to lifting the boil water alert.	
Thursday 14 July	Media release: boil water alert remains in place, reinforcing zoned approach and that DRC were working with NSW Health.	
Friday 15 July	Advice from external expert requested by Manager Water Supply and Sewerage on dilution.	
Monday 18 July	<b>Started to progressively lift the boil water alert</b> (zoned approach as reservoirs and networks were flushed and diluted). 10 am: Boil water alert lifted in first zone. 10 am: Map went live on the 18 <sup>th</sup> at 9:58 am. Media release, update to social media and radio messages to communicate boil water alert lifting.	School returned after the school holidays.
Wednesday 20 July		Interagency meeting on dilution, amendments to requirements agreed based on additional data provided by DRC.
Tuesday 2 August	<b>Boil water lifted all zones</b>	

**Debrief Activity**

Timeline was updated with notes and key events.

**4.3 Problem Statement**

Based on the incident’s history, a problem statement was drafted and reviewed:

***“Water quality data show that the John Gilbert WTP was producing water in exceedance of the filtration CCP, between Tuesday 05 to Thursday 07 July 2022 and this water was delivered to the supply system.”***

**Debrief Activity**

The problem statement was agreed.

**5 Site Visit Observations**

A site visit was held on Tuesday 18 October 2022 to meet with staff involved with the boil water incident and further understand the background and context to the incident. Observations from the site visit are summarised in Appendix C.

## 6 Root Cause Assessment

### 6.1 Themes

It is useful to identify whether any themes can be determined from an initial review of the material as these themes help to inform the identification of root causes. Themes have been identified which may have led to the incident as well as prolonged the incident, these are detailed in Table 6-1.

**Table 6-1. Summary of themes emerging from pre-review of material.**

Systemic Area Affected?	Theme
Personnel	Roles not clearly defined and understood, for example: <ul style="list-style-type: none"> <li>Incident controller role was not clearly defined.</li> </ul>
Personnel	Resourcing issues, including: <ul style="list-style-type: none"> <li>Minimal coverage on weekends.</li> <li>Extended periods of vacancy for key positions.</li> <li>Difficulty in recruiting and retaining appropriately qualified operators.</li> <li>Key roles have a broad portfolio of responsibilities.</li> </ul>
Personnel	Lack of water quality awareness training.
Personnel	On-call and overtime contribute to operator fatigue.
Environment	
Personnel	Involvement of necessary personnel in key forums was delayed or omitted, for example: <ul style="list-style-type: none"> <li>A WTP operator was not present at interagency meetings to provide technical advice.</li> <li>Subject matters experts (depends on data availability).</li> </ul>
Method / Protocols	Risk was not understood, for example: <ul style="list-style-type: none"> <li>DRC's initial response approach was based on previous experience rather than a risk-based approach of the catchment risk. Previous events (<i>E. coli</i>) were managed with increased chlorine.</li> </ul>
Method / Protocols	Communication protocols and mechanisms were insufficient or unreliable: <ul style="list-style-type: none"> <li>Prior to the event, there was no formal communication on river levels or releases from WaterNSW (since rectified).</li> <li>Public messaging from elected councillor appeared to conflict with advice given by the operational team and NSW Health.</li> <li>Interactive map crashed on loading; issues were noted with bandwidth.</li> </ul>
Method / Protocols	Some key operating procedures are not formalised or out of date, for example: <ul style="list-style-type: none"> <li>There is no SOP for managing the shandyng (bore and river water).</li> <li>The clarifier is classed as a COP but there was confusion over this process step as there are no COP documents on the water quality SharePoint site.</li> <li>The DRC DWQMP had not been updated since February 2015.</li> </ul>
Method / Protocols	CCP change management is not formalised. CCPs are not consistently documented and/or applied, for example CCP JGWTP 005.
Method / Protocols	Several items on the flow diagram were incorrect or inadequate.
Method / Protocols	Documents and records are inconsistently maintained, for example: <ul style="list-style-type: none"> <li>Water quality committee meetings are not held as frequently as intended.</li> <li>Records of toolbox meetings are filed in a location that is not widely accessible.</li> <li>Records in TRIM can be difficult to locate.</li> </ul>

Systemic Area Affected?	Theme
Measurement / Monitoring	Several gaps in monitoring allowed the event to go under the radar: <ul style="list-style-type: none"> <li>• Early notification of potential flooding was not being sent to water treatment staff.</li> <li>• Water gauges not working on river (gauges get washed away).</li> <li>• Instrument calibration had failed and was overdue for rectification.</li> <li>• Monitoring uncertainties were identified during the site visit which included location, frequency (including reduced/no monitoring on weekends – other than online monitoring), parameter and mode of sampling.</li> </ul>
Environment	Surface water quality outside the design envelope.
Environment	Necessary maintenance was delayed due to COVID, for example: <ul style="list-style-type: none"> <li>• Clarifier 2 did not undergo scheduled maintenance in 2021.</li> <li>• Filters 1-4 were overdue for refurbishment.</li> </ul>
Assets / Equipment	At ~\$400K per year, the budget set aside for the maintenance of the JGWTP may be inadequate for purpose.
Assets / Equipment	SCADA and telemetry issues: <ul style="list-style-type: none"> <li>• SCADA runs slowly due to server capacity issues.</li> <li>• Remote Terminal Unit (RTU) is known to drop out at the bores, making data inaccessible.</li> <li>• Any technician has the ability to change a CCP critical limit.</li> </ul>
Assets / Equipment	Clarifier 1 was end of life.
Assets / Equipment	There are design issues with the WTP, for example: <ul style="list-style-type: none"> <li>• The WTP was designed with backwash water for one filter at a time however the WTP has to run during backwash to keep producing water.</li> <li>• DRC staff noted the WTP was designed to produce water at 1 NTU – however, the UKG (2005) design specification has no mention of the required NTU to be met.</li> <li>• Initial SCADA setpoints show a high alarm at 0.5 NTU and high high alarm at 0.9 NTU (scans provided by DRC).</li> </ul>

**6.2 Identification**

An important step in conducting a debrief is to examine the problem statement and identify the root cause(s) rather than the initial symptoms.

A root cause must satisfy all the following criteria:

- Is a basic cause of the incident.
- Is systemic (e.g. design, operation, maintenance, training, procedures, etc). A root cause does not relate to the actions of an individual person.
- Can be reasonably identified or detected.
- Can be controlled to prevent or minimise the likelihood of future events.

Once this analysis is completed, actions can be developed to help prevent a recurrence of the cause. Prior to undertaking the root cause analysis, information is gathered from the incident including operational information and a timeline of the event.

The root cause analysis will follow a ‘Why Tree’ process (see figure below). The technique involves starting at the event and asking why it occurred to identify a causal event. After each causal event is identified, ‘why’ is asked until the root cause is identified, with multiple branches added, when there is more than one cause.



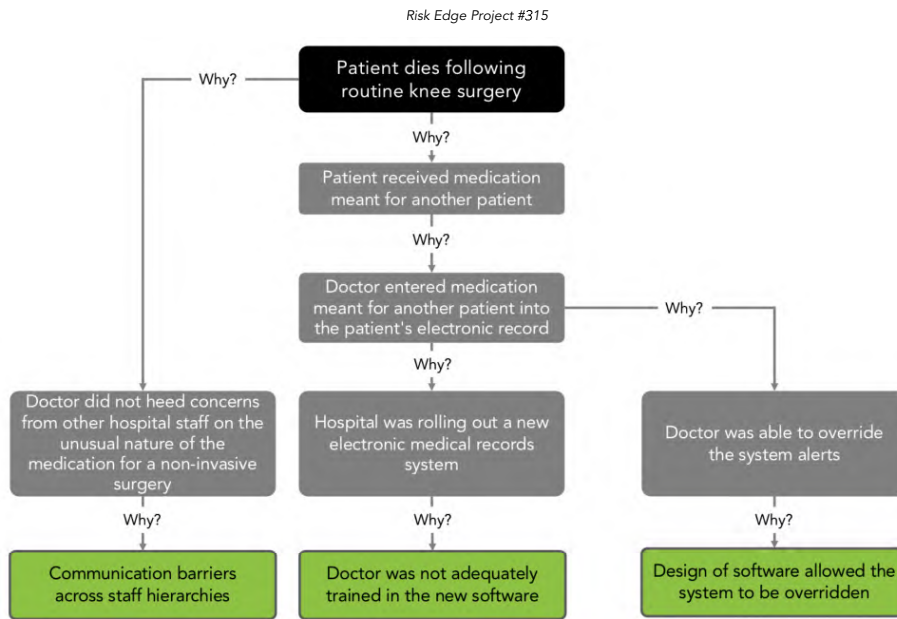


Figure 6-1. Example methodology applied in practice.<sup>5</sup>

Miro® boards were used to capture the information for the workshop.

The root cause analysis focussed on the wider operating environment and stakeholders, not just the John Gilbert WTP or specific to the event or personnel involved, to identify root causes and improvements across the board.

- Debrief Activity
1. Identify:
    - a. Initial findings were discussed and adjusted where required.
  2. Qualify:
    - a. Workshop participants reviewed the findings and developed a series of 'whys' and root causes, associated with the problem statement.

The Miro® boards are summarised in Appendix D.

### 6.3 Root Cause Treatment

It is necessary to identify potential mitigation measures which can be used to improve the situation and help prevent a recurrence of the root cause/s. This final session of the debrief covered the improvement aspect.

- Workshop Activity
3. Improve:
    - a. Each of the 'true' root causes was reviewed and improvement actions identified to prevent a recurrence of the problem.

<sup>5</sup> Figure developed from material in Davison, A. (2018) Your governance framework, are lives safe on your watch? CERM® Risk Insights #212 [https://insights.cermacademy.com/212-governance-framework-lives-safe-watch-annette-davison/?doing\\_wp\\_cron=1582168988.5963170528411865234375](https://insights.cermacademy.com/212-governance-framework-lives-safe-watch-annette-davison/?doing_wp_cron=1582168988.5963170528411865234375)

A summary of the improvement actions is provided in Table 6-2, and final reflections in Appendix D.

**Table 6-2. Summary of improvement actions identified and their relationship to ADWG Framework elements.**

Theme	Improvements	Framework Element
Governance and "tone from the top"	Induct councillors using DPE training package.	1, 7, 12
	Undertake drinking water quality awareness training for key staff.	1, 7, 12
	Review process, understanding and governance of approving new CCPs following risk assessments e.g. Wellington CCPs.	1, 3, 7, 12
	Review SCADA setpoints to ensure that setpoints match and support the correct operation of the CCPs.	3, 4
	Review communication around the critical control points with NSW Health.	3, 6, 12
	Review customer service standards to ensure that quality is not compromised (there is currently no process to weigh up competing levels of service priorities).	1, 2, 3, 12
	The roles and responsibilities for DWMS implementation need to be understood and reallocated when there are staffing gaps.	1, 12
	NSW Health should consider supporting interactions with EPA on discharge of chlorinated water to environment in future similar events to ensure that public health is protected.	6
	Training for front line management and above, in water quality incidents and response actions (to improve the 'when' and 'why' to contact NSW Health when CCPs are breached).	6, 7
Resourcing	Ensure sufficient resources across the water team to undertake all required obligations under the Public Health Act, from "boots on the ground" to executive (resourcing gap is creating uncertainty across the board including in appropriate monitoring and review of the water quality data). (Resourcing should include not only an appropriate number and level of operators, but also resourcing for on-call duties and funding of on-call duties. As an example, on a weekend, there is only one staff in attendance, for 5 hours per day, over both days. The reason for this is that that resource is charged at overtime. The technicians noted that this situation is causing fatigue. There is an on-call function but this is not paid. Overtime is only paid if the resource has to attend the plant in person. There is also a current gap in a resource responsible for water quality management oversight i.e. a drinking water quality compliance officer role.)	1, 12
Knowledge / Protocols	Review each reservoir and zone to determine how water pressure can be managed more flexibly e.g. set target and critical limits for levels. Some reservoirs may have drop dead levels that cannot be compromised.	2, 4, 9, 12
	Consider reviewing the hydraulic model of reticulation network to improve understanding of water flows.	2, 4, 9, 12
	Consider using a digital twin (essentially a digital representation of the network) to improve scenario modelling.	2, 4, 9, 12
	Review whether / if the plant can be run in manual mode.	2, 4, 9, 12
	Consider the likely data provision requirements to allow faster assessment of dilution.	2, 4, 9, 12
	Review if the plant could be run on only bore water (in conjunction with current project that is increasing the supply of bore water to the plant). This could provide a critical advantage of choosing not to process river water during poor raw water events, significantly reducing the treated water quality risks.	2, 9

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Theme	Improvements	Framework Element
	Develop DRC in-house capability to run root cause analyses as part of continuous improvement/incident response (DPE / external organisation can assist with this).	6, 12
Equipment / Assets	Investigate how to backwash without sending the non-conforming water to town.	2, 4, 9, 12
	Investigate filter to waste for current set-up (only one filter backwash volume is available at a time so plant needs to keep producing water for multiple backwashes, and CWT cannot be easily isolated from the network (only one filter backwash volume is available at a time so plant needs to keep producing water for multiple backwashes, and clear water tank cannot be easily isolated from the network).	2, 4, 9, 12
	Improve understanding of assets and what is required to enable isolation.	2, 4, 9, 12
	Review system set up to ensure that valving etc is ground-truthed and accurate.	2, 4, 9, 12
	Review access permissions to the SCADA system.	4, 12
	Review SCADA equipment to ensure operators can effectively observe and respond to system requirements.	4, 12
Measurement / Monitoring	Review raw water and operational monitoring regime, to improve system understanding and evidence base for monitoring (location, parameter, monitoring type, frequency). Objective is to improve understanding of when / if configuration needs to change.	4, 12
	Conduct jar testing to understand coagulant dosing (optimising for true colour as well as turbidity; need to review dosing requirements for raw water quality and upgrade treatment chemical dosing capability).	4, 12

For completeness, Dubbo Regional Council approved addition of the previous debrief root cause action list (completed as part of the NSW Health Drinking Water Management System implementation projects), to this document. The actions are provided in Appendix E.

## References

- ADWG (2011) NHMRC/NRMMC (National Health and Medical Research Council/Natural Resource Management Ministerial Council) Australian Drinking Water Guidelines National Water Quality Management Strategy. Version 3.8. ISBN Online: 1864965118.
- Atom Consulting (2021) Incident Debrief Output Paper for NSW Health. Version 1.0 (HEA2002DRC), 19/01/2021.
- Atom Consulting (2022) Dubbo Boil Water July 2022 Emergency Management Debrief, Output Report for Dubbo Regional Council and Department of Planning and Environment, version 2.0, October 2022.
- Davison, A. (2018) Your governance framework, are lives safe on your watch? CERM® Risk Insights #212 [https://insights.ceracademy.com/212-governance-framework-lives-safe-watch-annette-davison/?doing\\_wp\\_cron=1582168988.5963170528411865234375](https://insights.ceracademy.com/212-governance-framework-lives-safe-watch-annette-davison/?doing_wp_cron=1582168988.5963170528411865234375)
- UKG (2005) John Gilbert WTP Upgrade - Dubbo Design Criteria UKG PROJECT NO: N055 DOCUMENT NO: N005 -003. Design Criteria. I:\ENGINEERING\Projects\N055 DUBBO\Z.Concept Design Submission\Design Criteria\_Rev 3.xls

Agenda

Timing	Item	Methodology	Who
08:45 – 09:00	Arrival		All
09:00 – 09:15	Workshop opening	Acknowledgement of Country Roundtable introductions and overview of the workshop	All, facilitated by Risk Edge
09:15 – 09:30	Context setting: Summary observations	Discussion	Dubbo Regional Council / LHD
09:30 – 10:15	Context setting: System Understanding and Pre-event conditions	Process design and water quality analysis. Review of pre-event conditions.	All, facilitated by Risk Edge
10:15 – 10:30	Break	Morning Tea	All
10:30 – 11:15	Context setting: Review of timeline	Gaps of key points to be noted by the group and recorded.	All, facilitated by Risk Edge
11:15 – 11:45	Confirmation of problem statement	Group participants will be asked to review and confirm the problem statements and reach consensus.	All, facilitated by Risk Edge
11:45 – 12:00	Introduction to 'Whys Tree' root cause analysis	Overview of the approach to be followed.	Risk Edge
12:00 – 12:45	5 Whys root cause analysis – <b>Identify</b> and <b>Qualify</b>	Likely to be based on what seems to be common themes of: <ol style="list-style-type: none"> <li>1. Personnel</li> <li>2. Method / Protocols</li> <li>3. Measurement / Monitoring</li> <li>4. Assets</li> <li>5. Environment</li> <li>6. Governance</li> <li>7. Training</li> </ol> Participants will identify a possible suite of 'whys' that led to the problem, exploring each common theme. Participants will be asked to qualify the 'whys' to ensure that a true root cause of the problem is identified. To accommodate the face to face and remote attendance hybrid workshop model, a Miro board will be used to capture the outcomes.	All, facilitated by Risk Edge
12:45 – 1:15	Break	Lunch	All
1:15 – 2:30	5 Whys root cause analysis – <b>Identify</b> and <b>Qualify</b>	Continued	All, facilitated by Risk Edge
2:30 – 3:45	5 Whys root cause analysis – <b>Improve</b>	Participants will review their root causes and identify actions that could be implemented to address the cause.	All, facilitated by Risk Edge
3:45 – 4:00	Next steps		Risk Edge

**Appendix C Site Visit Observations**

Observations from site visit 18 October 2022

Item	Observations
Flow diagram	<p>Several items of monitoring, noted on the current conceptual flow diagram were incorrect or missing or inadequate.</p> <p><b>Raw water:</b> Turbidity for raw water is sampled from a common line. An online meter and laboratory measurements (from grab of same line sent up to lab) are taken. The raw water line to the lab commonly gets blocked with causes uncertainty in the measurement of samples from this line. Operational staff had concerns of the raw water sampling including the configuration of the distribution of the sample line to the lab. On the day of the visit, the online turbidity and conductivity meters had non-compliant calibration stickers, with calibration noted as being due 'ASAP'.</p> <p><b>PAC:</b> A grab sample is taken from the weir in the PAC Tank for the jar test, as directed by the supervisor. The trigger for collection is usually by context such as a rain event of water quality findings, as there are not enough staff to conduct the jar test routinely. Operators noted their preference would be to conduct a daily jar test. Monitoring of the jar test outcomes includes visual of the floc, settleability, raw pH, turbidity. Jar test sheet is used to record and inform the results.</p>
Resourcing	<p>On a weekend, there is only one staff in attendance, for 5 hours per day, over both days. The reason for this is that that resource is charged at overtime. The technicians noted that this situation is causing fatigue. There is an on-call function but this is not paid. Overtime is only paid if the resource has to attend the plant in person.</p> <p>Technicians noted the difficulty in getting appropriately qualified staff, particularly given that training is not currently being offered (the site visit team noted this situation is currently being addressed).</p> <p>A new resource (Cert III qualified) started at the WTP in May 2022, and resources have been required to mentor this role. This resource was on duty prior to (2022-07-01), and around the time of the event (a shift is Tuesday to Tuesday). Prior to the event, the technicians noted the clarifier turbidity was slightly elevated.</p>
Supply chain	<p>COVID caused delays in the filter upgrades. Two filters were upgraded in 2018(?) but upgrade of the remaining four was delayed.</p>
SCADA	<p>The technicians noted their frustration with the current SCADA system.</p> <p>The system runs extremely slowly, due to a server capacity issue – the technicians noted it is not fit for purpose for all the systems it now has to manage. As an example, it can take as much as 1 hour for the system to action a command (such as valve opening or closing), from the moment the button is clicked within SCADA. Control loops cannot complete before timeout so they go into fault.</p>
Telemetry	<p>The RTU is known to drop out at the bores, meaning that data cannot be accessed – this was a known issue prior to the event.</p>
Source water	<p>Not all bores were functioning prior to the event – this meant less buffer in water source selection. Some bores were offline due to PFAS contamination, refurbishment, others due to pump failure and RTU failure.</p> <p>Source water is now outside the design envelope.</p> <p>All dosing is on highest dosing rates. Ferric is x 3 compared to what used to be dosed.</p>
Documents and records	<p>Water quality committee meetings are supposed to occur monthly but have only happened a couple of times recently (last being June- August 2022). Records of the meetings are taken and stored but it was noted that the records are difficult to re-find once stored.</p> <p>Toolbox meetings occur daily with records taken on a tablet, but not everyone has access. Results are stored in TRIM, but then difficult to find.</p>

Item	Observations
COP	<p>Dubbo has another level of operational point, called a critical operating point or COP. The clarifier is classed as a COP but there was confusion over this process step as there are no COP documents on the water quality SharePoint site (there were for other COPs such as in the reticulation).</p> <p>The Manager Water and Sewer role was certain that the clarifier is a COP.</p> <p>The clarifier performance can be trended but only when looking at the SCADA traces. Technicians mainly just rely on pager alerts.</p>
Clarifiers	<p>Clarifier 2 is considered a better clarifier operationally.</p> <p>Clarifier 2 did not undergo its scheduled maintenance in 2021, and was offline, undergoing maintenance prior to the event.</p> <p>Clarifier 1 was end of life.</p> <p>The technicians try to achieve the following:</p> <ul style="list-style-type: none"> <li>Clarifier 1: &lt;3 NTU but target &lt;1</li> <li>Clarifier 2: &lt;2 NTU</li> </ul> <p>Clarifier 1 had been off for a couple of days to fix the leak in the channel. It was brought back on line 2022-06-18. It did not return to steady state prior to the event, Swapped to clarifier 2 on 2022-06-22 at 13:00. On 2022-06-23, clarifier 1 was started and then the technicians started cleaning clarifier 2.</p> <p>Clarifier 1 was running stop/start in week prior to the event, due to high turbidity in clarifier 1 and the filter.</p> <p>Clarifier 1 does not have a VSD, therefore all dosing rates have to be adjusted manually.</p>
Distribution / Demand Management	<p>Water levels in town were already low (although no clarification was received on what constitutes 'low' and what the drivers are for considering 'low' e.g. reticulation pressure, firefighting, temporal demand issues).</p>
Filters	<p>Filters 1-4 were overdue for refurbishment due to COVID.</p>
Disinfection	<p>System design makes chlorine contact time calculation difficult.</p>
Communication	<p>Prior to the event, there was no formal communication on river levels or releases, from WaterNSW (this has since been rectified).</p>
Design issues	<p>The plant was designed with backwash water for one filter at a time. The plant has to run during backwash to keep producing water. Plant was designed to meet 1 NTU.</p> <p>When the plant critical limit was changed to meet 0.5 NTU, no work was conducted to consider resilience.</p>
DWMS	<p>DRC's version of a DWMS is a Drinking Water Quality Management Plan (DWQMP). The version in force at the time of the event was February 2015 (note, this was not for the whole of DRC's water supply systems).</p>
Reporting	<p>The most recent annual report on the SharePoint site was from 2012-2013.</p> <p>Manager Water and Sewer role advised that a more recent one was available (no records available to confirm this). CEO and Director have now requested quarterly updates on CCP exceedances.</p> <p>Quarterly reports on enterprise risk links to CSP.</p>
Critical Control Point Observations	<p>CCP JGWTP 005 Filtration: Target limits are 0.2-0.3 NTU, Alert is &gt;0.3 NTU (alarmed to pager) (applies if all individual filter turbidity analysers are above 0.3) and Critical is &gt; 0.5 NTU for &gt; 15 minutes (presumably when supplying water).</p> <p>As an observation, the way it is written, the alert level only applies if all filters are meeting the conditions.</p> <p>If an individual filter has supplied water above the critical limit, the process is to inform the supervisor immediately and the supervisor notifies their superior (the 'WOST', noting that at the</p>

Item	Observations
	<p>time of the event, the WOST position was vacant (as of March 2022) and was being covered by the Water and Sewer Manager). The WOST position must then inform NSW Health and DPIE – there is no timing stipulated.</p> <ul style="list-style-type: none"> <li>2022-07-05: The technician on duty notified the supervising technician that a filter critical limit exceedance had occurred. The Water and Sewer Manager was informed and made the decision to keep the plant running – somewhere between 11:02 and 13:34.</li> <li>2022-07-06: The Manager Water and Sewer informed NSW Health of the critical limit exceedance (somewhere around 18:00). A gap exists between when the Water and Sewer Manager was informed and when NSW Health was informed.</li> <li>2022-07-07: A decision is made to issue a boil water alert in the morning. Manager Water and Sewer made decision to shut the plant down for the night but the WTP water quality data appear to indicate that non-conforming water was still being produced.</li> <li>There appears to be a gap of 14 hours of supply of non-conforming water (~7 ML). Demand was high during the period.</li> </ul> <p>Critical limits are not locked out from being changed (but only technicians can change the limit). The process is that if a limit is changed, it should be documented in the diary and reported to the supervising technician.</p> <p>At the site visit, the SCADA limits did not match what was in CCP JGWTP 005. The critical limit was correct but the alert limit had been changed to 0.45 (from 0.3), to reduce alarms.</p> <p>According to the Manager Water and Sewer, the technicians can change the critical limit to go above 0.5 NTU. Manager Water and Sewer did not remember having discussed changes to the CCP conditions, with NSW Health.</p>
Manager Water and Sewer role	<p>This role has a broad level of responsibility including overseeing asset planning, client services team, operations team and reticulation/treatment.</p> <p>It was noted that from an asset perspective, that the plant upgrade had been delayed due to COVID issues. A major upgrade is covered in the Strategic Business Plan in 2036.</p> <p>The budget for annual maintenance for the WTP is \$300-400K.</p> <p>Plans are in place to refurbish the remaining four filters, fluoridation, UV, PAC and lime dosing.</p> <p>This role runs the Water Quality meetings.</p> <p>The role does not keep their own records of events.</p>
Strategic Water Officer	<p>This role has responsibility for reviewing water quality but is currently not filled due to extended illness, with no plan to fill this position in the meantime.</p> <p>Confirm whether position was filled before and on the day of the incident.</p>
Training	<p>No water quality awareness training is undertaken. DRC experiences challenges finding qualified operators.</p>
Data Analysis	<p>All data in the water quality spreadsheet are transcribed from the daily checklists.</p>
Sampling	<p>Frequency is based on what was already done previously and has not been reviewed for adequacy.</p>
Monitoring	<p>Multiple improvement opportunities were identified for monitoring. Some observations are provided below.</p>

### Monitoring Observations

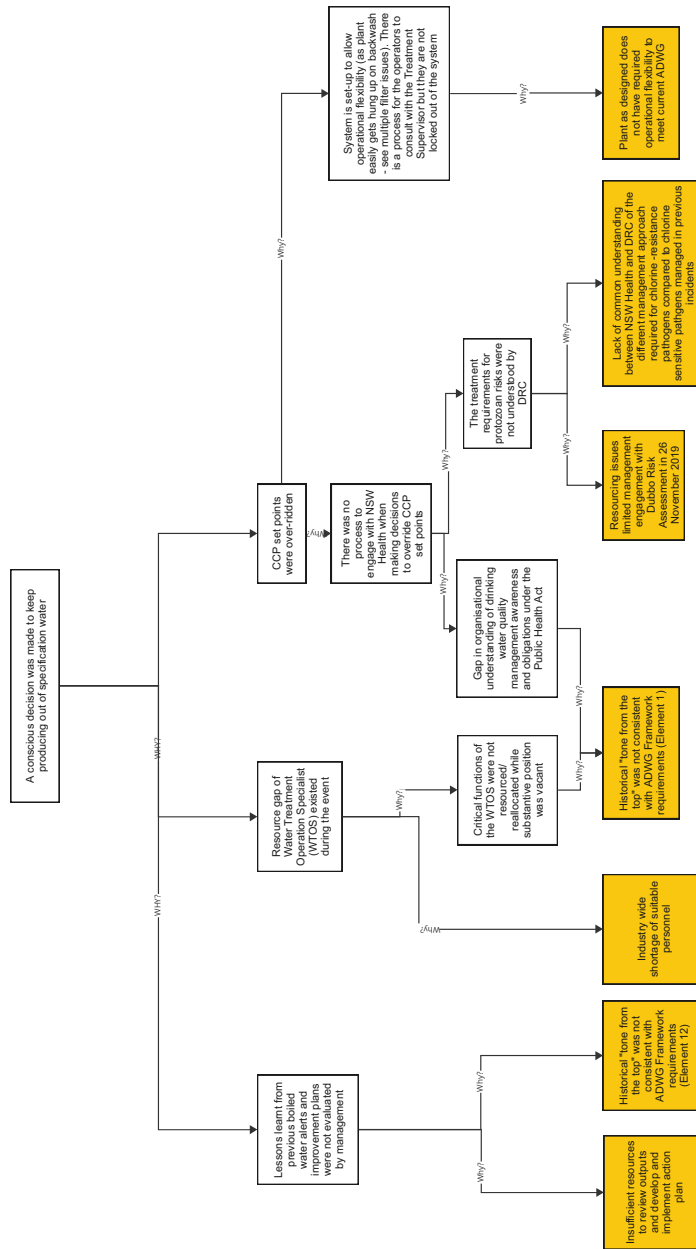
Parameter	Location	Frequency	Notes
Turbidity	Water shandy (bores and river) prior to PAC tank	Online	Online is in same line as the sample that is grabbed at the lab.

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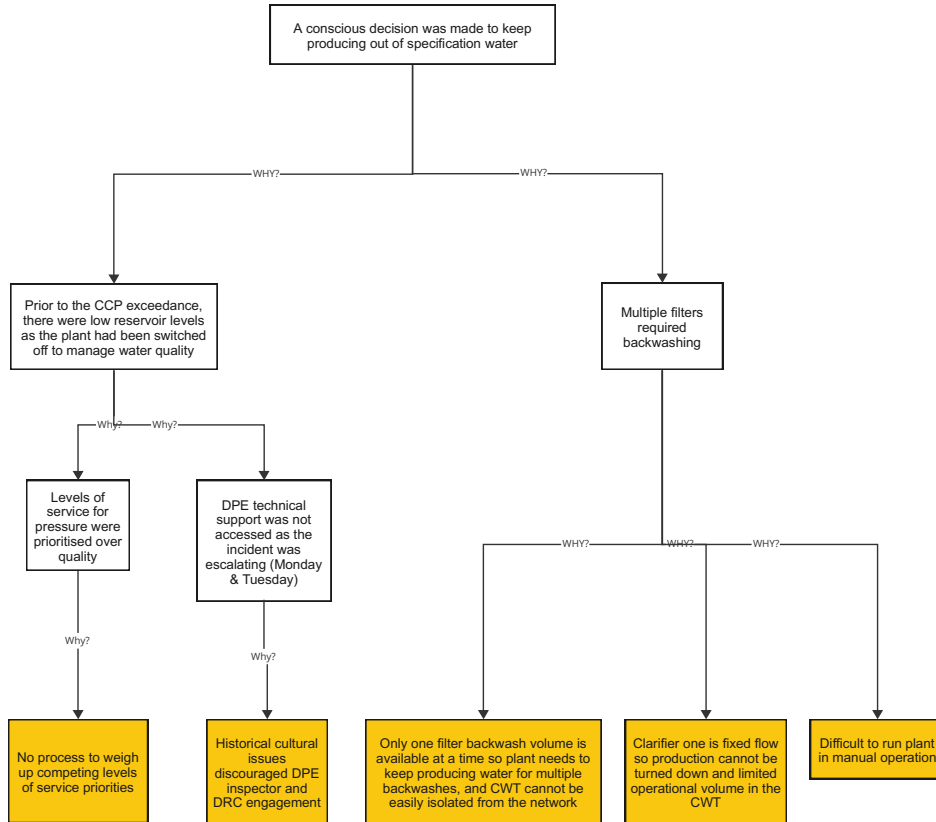
Parameter	Location	Frequency	Notes
Turbidity	Water shandy (bores and river) prior to PAC tank	Grab 5/7	Grab sample is taken from the laboratory where it is 10 min delayed from the online measurement. Percent of shandy varies delay.  There is no SOP for managing the shandying but periodic jar tests are performed.
Turbidity	Bore (whichever bore is operating)	Grab 5/7	A sample is physically collected by the operator at the operating pump.
Turbidity	Bores (combined)	Grab 5/7	Water is pumped to the lab and is a combined stream.
Manganese	Pipe outlet from raw water pump, which ever one is running	Grab 5/7	Sample is physically collected by operator from a sample tap, at the operating pump
Manganese	Clear water tank – input	Grab 5/7	
Manganese	Clear water tank – output	Grab 5/7	

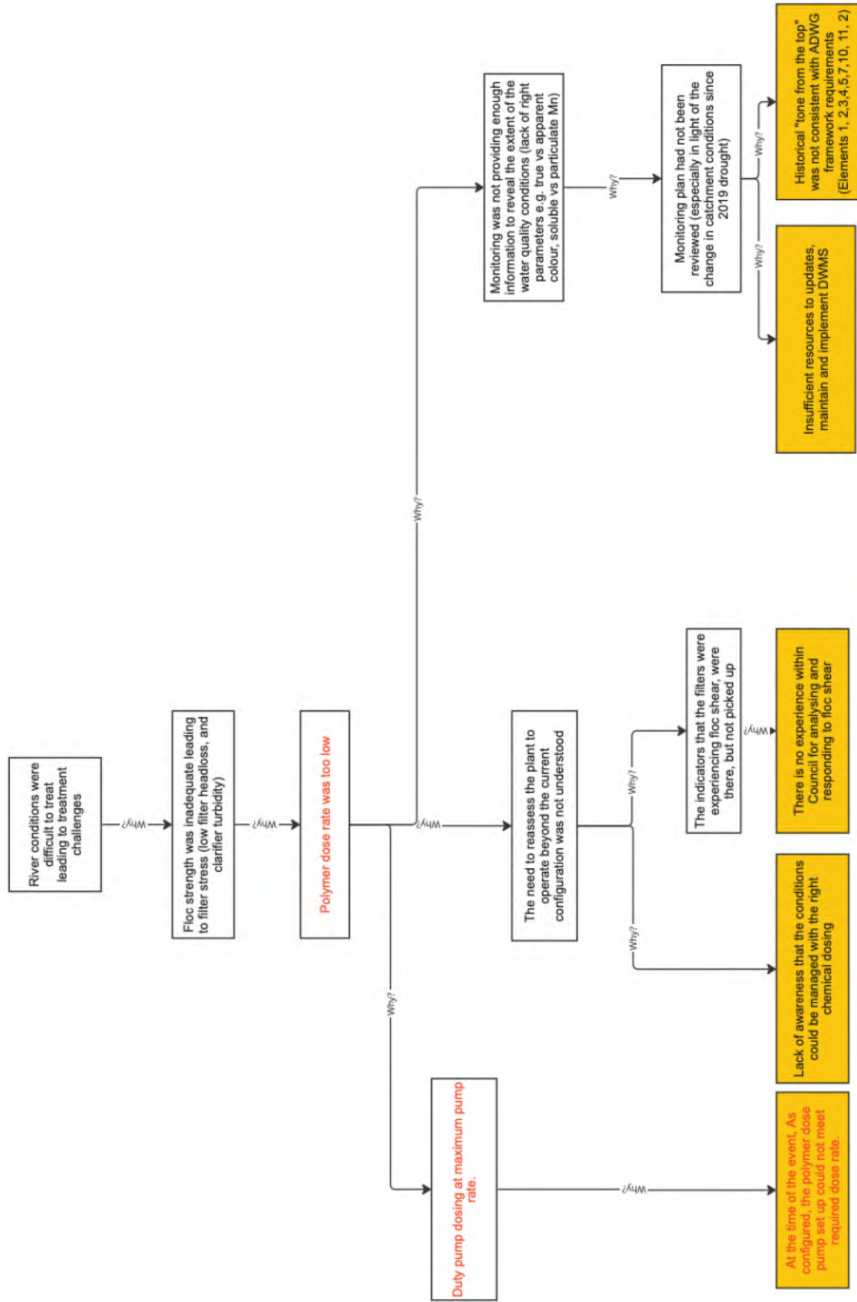


Appendix D Miro® Board Summaries (Root Cause Trees and Final Reflections)



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<sup>7</sup> Red text denotes changes made in response to DPE comments on original 'root cause tree'.

### Final Reflections

Multiple gaps: resource, training (inc Councillors), maintenance, implementing management systems.

Staffing is critical - particularly with two different plants especially for new staff. Plant needs to be staffed 7 days.

Plant's fine in capacity but changing standards require catching up  
Resourcing will help.

Water policy - commitment is buried on p17 of the water policy.

Get onto the front foot (proactive). Shut the plant down before getting to the red line and find solutions and get help before starting up again.

Early help and engagement with regulators  
Importance of providing safe water.  
Resourcing having positions and filling positions.

"Too thin on the ground" need to invest in human resources and maintenance.

Importance of engaging early and often. Regulators are free resources for supporting during this event.

Fatigue is an issue in these events and is know to lead to poor decision making.  
Operator sharing of resources and knowledge.  
Highlight with the executive the importance of engaging with the executive.

Resources will help the situation.  
Don't waste a disaster.  
Push back to management to get the resources needed so the operators can do their job.

Plant and its operation is difficult, Obtaining parts is difficult, opportunity to look at long term plant to look at what efficiencies look like inc redundancy and resilience.

**Appendix E Previously Identified Root Cause Improvement Actions (Source: Atom Consulting, 2021)**

No.	Action	WTP	Root Cause(s)	Responsibility	Status
1	Reinstate bores	Geurie Wellington	G2, W2	DRC	Incomplete
2	Review water quality risk assessment to include bore water quality	Geurie Wellington	G2, W2	DRC	Incomplete
3	Capture knowledge of treatment setpoints and chemical dose rates for future events	John Gilbert Geurie Wellington	G1, W1	DRC	Incomplete
4	Undertake UVT monitoring of raw water for organics	Geurie Wellington	G10, W10	DRC	Ongoing
5	Determine action levels for UVT in raw water	Geurie Wellington	G1, W1	DRC	Incomplete
6	Fill vacant position in Wellington/Geurie team	Geurie Wellington	G7, W8, D16	DRC	Complete
7	Interagency discussion between NSW Health, DPIE and Office of Local Government on operator training and appropriate remuneration	John Gilbert Geurie Wellington	G5, W5, D13, D14	NSW Health DPIE	Incomplete
8	Engage with DRC senior management and councillors on water safety	John Gilbert Geurie Wellington	G6, G8, W7, D15	NSW Health	Incomplete
9	Install online filter turbidity meters	Geurie	G9	DRC	Complete
10	Modify filter turbidity meter sample location to ensure representative sample	John Gilbert Geurie Wellington	G9, W9, D7	DRC	Complete
11	Install debubblers on filter turbidity meters	John Gilbert Geurie Wellington	G9, W9, D8	DRC	Complete
12	Upgrade SCADA to allow remote monitoring of all points	Geurie	G8	DRC	Complete
13	Install aeration of raw water	John Gilbert Geurie Wellington		DRC	Complete
14	Investigate options and undertake major plant upgrade	Geurie		DRC	Incomplete
15	Install permanent potassium permanganate dosing	Geurie	G3	DRC	Incomplete
16	Install UV disinfection	John Gilbert Geurie Wellington	Additional protozoa barrier and HBT	DRC	Ongoing
17	Undertake soluble and total manganese testing daily	John Gilbert Geurie Wellington	G4, W4	DRC	Complete

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No.	Action	WTP	Root Cause(s)	Responsibility	Status
18	Update monitoring plans to reflect changes to monitoring (Mn, UVT, online turbidity etc)	John Gilbert Geurie Wellington	G4, G9, W4	DRC	Incomplete
19	Complete sedimentation lagoon refurbishment (remove vegetation, erosion control)	Wellington	W12, W14	DRC	Incomplete
20	Divert stormwater from sedimentation lagoons	Wellington	W11	DRC	Complete
21	Assess options to manage sludge (eg. clarifiers, mechanical dewatering)	Wellington		DRC	Incomplete
22	Install new (larger) alum dosing pumps	Wellington	W15	DRC	Complete
23	Investigate separation of dosing points and rapid mixing	Wellington	W13	DRC	Incomplete
24	Plan for filter refurbishment	Wellington		DRC	Incomplete
25	Investigate balance tank on backwash return to sedimentation lagoons	Wellington		DRC	Incomplete
26	Upgrade filter valves and actuators	John Gilbert	D11	DRC	Ongoing
27	Respan filter turbidity meters on SCADA to full range of instrument	John Gilbert	D9	DRC	Complete
28	Investigate if bores can yield enough water to supply Level 4 restrictions	John Gilbert	D4	DRC	Incomplete
29	Investigate options for plant to treat 100% bore water	John Gilbert	D5	DRC	Incomplete
30	Adjust filter backwash setpoints achieve optimum backwash and ripening	John Gilbert	D12	DRC	Complete
31	Install drain at end of filtered water channel (may be part of UV upgrade)	John Gilbert	D10	DRC	Incomplete
32	Consider community education campaign on after hours calls	John Gilbert	D17	DRC	Incomplete
33	Investigate if filter flow paths can be duplicated	John Gilbert		DRC	Incomplete
34	Complete filter refurbishment (media and nozzles)	John Gilbert		DRC	Incomplete
35	Adjust chemical reorder levels to account for longer lead times	John Gilbert Geurie Wellington	D2	DRC	Complete
36	Add DPIE notification to CCP procedures	John Gilbert Geurie Wellington	WC1, DC1	DRC	Incomplete
37	Develop incident reporting template for NSW Health and DPIE	John Gilbert Geurie Wellington	WC1, DC1	DRC	Incomplete
38	Follow up media communication responsibilities and reviews	John Gilbert Geurie Wellington	WC2, DC2	DRC	Incomplete

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No.	Action	WTP	Root Cause(s)	Responsibility	Status
39	Improve regular engagement between DRC and NSW Health on water safety messaging to community	John Gilbert Geurie Wellington	WC1, DC1	NSW Health DRC	Incomplete
40	Employ new treatment officer	John Gilbert Geurie Wellington	WC3	DPIE	Complete
41	Advocate for improved data from WaterNSW as part of review of their operating licence	John Gilbert Geurie Wellington	WC4, DC5	NSW Health DPIE DRC	Incomplete
42	Review monitoring plans for routine and incidents	John Gilbert Geurie Wellington	DC3	DRC	Incomplete
43	Investigate options for automated SCADA reports with for interagency reporting in emergency	John Gilbert Geurie Wellington	DC4	DRC	Incomplete



# Water Quality Action Plan

ACTION	Action Categorisation	Plant Name	Responsibility - Organisation	Responsibility - DRC Staff	Priority	Timeframe	Status
1 Reinstate Bores Geurie	Capital Upgrades	GWTP	DRC				Completed
2 Reinstate Bores Wellington	Capital Upgrades	WWTP	DRC	Manager Strategy	1. High	Immediate	Progressing
3 Review water quality risk assessment to include bore water quality	Procedures / Documentation	GWTP	DRC				Completed
4 Review water quality risk assessment to include bore water quality	Procedures / Documentation	WWTP	DRC	Manager Strategy Water Supply and	1. High	Immediate	Progressing
5 Capture knowledge of treatment setpoints and chemical dose rates for future events	Operational Procedures / Documentation	All WTP's	DPE DRC				Actioned
6 Undertake UVT monitoring of raw water for organics	Operational	GWTP WWTP	DRC				Completed
7 Determine action levels for UVT in raw water	Operational	GWTP WWTP	DRC				Completed
8 Fill vacant position in Wellington/Geurie team	Training / Staff	GWTP WWTP	DRC	Water & Sewer Operations Engineer	1. High	Long Term Short Term	Ongoing
9 Interagency discussion between NSW Health, DPIE and Office of Local Government on operator training and appropriate remuneration	Other Training / Staff	All WTP's	DPE NSW Health		1. High	Immediate Long Term Short Term	Progressing
10 Engage with senior management and councillors on water safety	Community Engagement/Education Other	All WTP's	NSW Health				Under Investigation
11 Install online turbidity meters	Capital Upgrades	GWTP	DRC				Completed
12 Modify turbidity meter sample location to ensure representative sample	Operational	All WTP's	DRC				Completed
13 Install debubblers on filter turbidity meters	Capital Upgrades	All WTP's	DRC				Completed
14 Upgrade SCADA to allow remote monitoring of all points	Capital Upgrades Operational	GWTP	DRC				Completed
15 Install aeration of raw water	Capital Upgrades	All WTP's	DRC				Completed
16 Investigate options and undertake major plant upgrade	Capital Upgrades Strategic Planning	GWTP	DRC	Manager Water Sewer	1. High	Short Term	Under Investigation
17 Install permanent potassium permanganate dosing	Capital Upgrades	GWTP	DRC	Manager Water Sewer	1. High	Short Term	Under Investigation
18 Install UV disinfection	Capital Upgrades	GWTP WWTP	DRC	Manager Water Sewer	1. High	Immediate	Progressing
19 Install UV disinfection	Capital Upgrades	JGWTP	DRC	Manager Strategy	2. Moderate	Long Term	Progressing
20 Undertake soluble and total manganese testing daily	Operational	All WTP's	DRC				Completed
21 Update monitoring plans to reflect changes to monitoring (Mn, UVT, online turbidity etc)	Operational Procedures / Documentation	All WTP's	DRC	Water & Sewer Operations Engineer	2. Moderate	Short Term	Progressing
22 complete sedimentation lagoon refurbishment (remove vegetation erosion control)	Capital Upgrades	WWTP	DRC				Completed
23 Divert stormwater from sedimentation lagoons	Capital Upgrades	WWTP	DRC				Completed
24 Assess options to manage sludge (eg clarifiers, mechanical dewatering)	Capital Upgrades	WWTP	DRC	Manager Water Sewer	3. Low	Long Term	Not yet commenced
25 Install new (larger) alum dosing pumps	Capital Upgrades	WWTP	DRC				Completed
26 Investigate separation of dosing points and rapid mixing	Capital Upgrades	WWTP	DRC	Water & Sewer	2. Moderate	Long Term	Not yet commenced
27 Plan for filter refurbishment	Operational Strategic Planning	WWTP	DRC	Water & Sewer Operations Engineer	1. High	Immediate	Under Investigation
28 Investigate balance tank on backwash return to sedimentation lagoons	Capital Upgrades	WWTP	DRC	Manager Water Sewer	3. Low	Long Term	Not yet commenced
29 Upgrade filter valves and actuators	Capital Upgrades	JGWTP	DRC	Water & Sewer	2. Moderate	Short Term	Progressing
30 Respan filter turbidity meters on SCADA to full range of instrument	Operational	JGWTP	DRC				Completed
31 Investigate if bores can yield enough water to supply Level 4 restrictions	Strategic Planning	JGWTP	DRC		1. High	Long Term	Completed
32 Investigate options for plant to treat 100% bore water	Strategic Planning	JGWTP	DRC				Completed
33 Adjust filter backwash setpoints achieve optimum backwash and ripening	Operational	JGWTP	DRC				Completed
34 Install drain at end of filtered water channel (may be part of UV upgrade)	Capital Upgrades	JGWTP	DRC	Manager Strategy Water Supply and	3. Low	Long Term	Under Investigation
35 Complete filter refurbishment (media and nozzles)	Capital Upgrades	JGWTP	DRC	Manager Water Sewer	1. High	Immediate	Progressing
36 Adjust chemical reorder levels to account for longer read times	Operational	All WTP's	DRC				Completed
37 Add DPIE notification to CCP procedures	Procedures / Documentation	All WTP's	DRC	Technical Officer	1. High	Immediate	Progressing
38 Develop incident reporting template for NSW Health and DPIE	Procedures / Documentation	All WTP's	DRC	Technical Officer Operations	2. Moderate	Short Term	Progressing
39 Improve regular engagement between DRC and NSW Health on water safety messaging to community	Community Engagement/Education	All WTP's	DRC NSW Health	Director Infrastructure	2. Moderate	Short Term	Progressing

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ACTION	Action Categorisation	Plant Name	Responsibility - Organisation	Responsibility - DRC Staff	Priority	Timeframe	Status
40	Employ new treatment officer	Training / Staff	All WTP's	DRC			Completed
41	Advocate for improved data from WaterNSW as part of review of their operating licence	Operational	All WTP's	DPE DRC NSW Health	Manager Water Sewer	2. Moderate Long Term	Progressing
42	Investigate options for automated SCADA reports for interagency reporting in emergency	Capital Upgrades Operational	All WTP's	DRC	Manager Water Sewer	2. Moderate Long Term	Not yet commenced
43	Clarification process upgrade - replacement of lagoons with conventional clarifiers and separate wastewater handling system	Capital Upgrades	WWTP	DRC	Manager Water Sewer	2. Moderate Long Term	Not yet commenced
44	Construction of raw water tank for improved chemical mixing and contact	Capital Upgrades	WWTP	DRC	Manager Strategy Water Supply and	2. Moderate Short Term	Progressing
45	Adjustment of filtration CCP alert level for filtered water turbidity down to 0.3 NTU	Procedures / Documentation	WWTP	DRC			Completed
46	Jar testing investigation to confirm suitability of current chemicals for water quality conditions faced	Operational	WWTP	DRC	Water & Sewer Operations Engineer	1. High Immediate	Completed
47	Additional operator training, particularly in jar testing and general WTP process troubleshooting	Training / Staff	WWTP	DRC	Water & Sewer Operations Engineer	1. High Immediate	Ongoing
48	Requirement for incident to be reviewed regularly and preferred technical advisers to be determined	Procedures / Documentation	All WTP's	DRC	Manager Water Sewer	1. High Immediate	Actioned
49	Develop and implement a process for understanding and assessing risk and response for drinking water supply incidents/emergencies. Consider internal systems and knowledge (network modelling) and external subject matter experts for critical knowledge gaps	Procedures / Documentation	All WTP's	DRC	Manager Water Sewer	2. Moderate Short Term	Completed
50	Develop and implement a process to assess the risk profile after a drinking water supply incident is identified to better plan operations. Consistent with council's enterprise risk process	Procedures / Documentation	All WTP's	DRC	Water & Sewer Operations Engineer Treatment	2. Moderate Short Term	Not yet commenced
51	Ensure the changing nature of the catchment risk profile is understood and documented, for example developing an ongoing catchment threat assessment	Procedures / Documentation	All WTP's	DRC	Manager Water Sewer	2. Moderate Short Term	Not yet commenced
52	Council to seek better clarification from NSW Health on the risk and actions required as part of future boil water alert responses	Operational	All WTP's	DRC	Manager Water Sewer	2. Moderate Short Term	Under Investigation
53	Develop plans for different scenarios on how to manage distribution of out of specification water	Other Procedures / Documentation	All WTP's	DRC	Water & Sewer Operations Engineer	3. Low Long Term	Not yet commenced
54	Liaise with WaterNSW on operational data gaps - water gauges not working on river	Operational	All WTP's	DRC Water NSW	Manager Water Sewer	3. Low Long Term	Not yet commenced
55	Review and more clearly define the role of the incident controller role in incident documentation	Procedures / Documentation	All WTP's	DRC			Completed
56	WTP Coordinator to be engaged as part of interagency communications for future boil water alerts	Procedures / Documentation	All WTP's	DRC			Actioned
57	Ensure that IT systems capability support the use of interactive tools, such as checking band width of website for any interactive tools developed to ensure it is appropriate for expected website traffic	Operational	All WTP's	DRC	Manager Information Technology	3. Low Short Term	Not yet commenced
58	Induct councillors using DPE training package	Training / Staff	All WTP's	DRC	Director Infrastructure	2. Moderate Short Term	Not yet commenced
59	Undertake drinking water quality awareness training for key staff	Training / Staff	All WTP's	DRC	Manager Water Sewer	3. Low Long Term	Not yet commenced
60	Review process, understanding and governance of approving new CCP's following risk assessments	Procedures / Documentation	All WTP's	DRC	Manager Water Sewer	2. Moderate Short Term	Not yet commenced
61	Review SCADA setpoints to ensure that setpoints match and support the correct operation of the CCPs.	Operational	All WTP's	DRC	Manager Water Sewer	1. High Immediate	Completed
62	Review communication around the critical control points with NSW Health.	Procedures / Documentation	All WTP's	DRC NSW Health	Manager Water Sewer	2. Moderate Short Term	Under Investigation
63	Review customer service standards to ensure that quality is not compromised (there is currently no process to weigh up competing levels of service priorities).	Procedures / Documentation	All WTP's	DRC	Water & Sewer Client Services Coordinator	2. Moderate Long Term	Not yet commenced
64	The roles and responsibilities for DWMS implementation need to be understood and reallocated when there are staffing gaps.	Procedures / Documentation	All WTP's	DRC	Manager Water Sewer	2. Moderate Short Term	Not yet commenced
65	NSW Health should consider supporting interactions with EPA on discharge of chlorinated water to environment in future similar events to ensure that public health is protected.	Operational	All WTP's	NSW Health			
66	Training for front line management and above, in water quality incidents and response actions, (to improve the 'when' and 'why' to contact NSW Health when CCP's are breached.	Training / Staff	All WTP's	DRC	Manager Water Sewer	2. Moderate Short Term	Under Investigation

CCL2

ACTION	Action Categorisation	Plant Name	Responsibility - Organisation	Responsibility - DRC Staff	Priority	Timeframe	Status
67	Operational	All WTP's	DRC	Director Infrastructure	2. Moderate	Short Term	Under Investigation
68	Operational	All WTP's	DRC	Manager Water Sewer	1. High	Short Term	Not yet commenced
69	Operational	JGWTP	DRC	Manager Water Sewer	2. Moderate	Long Term	Under Investigation
70	Operational	JGWTP	DRC	Water & Sewer Operations Engineer	2. Moderate	Short Term	Not yet commenced
71	Operational	JGWTP	DRC	Water & Sewer	2. Moderate	Short Term	Completed
72	Operational	JGWTP	DRC	Manager Water Sewer	2. Moderate	Short Term	Not yet commenced
73	Capital Upgrades Operational	JGWTP	DRC	Manager Strategy	2. Moderate	Short Term	Progressing
74	Procedures / Documentation	All WTP's	DPE DRC	Manager Water Sewer	3. Low	Long Term	Not yet commenced
75	Capital Upgrades	JGWTP	DRC	Manager Strategy Water Supply and	2. Moderate	Short Term	Under Investigation
76	Capital Upgrades	JGWTP	DRC	Manager Strategy Water Supply and Sewerage	2. Moderate	Short Term	Under Investigation
77	Operational	JGWTP	DRC	Water & Sewer Operations Engineer	3. Low	Long Term	Not yet commenced
78	Operational	JGWTP	DRC	Water & Sewer Operations Engineer	3. Low	Long Term	Not yet commenced
79	Operational	All WTP's	DRC	Manager Water Sewer	1. High	Short Term	Completed
80	Operational	All WTP's	DRC	Manager Water Sewer	2. Moderate	Short Term	Completed
81	Operational	JGWTP	DRC	Manager Water Sewer	3. Low	Long Term	Not yet commenced
82	Operational	JGWTP	DRC	Water & Sewer	2. Moderate	Short Term	Not yet commenced
83							



# **DRINKING WATER MANAGEMENT SYSTEM**

## 2022 Annual Report to NSW Health

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## ■ Document Control

Date	Change made	Person	Position
24 February 2023	Initial Drafting	Ashley Quinn	Technical Officer Operations
2 March 2023	Finalisation	Muhammad Abdullah	Water and Sewer Operations Engineer Treatment

## ■ Guidance

This report template is designed to address the reporting (Element 10), evaluation (Element 11) and review and continual improvement (Element 12) requirements of Dubbo Regional Council's Drinking Water Management System (DWMS).

The NSW Guidelines for DMWS (2013) recommends review of the following areas:

- Performance of critical control points.
- Water quality review (raw, treated and distribution water quality including verification monitoring in the NSW Health Drinking Water Database).
- Levels of service (including consumer complaints).
- Incident and emergencies (including follow up).
- DWMS implementation.
- Continuous Improvement Plan implementation.

Review of system performance should be against Australian Drinking Water Guidelines (ADWG), levels of service, NSW Water Supply and Sewerage Performance Monitoring reports and other regulatory requirements (Element 1).

Shortcomings should be captured in the Improvement Plan (Element 12).

## ■ Executive Summary

Dubbo Regional Council (Council) has four potable water schemes:

- Dubbo
- Wellington
- Geurie
- Mumbil.

This Annual Report includes the performance information and assessment for these schemes.

Council have experienced a number of operational challenges this year:

- Plants during the year, at various times, have been operating with skeleton staffing levels due to resignations and lengthy vacancies of key roles such as the treatment specialist and treatment technicians.
- A substantial operational challenge Council is facing is that there is no registered training provider in NSW who offers a Certificate III or Certificate IV in Water Operations. There is a lack of qualified people applying for vacant treatment technician roles, therefore more one on one time is required to train successful non-qualified applicants. With already low staff levels this has been difficult.
- The inconsistent river quality.

Council has demonstrated its commitment to working towards improvements to the water treatment plants by:

- Dubbo's Water Treatment Plant (WTP) fluoride dosing system has been scheduled for construction within 2023. Public Works have drafted and submitted the scope of works for review in mid-2022. The tender process is scheduled for 2023.
- The UV system has been installed at both Wellington and Geurie WTPs within 2022, however, within this reporting period Council had not received Section 60 approval. Commissioning is scheduled for early 2023.

A summary of the Critical Control Points (CCP) exceedances for the 2022 reporting period are summarised below:

**Critical Control Points (CCP)**

Number of CCP Exceedances				
	CCP4	CCP5	CCP6	CCP7
WTP CCPs	pH - CWT	Turbidity-Filtration	Chlorination (Lower Limit) - CWT Lower	Fluoridation - CWT
JGWTP (Dubbo)	0	1	0	Offline
Wellington WTP	0	1	0	14
Geurie WTP	0	18	1	0
Mumbil WTP	0	0	16	0
CCPs Reservoir	Integrity			
Dubbo Reservoir	7			
Wellington Reservoir	0			
Geurie Reservoir	0			
Mumbil Reservoir	0			

**Water Quality**

Key water quality issues identified in the reporting period include:

- Fluoridation CCP targets were unable to be maintained due to non-compliance and safety related issues. Council has recently engaged Public Works to draft a scope of works to upgrade both the fluoride dosing and storage system at the Dubbo WTP. Treatment technicians have provided feedback and the scope of work has been sent to the Executive Leadership Team for consideration.
- Free chlorine within reticulation systems of all water schemes are now Critical Operation Points (COP). Maintaining chlorine residuals within the reticulation system is the biggest challenge for Council. Council has responded to low free chlorine readings by manually dosing chlorine to the affected reservoirs to boost chlorine levels, followed by resampling. Council monitor the chlorine levels throughout the JGWTP using the chlorine monitoring devices.
- High levels of geosmin and algae produced in surface water in late 2022 has caused taste and odour issues at all WTPs within the Dubbo Local Government Area (LGA). All WTPs are producing water within the Australian Drinking Water Guidelines.

## Continuous Improvement Plan

A summary of progress towards implementing Continuous Improvement Plan actions is provided in the Table below:

	Completed	In progress	Items added	Total
Number of actions	4	28	5	32

## Drinking Water Management System (DWMS) Reviews

A summary of internal and external DWMS reviews are provided in the Table below:

Review	Scope	Findings	Actions taken
Drinking Water Quality Committee Meeting - Council	Review water quality results	Findings are provided in the Drinking Water Quality Committee Meeting Minutes (Appendix B)	Actions arising from the Drinking Water Quality Committee Meeting are summarised as DWQCM Action Items within the Meeting Minutes

## Report Purpose

The purpose of this report is to provide NSW Health with an annual update on the performance and continuous improvement activities conducted by Council for the four potable water schemes operated by Council. The reporting period covered in this report is from 1 January 2022 to 31 December 2022.

## Scheme Summary

In summary, Council has four potable water schemes:

- Dubbo
- Wellington
- Geurie
- Mumbil.

This Annual Report includes the performance information and assessment for these schemes.

The source water and treatment unit processes for each of the schemes are provided in their corresponding water treatment schematic (refer to Figure 2.1 for Dubbo; Figure 2.2 for Wellington; Figure 2.3 for Geurie and Figure 2.4 for Mumbil (pages 3 to 6) below):

A summary of system upgrades or improvements undertaken in 2022 is provided in Table 2.1 and a summary of the connections at the beginning and end of 2022 is provided in Table 2.2.

Timeframe	Description of Upgrade / System Improvement Activity
All WTPs	<ul style="list-style-type: none"> <li>• Small safety upgrades in the form of a ventilation system were installed in the lab at the Dubbo WTP to mitigate the chance of fume related incidents occurring.</li> <li>• Installation of UV system at Wellington and Geurie WTPs.</li> </ul>
Rollout throughout the year	<ul style="list-style-type: none"> <li>• Across the Dubbo scheme, the upgrading of pipework in the reticulation system has commenced to allow the connection of new bore water aeration towers. This will allow additional bores to be used.</li> </ul>

**Table 1: Summary of system upgrades or improvements undertaken in 2022**



Water Scheme	Connections
	Assessments with meters connected before 31/12/2022
Dubbo Water Scheme (including Eumungerie, Mogriguy, Wongarbon, Brocklehurst and Ballimore)	17,441
Wellington Water Scheme (including Nanima)	2,648
Geurie Water Scheme	279
Mumbil Water Scheme	133

**Table 2: Summary of the connections for each scheme at the beginning and end of 2022**

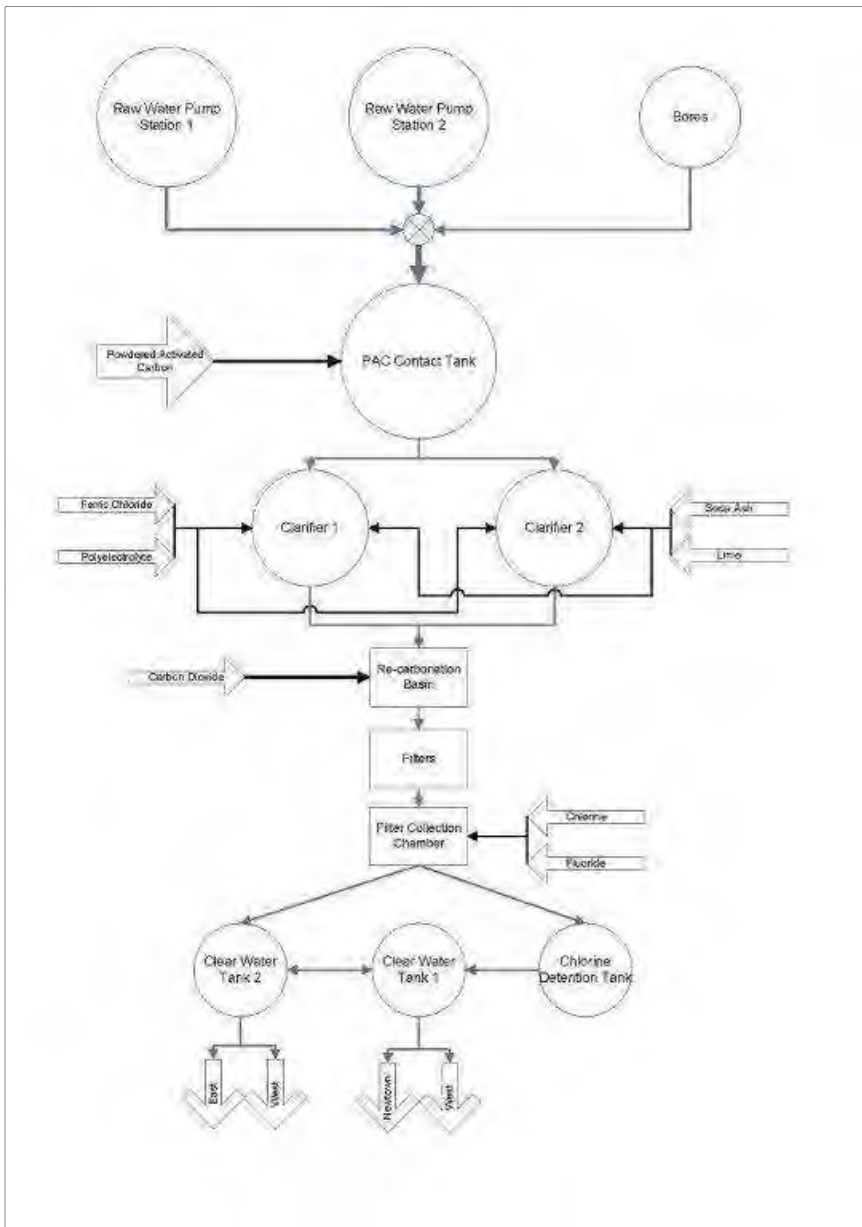


Figure 1: Schematic of JGWTP

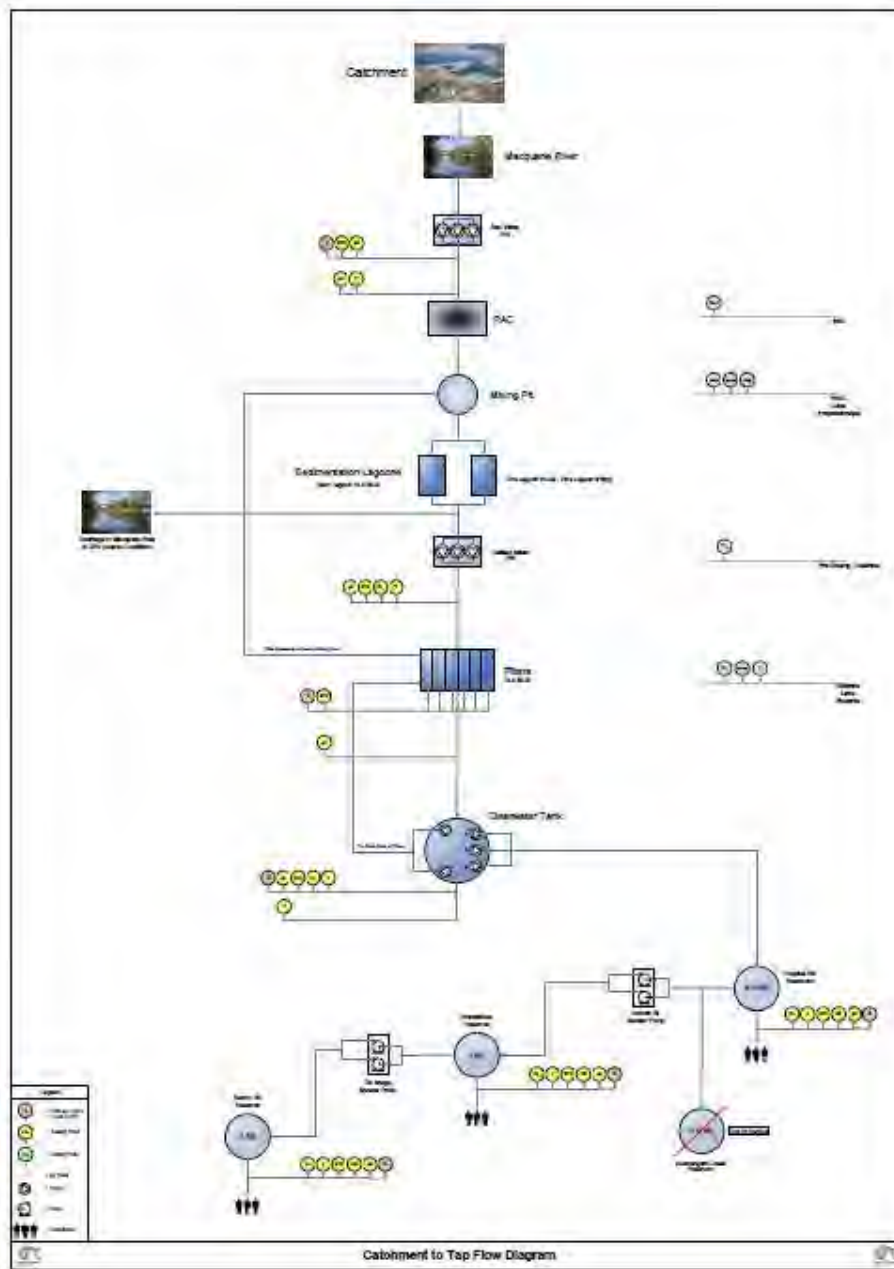


Figure 2: Schematic of Wellington WTP

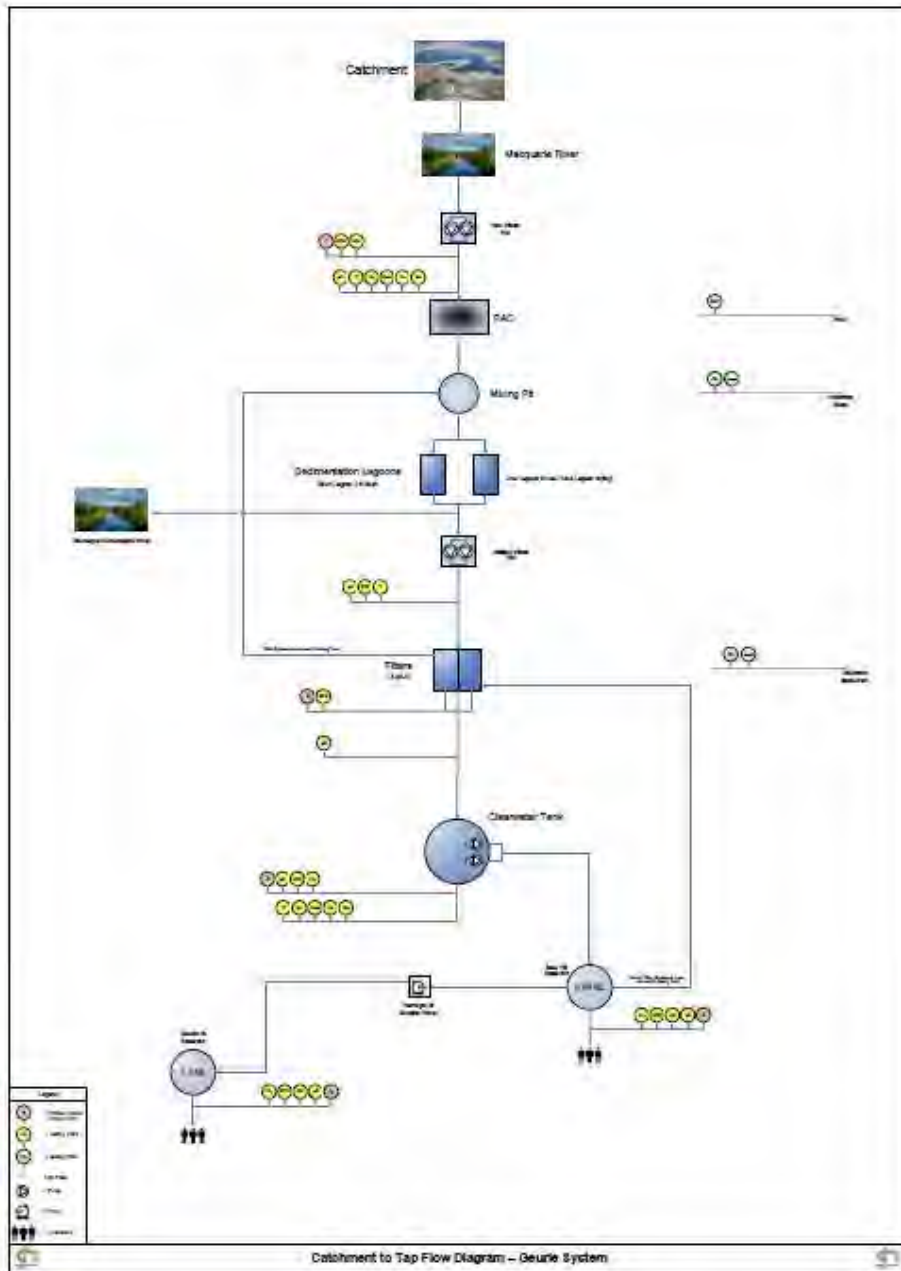


Figure 3: Schematic of Geurie WTP

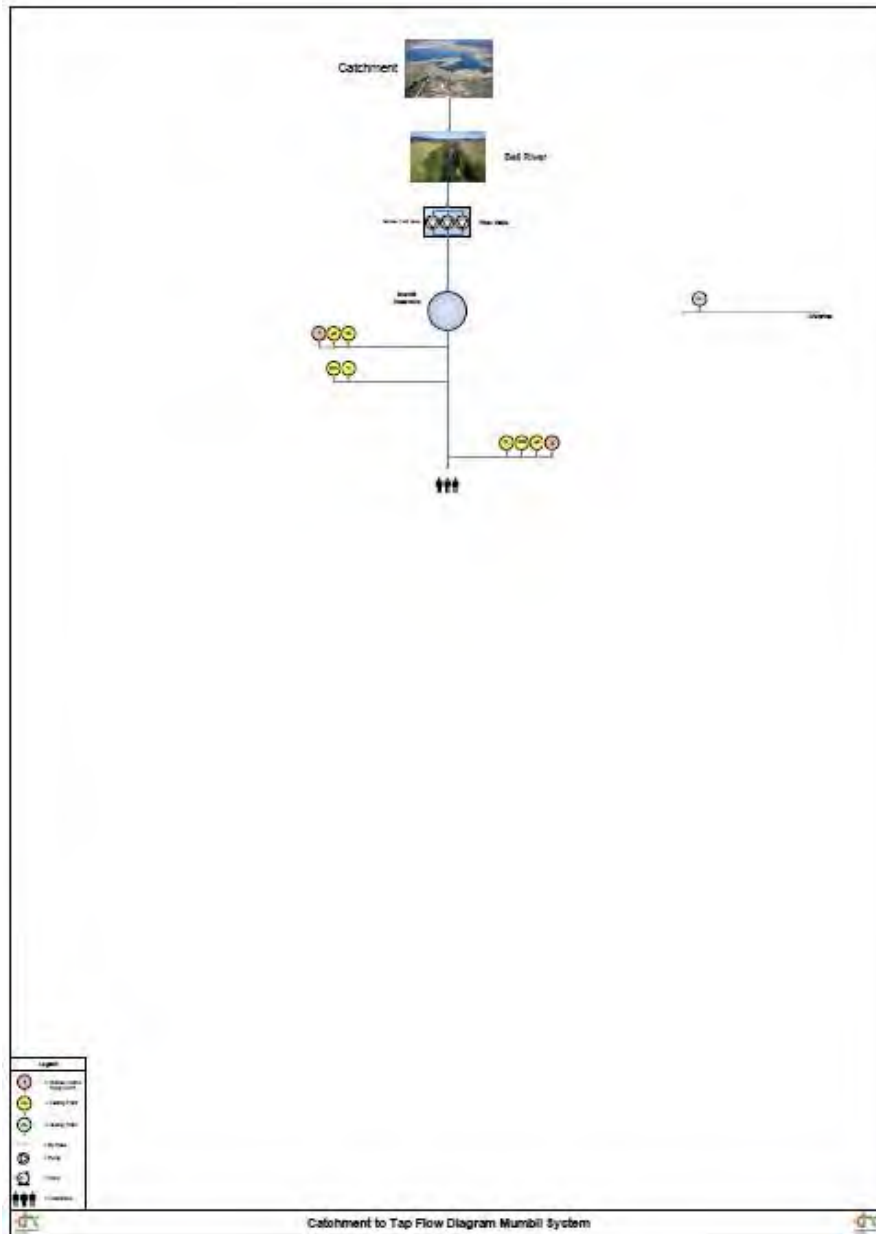


Figure 4: Schematic of Mumbil WTP

## ■ Drinking Water Management Systems Document Control

A summary of updates to Drinking Water Management System (DWMS) documentation is provided in Table 3 below:

Document	Version	Updates	Submitted to NSW Health and date submitted
CCP sheets		All WQP, COPs and CCPs are reviewed and updated	As part of this Annual Report
Drinking Water Quality Management Plan	2.0	February 2015 - External audit by Hunter H2O - document renamed	September 2015
Drinking Water Quality Manual	1.0	2013 - Internal audit by Geoff Bellingham - document renamed	
Australian Drinking Water Guidelines Manual	1.0	2011 - Initial development of Manual	

**Table 3: Summary of DWMS updates**

## ■ Critical Control Points

The Critical Control Points (CCPs) for Dubbo, Wellington, Geurie and Mumbil treated water schemes are presented in Tables 4, 5, 6 and 7 below:

On 25 to 26 November 2021, a Dubbo Drinking Water Risk Assessment was held where all the CCPs were reviewed and updated accordingly.

CCP number	Monitoring parameter	Target criterion	Adjustment limit	Critical limit
<b>John Gilbert Water Treatment Plant (JGWTP)</b>				
JGWTP 004	pH (CWT)	7.2 to 8.0	<7.0 or >8.0	<6.5 to >8.5
JGWTP 005	Turbidity - Filtration	0.2 to 0.3 NTU	>0.3 NTU	>0.5 NTU for >15 mins
JGWTP 006A	Free Chlorine (CWT)	1.5 to 3.5 mg/L	<1.5 mg/L	<1.0 mg/L
JGWTP 007	Fluoridation (CWT)	1.0 to 1.05 mg/L	<1.0 or >1.05 mg/L	<0.9 or >1.5 mg/L
<b>Dubbo Treatment Reticulation System – (no CCPs all WQPs)</b>				
<b>Dubbo Reservoir</b>				
D Reservoir 001	Integrity	No gaps, vermin proof, secure, enclosed reservoir, locked hatches	Visual evidence of breach	Visual evidence of contamination of reservoir water

**Table 4: Summary of critical control points - Dubbo Scheme**

CCP number	Monitoring Parameter	Target criterion	Adjustment limit	Critical limit
<b>Wellington WTP (WWTP)</b>				
WWTP 004	pH (CWT)	7.2 to 8.0	<7.0 or >8.0	<6.5 to >8.5
WWTP 005	Turbidity – Filtration	<0.2 NTU	>0.45 NTU	>0.5 NTU
WWTP 006A	Free Chlorine (CWT)	1.5 to 3.5 mg/L	<1.5 mg/L	<1.0 mg/L
WWTP 007	Fluoride (CWT)	1.0 to 1.05 mg/L	<1.0 or >1.05 mg/L	<0.9 or >1.5 mg/L
<b>Wellington Treatment Reticulation System – (no CCPs all WQP)</b>				

CCP number	Monitoring Parameter	Target criterion	Adjustment limit	Critical limit
<b>Wellington Reservoir</b>				
W Reservoir 001	Integrity	No gaps, vermin proof, secure, enclosed reservoir, locked hatches	Visual evidence of breach	Visual evidence of contamination of reservoir water

**Table 5: Summary of critical control points - Wellington Scheme**

CCP number	Monitoring parameter	Target criterion	Adjustment limit	Critical limit
<b>Geurie WTP (GWTP)</b>				
GWTP 004	pH (CWT)	7.2 to 8.0	<7.0 or >8.0	<6.5 to >8.5
GWTP 005	Turbidity - Filtration	<0.2 NTU	>0.45 NTU	>0.5 NTU
GWTP 006A	Free Chlorine (CWT)	1.5 to 3.5 mg/L	<1.5 mg/L	<1.0 mg/L
<b>Geurie Treatment Reticulation System – (no CCPs all WQP)</b>				
<b>Geurie Reservoir</b>				
G Reservoir 001	Integrity	No gaps, vermin proof, secure, enclosed reservoir, locked hatches	Visual evidence of breach	Visual evidence of contamination of reservoir water

**Table 6: Summary of critical control points - Geurie Scheme**

CCP number	Monitoring parameter	Target criterion	Adjustment limit	Critical limit
<b>Mumbil WTP (MWTP)</b>				
MWTP 003	Turbidity (CWT)	<0.8 NTU	0.8 to 1.0 NTU	>1.0 NTU
MWTP 004	pH (CWT)	7.2 to 8.0	<6.8 or >8.0	<6.5 to >8.5
MWTP 006A	Free Chlorine (CWT)	1.2 to 3.5 mg/L	<1.2 mg/L	<1.0 mg/L
<b>Mumbil Treatment Reticulation System</b>				
<b>Mumbil Reservoir</b>				
M Reservoir 001	Integrity	No gaps, vermin proof, secure, enclosed reservoir, locked hatches	Visual evidence of breach	Visual evidence of contamination of reservoir water

**Table 7: Summary of critical control points - Mumbil Scheme**

### Critical Limit Exceedance

The critical limit exceedances for the four Council treated water schemes are presented in the below tables, alongside information on the reason for the exceedance, immediate action taken following the exceedance and preventive action undertaken to prevent a recurrence of the exceedance:

Exceedances for the Dubbo treated water scheme are presented in Table 8;  
 Exceedances for the Wellington treated water scheme are presented in Table 9;  
 Exceedances for the Geurie treated water scheme are presented in Table 10; and  
 Exceedances for the Mumbil treated water scheme are presented in Table 11.

Date	CCP 4 - pH*	CCP5 - Filtered Turbidity*	CCP6A - Free Chlorine*(Lower Limit)	CCP7 - Fluoridation*	Water quality issue	Reason	Immediate correction	Preventive Action
01/01/2022 To 31/12/2022					Low fluoride	Fluoride is offline due to non-compliant issues - NSW Health has been notified previously.		
05/07/2022					High turbidity	Turbidity levels were high due to the very high river colour and manganese level.	Jar tested and adjusted chemical dosing.  Drained all reservoirs and refilled with water within specifications.  NSW Health was notified and subsequently a Boil Water Alert was issued on 07/07/2022 and concluded 02/08/2022.	Implement PLT changes to allow increases in pre-filter polymer dosing.

**Table 8: Critical limit exceedances - JGWTP**

\* Daily data records required as part of CCP.

All reticulation and reservoir have no CCPs, all have been changed and updated to WQP or COP



Date	CCP4 - pH*	CCP5 - Filtered Turbidity*	CCP6A - Free Chlorine* (Lower Limit)	CCP7 - Fluoridation*	Water quality issue	Reason	Immediate correction	Preventive Action
23/05/2022					Low fluoride	The heaters within the fluoride room were broken causing sodium silica to have moisture. This has caused issues with dosing.	Dosing lines were de-blocked.	Heater repairs have been completed.
14/09/2022								
02/11/2022								
03/11/2022								
23/11/2022								
05/07/2022					Low fluoride	At various times unavailability of fluoride qualified staff, due to the fluoride act Council was unable to dose fluoride.	Form 5s were submitted throughout the various weekends.	
12/09/2022								
26/09/2022								
27/09/2022								
30/09/2022								
04/10/2022								
14/11/2022								
15/11/2022								
16/11/2022								

**Table 9: Critical limit exceedances - Wellington WTP**

\* Daily data records required as part of CCP.

All reticulation and reservoir have no CCPs, all have been changed and updated to WQP or COP

Date	CCP4 - pH*	CCP5 - Filtered Turbidity*	CCP6 A - Free Chlorine* (Lower Limit)	Water quality issue	Reason	Immediate correction	Preventive Action
19/06/2022			0.99	Low Free Chlorine	During the Boil Water Alert	Council flushed the mains.	Plant shut logic has been programmed in SCADA to shut down the plant in case of high turbidity at settling lagoon outlet.
09/06/2022		Filter 1 – 0.70		High Turbidity	Turbidity levels were high within the raw water due to the very high river colour and manganese level. Jar tested daily and adjusted chemical dosing to mitigate the continuation of high turbidity levels.	NSW Health was notified and subsequently a Boil Water Alert was issued on 08/06/2022 and concluded 27/06/2022.  Introduce temporary pre-filter Polymer dosing.	Permanent pre-filter Polymer dosing was installed.
11/06/2022		Filter 1 – 0.68					
11/06/2022		Filter 2 – 0.75					
12/06/2022		Filter 1 – 0.63					
12/06/2022		Filter 2 – 0.67					
13/06/2022		Filter 1 – 0.65					
13/06/2022		Filter 2 – 0.70					
15/06/2022		Filter 1 – 0.64					
15/06/2022		Filter 2 – 0.71					
16/06/2022		Filter 1 - 0.74					
16/06/2022		Filter 2 – 0.79					
17/06/2022		Filter 1 – 0.60					
17/06/2022		Filter 2 – 0.66					
18/06/2022		Filter 1 – 0.53					
18/06/2022		Filter 2 – 0.55					
20/06/2022		Filter 2 – 0.57					
21/06/2022		Filter 2 – 0.57					
08/10/2022		Filter 2 – 0.71		High Turbidity	Alum dosing system had failed	The WTP was immediately shutdown once the CCP was exceeded. Council carted water from the Dubbo system to the WTP at Geurie.	Alum dosing system repair work has been completed.

**Table 10: Critical limit exceedances - Geurie WTP**

\* Data generally recorded daily.

+ Data generally recorded fortnightly.

All reticulation and reservoir have no CCPs, all have been changed and updated to WQP or COP

Date	CCP1 - Turbidity	CCP42- pH	CCP3A - Free Chlorine (Lower Limit)	Water quality issue	Reason	Immediate correction	Preventive Action
27/07/2022			0.85	Low Free Chlorine	Non-return valve on raw water pump is passing causing air lock in chlorine dosing system.	Operators are manually dosing chlorine.	Engaged Council's Reticulation Team to replace pipework and non-return valve.
28/07/2022			0.91				
06/08/2022			0.98				
07/08/2022			0.62				
08/08/2022			0.88				
20/09/2022			0.94				
16/11/2022			0.84				
18/11/2022			0.33				
19/11/2022			0.00				
20/11/2022			0.15				
21/11/2022			0.52				
22/11/2022			0.66				
30/11/2022			0.97				
01/12/2022			0.77				
02/12/2022			0.92				
14/12/2022			0.88				

**Table 11: Critical limit exceedances - Mumbil WTP**

\* Data generally recorded weekly or fortnightly

All reticulation and reservoir have no CCPs, all have been changed and updated to WQP or COP

## ■ Fluoride Critical Limit Exceedance

Fluoridation is a CCP for the Dubbo Water Scheme (including JGWTP) and the Wellington Water Scheme (including Wellington WTP). Therefore, the fluoride exceedance for those schemes have been included as part of the critical limit exceedances.

## 10. Water Quality

Water quality data statistics and graphs are provided in Appendix A. Appendix A also includes historical water quality data statistics and graphs.

### Data Collection

Microbial data was collected throughout the year, on a monthly basis for all reservoir sites, including system reticulation data. These were sent to an independent laboratory, as well as the Microbiology samples collected weekly according to the NSW Health Drinking Water Monitoring Program (DWMP). All sample sites have undergone reassessment for suitability. A new style of sample point has been developed by staff to give a better flushing of the system and sampling point. The mains will be sampled, not a customer's garden tap, which will give a more accurate reading of the actual system.

### Water Quality Discussion

#### Dubbo, Wellington, Geurie and Mumbil Schemes

Water quality data statistics and graphs for the water scheme are provided in Appendix A.

#### Raw Water:

There has been a noted decline in the river water quality over the past four years, in particular after the heavy rain proceeding the drought. There have been higher organics in the river, with an increase in manganese which has been a particular issue in recent years.

Free chlorine in the town water has trended safe in 2022 compared with previous years. This has been performed operationally in an effort to increase the chlorine residual in the Dubbo reticulation system. In 2022, previously this was listed as a CCP, however, after consultation with the 2021 Drinking Water Risk Assessment conducted by Atom Consulting, has been updated as COPs.

#### Reticulation/Reservoir:

There were no exceedances of E.coli recorded in 2022.

Council has installed additional mechanical chlorine dosing systems at the major reservoirs (refer to below list), with manual dosing of the remaining reservoirs undertaken.

Reservoir Name	Dosing	Type	Number of Machine/s
Eulomogo	Unit	Calcium hypochlorite (Bullets or Disks)	1
Yarrandale	Unit	Calcium hypochlorite (Bullets or Disks)	1
Wongarbon	Unit	Calcium hypochlorite (Bullets or Disks)	1
Rifle Range	Unit	Calcium hypochlorite (Bullets or Disks)	2

Reservoir Name	Dosing	Type	Number of Machine/s
Bunninyong - steel only	Unit	Calcium hypochlorite (Bullets or Disks)	1
Wongarbon Pump Station	Unit	Calcium hypochlorite (Briquettes)	1
Eumungerie	Unit	Calcium hypochlorite (Briquettes)	N/A
Ballimore	Unit	Sodium hypochlorite	N/A

Mumbil source water has high levels of hardness, which does at times exceed the aesthetic limits set out by ADWG. Council has budgeted for a softening system to be installed in 2024.

The Wellington Water Scheme has recorded three aesthetic value exceedances of aluminium levels. Aluminium levels of 0.4800 at Site 319 and 0.4900 at Site 317 were recorded 23 February 2022 and levels of 2.1000 were recorded at Site 317 on 2 March 2022.

## Consumer Complaints

Details of water quality complaints made in 2022 and resolution/lessons learnt are provided in Table 12 below:

Month	Number of requests	Location	General description of complaints	Action undertaken	Resolution/lessons learnt
January	Nil				
February	4	Dubbo	Customer is concerned about orange water all through the house, bathroom toilet, sinks and also the kitchen, etc. She has run the tap and the water is still dirty.	Flushed the main then collected and tested samples, the results were within the ADWG. Colour was not visible upon collecting sample.	Notified customer of results.
		Dubbo	Customer has reported dirty water at their property.	Collected and tested samples, the results were within the ADWG.	Notified customer of results.
		Dubbo	Water is dirty and has black sand/dirt like particles coming through.	Collected and tested samples, the results were within the ADWG. Colour was not visible upon collecting sample.	Notified customer of results.
		Dubbo	Customer reports dirty water (brown water coming out) and low water pressure at their location.	Collected and tested samples, the results were within the ADWG. Colour was not visible upon collecting sample.	Notified customer of results.
March	Nil				
April	Nil				
May	10	Dubbo	Customer has reported that they have orange water at their property.	Flushed the main then collected and tested samples, the results were within the ADWG.	Notified customer of results.
		Dubbo	Customer has reported that the water is a yellow cloudy colour.	Collected and tested samples, the results were within the ADWG. Colour was not visible upon collecting sample.	Notified customer of results.
		Dubbo	Customer has reported very dirty water.	Collected and tested samples, the results were within the ADWG.	Notified customer of results.
		Wellington	Customer reported that there is white particles in their water.	Collected and tested samples, the results were within the ADWG. Particles and colour were not visible upon collecting sample.	Notified customer of results.

Month	Number of requests	Location	General description of complaints	Action undertaken	Resolution/lessons learnt
		Dubbo	Customer has reported that their water is dirty and black.	Collected and tested samples, the results were within the ADWG. Colour was not visible upon collecting sample.	Notified customer of results.
		Wellington	Customer has reported that their internal tap water smells, tastes bad and is not clear.	Collected and tested samples, the results were within the ADWG. Colour was not visible upon collecting sample	Notified customer of results.
		Dubbo	Customer has reported very dirty water	Collected and tested samples, the results were within the ADWG.	Notified customer of results.
		Dubbo	Customer has reported discoloured and dirty water.	Collected and tested samples, the results were within the ADWG.	Notified customer of results.
		Dubbo	Customer has reported that she believes the water has made her unwell. There is no smell or discoloration detected by resident.	Collected and tested samples, all results were within the ADWG. Flushed the main as a precaution.	Notified customer of results.
		Dubbo	Customer has reported dirty water.	Collected and tested samples, the results were within the ADWG.	Notified customer of results.
June	2	Dubbo	Customer has reported dirty and discoloured water.	Collected and tested samples, the results were within the ADWG. Colour was not visible upon collecting sample.	Notified customer of results.
		Geurie	Customer has reported dirty water.	Flushed the main, collected and tested samples, the results were within the ADWG. Colour was not visible upon collecting sample.	Notified customer of results.
July	1	Dubbo	Customer has reported dirty and discoloured water.	Flushed the main, collected and tested samples, the results were within the ADWG. Colour was not visible upon collecting sample.	Notified customer of results. Council investigated and found that the Council main was rundown. Council has since replaced the pipe to mitigate water quality issues within the area.
August	3	Eumungerie	Customer has reported that their water looks cloudy.	Flushed the main, collected and tested samples, the results were within the ADWG. Colour was not visible upon collecting sample.	Notified customer of results.

Month	Number of requests	Location	General description of complaints	Action undertaken	Resolution/lessons learnt
		Eumungerie	Customer has reported discoloured and dirty water.	Flushed the main, collected and tested samples, the results were within the ADWG.	Notified customer of results.
		Dubbo	Customer has reported an unpleasant odour and discolouration in her water.	Flushed the main, collected and tested samples, the results were within the ADWG.	Notified customer of results.
September	1	Dubbo	Customer has reported dirty water.	Initial sample taken and tested, which did not meet ADWG. Council flushed the main and retested, with the results were within the ADWG.	Notified customer of results.
October	2	Wellington	Customer has called in regards to the levels of chlorine in her water. Says that it seems to be too overpowering and when she has a bath, she has said it feels like she is burning.	Collected and tested samples, the results were within the ADWG. Free chlorine results were slightly below target limits.	Notified customer of results. Customer advised Council that she had sensitive skin due to a skin condition.
		Dubbo	Customer has reported discoloured water.	Collected and tested samples, the results were within the ADWG.	Notified customer of results.
November	7	Dubbo	Customer has reported discoloured water.	Flushed the main, collected and tested samples, the results were within the ADWG	Notified customer of results.
		Geurie	Customer has reported discoloured and dirty water.	Flushed the main, collected and tested samples, the results were within the ADWG.	Notified customer of results.
		Geurie	Customer has reported discoloured water.	Flushed the main, collected and tested samples, the results were within the ADWG. Colour was not visible upon collecting sample.	Notified customer of results.
		Geurie	Customer has reported discoloured water.	Flushed the main, collected and tested samples, the results were within the ADWG. Colour was not visible upon collecting sample.	Notified customer of results.
		Dubbo	Customer has reported discoloured water.	Flushed the main, collected and tested samples, the results were within the ADWG.	Notified customer of results.
		Dubbo	Customer has reported a metallic taste and odour.	Flushed the main, collected and tested samples, the results were within the ADWG.	Notified customer of results.



Month	Number of requests	Location	General description of complaints	Action undertaken	Resolution/lessons learnt
				Odour was not apparent upon collecting sample.	
December	27	Dubbo - 19 Montefiores - 1 Wellington - 1	Twenty customers reported a similar issue with their water on Monday 5 December 2022. It had been reported that their water has a strange taste, some customers also added that there was an earthy odour, however, there was no discolouration detected.	With an extensive list of similar characteristics. Independent testing conducted externally of Council revealed high levels of geosmin due to high levels of algae in the raw water.	Council has resorted to dosing the maximum amount of Powder Activated Carbon (PAC) in an attempt to minimise the odour and taste of geosmin. Algae levels have remained high into 2023.
		Geurie	Customer has reported that their water is a rust colour and has a strong odour.	Collected and tested samples, the results were within the ADWG. No discolouration was detected.	Notified customer of results.
		Dubbo	Customer has reported a strong chlorine smell and odour. She believes that the level of chlorine is causing a skin rash.	Collected and tested samples, the results were within the ADWG. Chlorine levels were at the lower end of the target parameters.	Notified customer of results and advised to seek medical advice for the skin rash.
		Dubbo	Customer has reported a strong dirty odour and taste.	Council's MWS and Council's WSOE has directed the Treatment Team to not sample/test these consumer complaints. These CRMs are believed to be related to the aforementioned Geosmin present within the raw water treated at the JGWTP.	TOO closed the customer requests. Algae levels have remained high into 2023.

Table 12: Water quality consumer complaints for 2022

## 12. Water Quality Incidents

There were two water quality incidents or emergencies for the 2022 report period which are presented in Table 13 below:

Details of incident/emergency	Investigation recommendations	Preventive action undertaken
Geurie Boil Water Alert	<p>A Boil Water Alert was issued for Geurie effective from Wednesday 8 June 2022 to Monday 27 June 2022.</p> <p>Geurie technicians are managing an aged TP (built in 1993).</p> <p>Since the amalgamation, Council have installed new sampling technology that has increased sensitivity to changes in the water, in comparison to what had previously been in place. Increased rainfall and higher flows in the Macquarie River had caused increased turbidity issues for a smaller plant of this size.</p>	<p>Since March 2022, Little River Plumbing and Gas Fitting (LRP&amp;GF) has been engaged to monitor and maintain the Geurie WTP due to staff vacancies.</p> <p>LRP&amp;GF worked with the Council's Treatment Team in reducing turbidity levels and bringing them back within our Critical Control Point parameters. LRP&amp;GF continues to monitor and maintain the Geurie WTP, making adjustments as needed.</p>
Dubbo Boil Water Alert	<p>A Boil Water Alert was issued for Dubbo effective from Thursday 7 July 2022. Poor raw water quality from the Macquarie River into the JGWTP has caused turbidity issues with water treatment. Council staff collaborated with Western NSW Local Health District (WNSWLHD) to expedite the dilution of the City's reservoirs in order to lift the alert.</p> <p>Council Treatment and Reticulation teams worked together to lift the Boil Water Alert in a staged approach, resolving one reservoir at a time to achieve the dilution targets agreed upon by Council and WNSWLHD.</p>	<p>Council's Treatment Team have since continued to closely monitor weekly samples, focusing on turbidity results.</p> <p>The Team have ensured that reservoirs are at capacity with potable water once a rain and/or flood event is anticipated and have emphasised the focus of storing potable water during weekends when the plant is not continuously manned.</p> <p>A debrief for the Boil Water Alert was held with staff from Council, the Department of Health and Department of Planning and Environment. Recommendations have been developed as part of the de-brief.</p>

**Table 13: Summary of incident and emergencies, recommendations and preventive actions**

### 13. Staff Development and Training

Details of the staff development and training courses completed during the reporting period are provided in Table 14 below:

Date	Attendees	Description of development/training
May 2022	<ul style="list-style-type: none"> <li>Glen Keyes</li> </ul>	MR Truck License
August 2022	<ul style="list-style-type: none"> <li>Quintin Johnson</li> </ul>	Mental Health Training through Council
September 2022	<ul style="list-style-type: none"> <li>Bradley Westcott</li> </ul>	Geo SCADA Expert Course
October 2022	<ul style="list-style-type: none"> <li>Malcolm George</li> </ul>	Confined Spaces and Breathing Apparatus Course/Refresher through Height Safety Engineers
November 2022	<ul style="list-style-type: none"> <li>Jay Lamb</li> <li>Malcolm George</li> <li>Prakashbabu Radhakrishnan</li> <li>Glen Jardine</li> <li>Glen Keyes</li> </ul>	Working at Heights through Specialised Safety
	<ul style="list-style-type: none"> <li>Bradley Westcott</li> <li>Ashley Quinn</li> <li>Frank Sciamanna</li> </ul>	Confined Spaces and Breathing Apparatus Course/Refresher through Height Safety Engineers
	<ul style="list-style-type: none"> <li>Quintin Johnson</li> <li>Shah Kader</li> </ul>	Statement of Attainment – Communication and Leadership through TAFE

**Table 14: Staff development activities or training courses**

## Continuous Improvement Plan

The full Continuous Improvement Plan activities that have progressed, been completed or added during the reporting period are provided in Table 15 below:

No.	Action	System	Next Step	Proposed Deadline	Responsible Officer
1	Upgrade filters at the Wellington and Geurie WTPs	Wellington/Geurie	Develop a technical scope to form part of the specification to engage a consultant to redesign the filters. Media also needs replacing at Geurie WTP which will increase the longevity of the filter quality.	March 2023	MWS
2	Complete Stage 2 of the filter upgrade at the JGWTP	Dubbo	Upgrade remaining four filters. WOET is reviewing the scope of works to gauge how many filters we have the capacity to upgrade within 2023. Whether this be two or four filters is yet to be determined.	July 2023	WOET
3	Upgrade Fluoride System	Dubbo	The tenders for a new fluoride dosing system will be advertised with a closing date of 28 February 2023. These will be assessed and with an aim of engaging a contractor in March 2023.	March 2023	MWS
4	Upgrade Fluoride System	Wellington	MWS to respond to Department Planning and Environment's (DPE) request for further information. Currently have no response from DPE. MWS to go forward with engaging Public Works. The Wellington WTP fluoride pump had broken down early December 2022.	February 2023	MWS
5	Review the CCPs as part of the risk assessment	All	Review all Critical Control Point (CCP) Procedures. All treatment plant CCP procedures will be reviewed at the next Water Quality Meeting scheduled for March 2023. All CCP documents were updated by TOO in mid-2022.	March 2023	MWS
6	Update the NSW Health verification sampling plan regarding the water supply zones and any new requirements on testing	Wellington	Update the document with the new population in each zone and check correct number of samples are being taken. Engage expert to assist with development/ review. Complete as part of the risk assessment review and revisit as part of the next Water Quality Meeting.	March 2023	WOET/TOO

No.	Action	System	Next Step	Proposed Deadline	Responsible Officer
7	Update the NSW Health verification sampling plan regarding the water supply zones and any new requirements on testing	Geurie	Update the document with the new population in each zone and check correct number of samples are being taken. Engage expert to assist with development/ review. Complete as part of the risk assessment review and revisit as part of the next Water Quality Meeting.	March 2023	WOET/TOO
8	Update the NSW Health verification sampling plan regarding the water supply zones and any new requirements on testing	Mumbil	Update the document with the new population in each zone and check correct number of samples are being taken. Engage expert to assist with development/ review. Complete as part of the risk assessment review and revisit as part of the next Water Quality Meeting.	March 2023	WOET/TOO
9	Update the NSW Health verification sampling plan regarding the water supply zones and any new requirements on testing	Dubbo	Update the document with the new population in each zone and check correct number of samples are being taken. Engage expert to assist with development/ review. Complete as part of the risk assessment review and revisit as part of the next Water Quality Meeting.	March 2023	WOET/TOO
10	Install sampling verification monitoring sites throughout high growth areas in Dubbo	Dubbo	Identify the sites that require additional monitoring sites. As Dubbo grows, more sites will need to be installed. First draft has been completed, it will now need to be consolidated.	December 2023	WOSR
11	Install sampling verification monitoring sites	Geurie	Finish installation at the previously identified sites.	April 2023	WOSR
12	Develop a works management system (for preventative maintenance)	All	Develop a water and sewer asset maintenance schedule and standard operating procedure between Mechanical/Electrical and the Assets Team regarding preventative maintenance. WOET to assist WSAPE.	June 2023	WSAPE
13	Finalise the Emergency Operating Procedure (EOP) for deliberate contamination procedure	All	Document to be reviewed and finalised.	June 2023	MWS/WSCSC
14	Review contingency planning documentation to ensure currency and requirements of NSW Health (BCP, EOPs, Drought Contingency)	All	Review documentation. MWS to review documentation once WSCSC has completed the initial drafting.	March 2023	WSCSC
15	Ensure that AS/NZS 4020:18 is used when procuring equipment for potable water	All	Confirming how this standard is met with purchasing through stores and supplies (eg specify through vendor).	Completed	MWS

No.	Action	System	Next Step	Proposed Deadline	Responsible Officer
16	Ensure that AS/NZS 4020:18 is used when procuring equipment for potable water	All	Confirm that developers are required to meet this standard when undertaking subdivisions. Continuously applied throughout the development process as this is more of a compliance assurance.	Completed	MWS
17	Obtain certification for operators under the national certifications framework	All	Currently there is no registered training provider within NSW that offers qualifications in water and/or wastewater operations. People Culture and Safety (PCS) is currently trying to find a registered training provider that is willing to travel to Dubbo and conduct training sessions.	June 2023	MWS / PCS
18	Prepare customer water quality report	All	Determine the level of details to be reported by WSCSC. To be reviewed by MWS once completed. This is a yearly report focusing on the previous calendar year, an overview of water quality performance will be reported on and published annually in February.	February 2024	WSCSC
19	Develop a SCADA page for the CCPs and include alarms when quality limits breached	All	Develop and implement a SCADA page for the CCPs and include alarms when quality limits are breached, a Chlorine Contact time (Ct) calculation could potentially be included on the new page.	Completed	MWS
20	Installing chlorine dosing systems at Wellington	Wellington	A review into which Wellington reservoirs require an automatic chlorine dosing system to be installed is required following concerns from Treatment staff. The installation will mitigate the safety issues and need for technicians to manually dose with chlorine tablets. WOET to complete a review of each reservoirs' requirements.	August 2023	WOET
21	Technical review is required to investigate a better delivery of chlorine within the reticulation system	Dubbo	Review the broader business plan. Potentially install chlorine dosing systems, circulation system at each reservoir etc. Dubbo already has chlorine levels incorporated into SCADA.	August 2023	WOET
22	Technical review is required to investigate better delivery of chlorine within the reticulation system	Wellington	Review the broader business plan. Potentially install chlorine dosing systems, circulation system at each reservoir etc.	August 2023	WOET

No.	Action	System	Next Step	Proposed Deadline	Responsible Officer
			Chlorine levels within reservoir potentially placed on SCADA.		
23	Technical review is required to investigate better delivery of chlorine within the reticulation system	Geurie	Review the broader business plan. Potentially install chlorine dosing systems, circulation system at each reservoir etc. Chlorine levels within reservoir potentially placed on SCADA.	August 2023	WOET
24	Technical review is required to investigate better delivery of chlorine within the reticulation system	Mumbil	Review the broader business plan. Potentially install chlorine dosing systems, circulation system at each reservoir etc. Chlorine levels within reservoir potentially placed on SCADA.	August 2023	WOET
25	Implement backflow prevention policy in Wellington	Wellington	Audit sites to determine medium and high risk sites. Water policies have been consolidated. Next step is the Council approval process.	Completed	WSCSC
26	Engagement of Yeoval community	Yeoval	Determine advice to North Yeoval area that their supply is non-potable (until the system is connected to the supply from Cabonne and confirmed as much as potable). Currently North Yeoval is connected to Cabonne, however, has not been declared as potable water by Cabonne Council. The Director Infrastructure (DI) to liaise with Cabonne Council and obtain an estimated completed date.	June 2023	DI
27	Installation of UV at all sites	Dubbo	An optimisation study of JGWTP has commenced to determine if UV installation is required.	February 2023	MISD
		Wellington	Develop specifications for the sites (Hunter H2O engaged).	February 2023	WOET
		Geurie	Develop specifications for the sites (Hunter H2O engaged).	February 2023	WOET
28	Change of valves and actuators at Dubbo and Wellington WTPs	Dubbo/Wellington	Develop specifications for the Dubbo and Wellington WTPs (Hunter H2O engaged). Wellington and Geurie have not been installed and have not been placed on SCADA.	July 2023	WOET

No.	Action	System	Next Step	Proposed Deadline	Responsible Officer
29	Lagoon 2 reline	Geurie	Construction of the relining will be touched upon within the WTP review scheduled for June 2023. Boland contracting has been engaged to clean Geurie lagoons in early 2023.	August 2023	WOET
30	Lagoon 1 reline	Wellington	Construction of the relining will need to be investigated. Boland contracting has been engaged to clean Wellington lagoons in early 2023.	June 2023	WOET
31	Bore water investigation	Geurie, Wellington and Dubbo	Ensure water quality considerations are incorporated in the design. Note: Geurie completed.	June 2023	MWS
32	Backwash to head of works	Dubbo	Risk review to be conducted. The design currently sits with MISD, however, input is required from MWS. The intent is for Council's Greenspace Operations Team to use the backwash water to irrigate parks and green spaces.		MISD

**Table 15: Continuous Improvement Plan activities that have progressed, completed or added during 2022**



## 15. Review of Drinking Water Management System Implementation

### Atom Consulting

A summary of the internal/external reviews of the Drinking Water Management System (DWMS) and implementation is provided in Table 16: Summary of DWMS review below:

Note: This summary also includes the details of relevant findings and any actions taken or identified.

Date	Reviewer	Scope	Findings	Actions
25-26/11/2021	Atom Consulting	Risk Assessment water quality results - Dubbo system	Raw colour Raw turbidity Clarifier pH, turbidity CWT turbidity WTP pH Individual filter turbidity (NTU)  WTP free chlorine  WTP free chlorine Fluoridation Reservoir integrity Re-chlorinator Reticulation colour, turbidity, pH, free chlorine, fluoride	Not considered a CCP, changed to a COP. Not considered a CCP, changed to a COP. Confirmed as a COP. Not considered a CCP, changed to a COP. Confirmed as a CCP. CWT online analyser. Confirmed as a CCP. Monitored at individual filter analysers. Target modified to 0.2 to 0.3 NTU and adjustment limit modified to > 0.3 NTU. Critical limit changed from > 1 NTU to >0.5 NTU for > 15 minutes due to risk of cryptosporidium in the catchment.  Lower limit confirmed as a CCP. Monitoring point is the CWT online analyser (second analyser is a COP). Upper limit not considered a CCP, changed to a COP. Confirmed as a CCP. Confirmed as a CCP. Confirmed as a COP. Changed to a Quality Point.

Table 16: Summary of DWMS Review

## 16. Reservoir Inspections

A summary of the reservoir inspections undertaken during the reporting period is provided in Table 17: Summary of Reservoir Inspections below, along with details of the findings and any corrective actions undertaken:

Date	Reservoirs inspected	Findings	Corrective actions
03/02/2022	Reservoir 59 - Ballimore	<ul style="list-style-type: none"> <li>Nil issues.</li> </ul>	<ul style="list-style-type: none"> <li>Nil.</li> </ul>
23/02/2022	Reservoir 57 - Yarrandale	<ul style="list-style-type: none"> <li>Grass within the water at reservoir.</li> </ul>	<ul style="list-style-type: none"> <li>Grass was observed as skimmed from reservoir through hatch.</li> </ul>
24/02/2022	Reservoir 59 - Ballimore	<ul style="list-style-type: none"> <li>Nil issues.</li> </ul>	<ul style="list-style-type: none"> <li>Nil.</li> </ul>
	Reservoir 58 - Wongarbron	<ul style="list-style-type: none"> <li>Storm water pit is full and the pump is not working.</li> <li>Pits need cleaning.</li> <li>Mud build up at stair entrance.</li> </ul>	<ul style="list-style-type: none"> <li>Pump fault rectified and water pumped out.</li> <li>Pits cleaned.</li> <li>Mud was cleaned from staircase.</li> </ul>
	Reservoir 54 - Eulomogo	<ul style="list-style-type: none"> <li>Gutters need cleaning.</li> <li>Tablet dispenser caught on ladder.</li> </ul>	<ul style="list-style-type: none"> <li>Cleaning done.</li> <li>Dispenser will be removed with reservoir cleaning as it is no longer required for chlorine dosing. Works scheduled for 2023.</li> </ul>
	Reservoir 53 - Buninyong	<ul style="list-style-type: none"> <li>Wrong locks on hatches. The current locks must be changed to confined space locks.</li> <li>Mud built up at entrance.</li> <li>Tree is growing through fence.</li> </ul>	<ul style="list-style-type: none"> <li>Lock needs to be replaced with confined space lock. Replacement scheduled for 2023.</li> <li>Mud cleaned from entrance.</li> <li>Trimming of tree completed.</li> </ul>
25/02/2022	Reservoir 51 - Newtown	<ul style="list-style-type: none"> <li>Valve pit full of water.</li> <li>Overhanging branch onto reservoir needs to be removed.</li> <li>Dead trees onsite to be removed.</li> </ul>	<ul style="list-style-type: none"> <li>Valve pit emptied by pump.</li> <li>Trimming of tree completed.</li> <li>The tree has been moved onsite to a low traffic area. Removal schedule in 2023.</li> </ul>
	Reservoir 52 - Myall Street	<ul style="list-style-type: none"> <li>Drains in Bundestag area clogged at both Myall Street reservoirs.</li> <li>Tree and branch removal needed, too close to reservoir and power lines.</li> </ul>	<ul style="list-style-type: none"> <li>Drain cleaning completed.</li> <li>Trimming of tree completed, however, tree was not removed.</li> </ul>
26/05/2022	Reservoir 58 - Wongarbron	<ul style="list-style-type: none"> <li>Large puddle in roadway needs filling with gravel to gain safe access to reservoir.</li> <li>Tripping hazard - ladder laying on ground needs to be removed.</li> <li>Diamond python has situated itself within the table machine, unable to add tablets for fear of injuring the snake.</li> <li>Sample tap needs replacing.</li> </ul>	<ul style="list-style-type: none"> <li>Road repair work completed.</li> <li>Ladders moved from walkway, however, it is still onsite and is scheduled to be removed in 2023.</li> <li>Diamond python has been removed from site.</li> </ul>

Date	Reservoirs inspected	Findings	Corrective actions
	Reservoir 54 - Eulomogo	<ul style="list-style-type: none"> <li>Site needs mowing.</li> <li>Online analyser needs maintenance.</li> <li>Reservoir bund needs cleaning.</li> </ul>	<ul style="list-style-type: none"> <li>Mowed site.</li> <li>Online analyser fixed and is working correctly.</li> <li>Bund cleaning completed.</li> </ul>
26/05/2022	Reservoir 59 - Ballimore	<ul style="list-style-type: none"> <li>Hazchem sign on entrance to site needs replacement.</li> <li>Found bypass valve open on dosing system.</li> </ul>	<ul style="list-style-type: none"> <li>Hazchem is scheduled to be replaced in 2023.</li> <li>Bypass valve closed.</li> </ul>
28/07/2022	Reservoir 60 - Eumungerie	<ul style="list-style-type: none"> <li>Leak on service water pump closest to the wall.</li> <li>Site needs to be mowed.</li> </ul>	<ul style="list-style-type: none"> <li>Water pump leak rectified.</li> <li>Mowed site.</li> </ul>
	Reservoir 59 - Ballimore	<ul style="list-style-type: none"> <li>Found roller door open.</li> </ul>	<ul style="list-style-type: none"> <li>Shut rolling door.</li> </ul>

Table 17: Summary of Reservoir Inspections

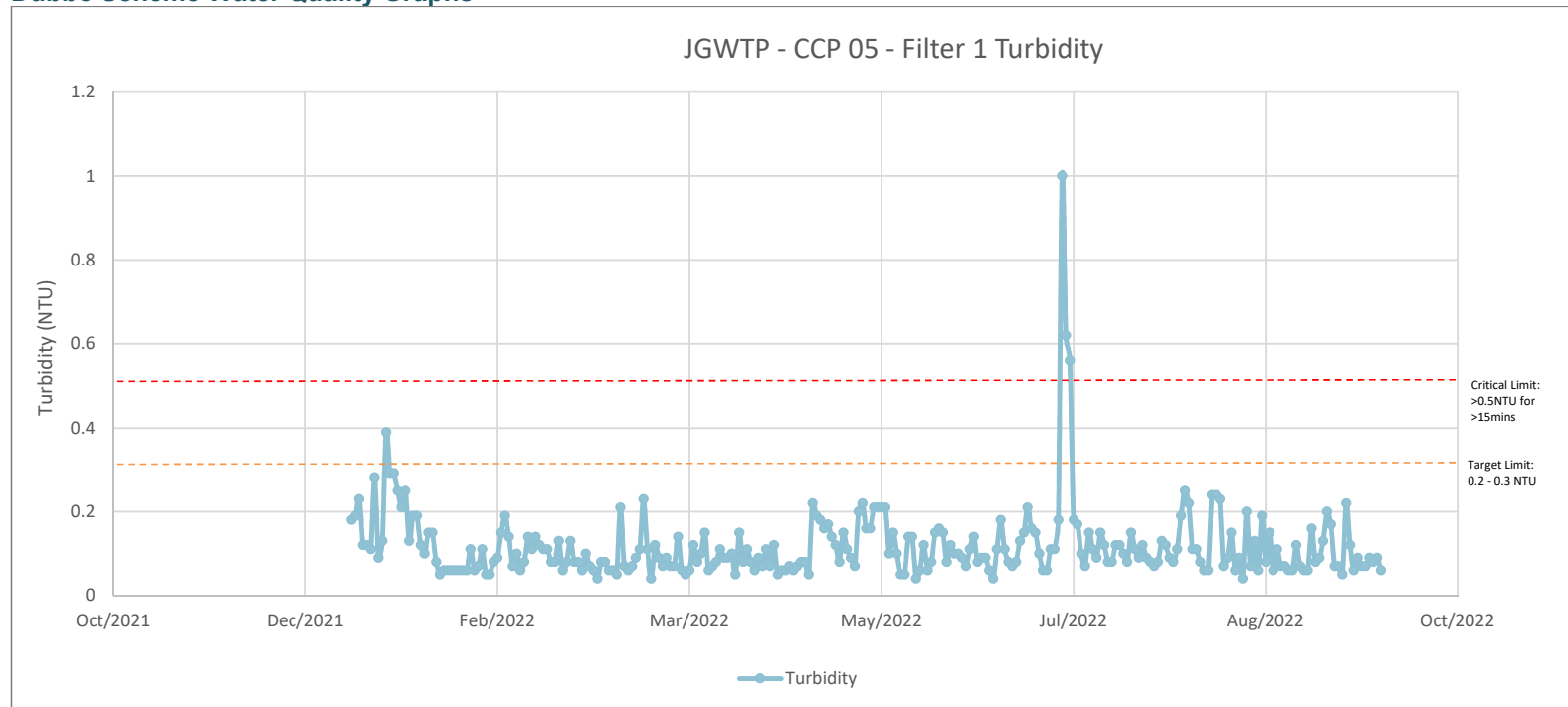
Council has CCTV installed on most reservoirs within the Dubbo scheme and will continue installation for all remaining reservoirs and schemes within 2023.

## 17. Water Quality Data

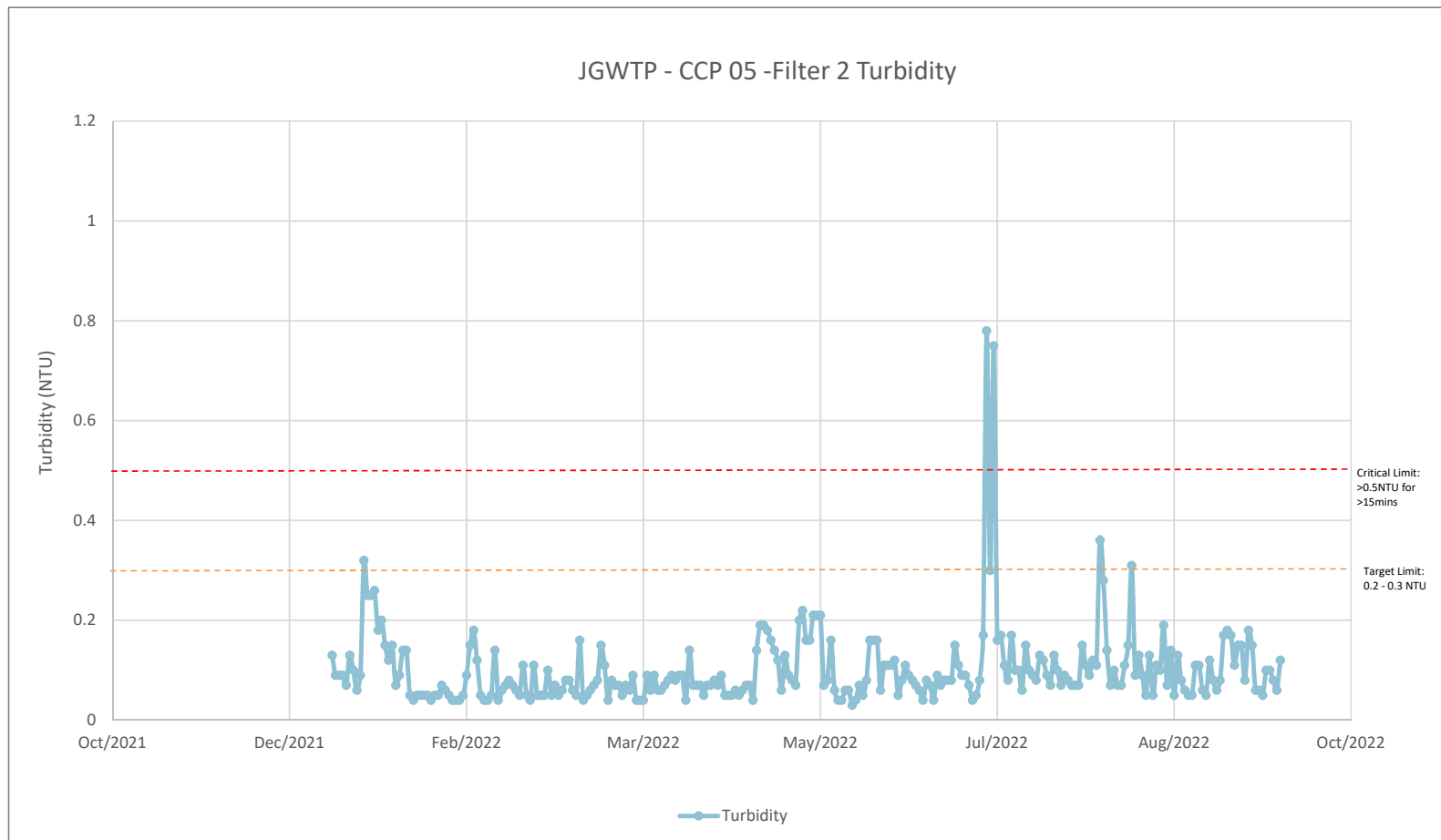
### Water Quality Graphs

Summary water quality graphs are given below:

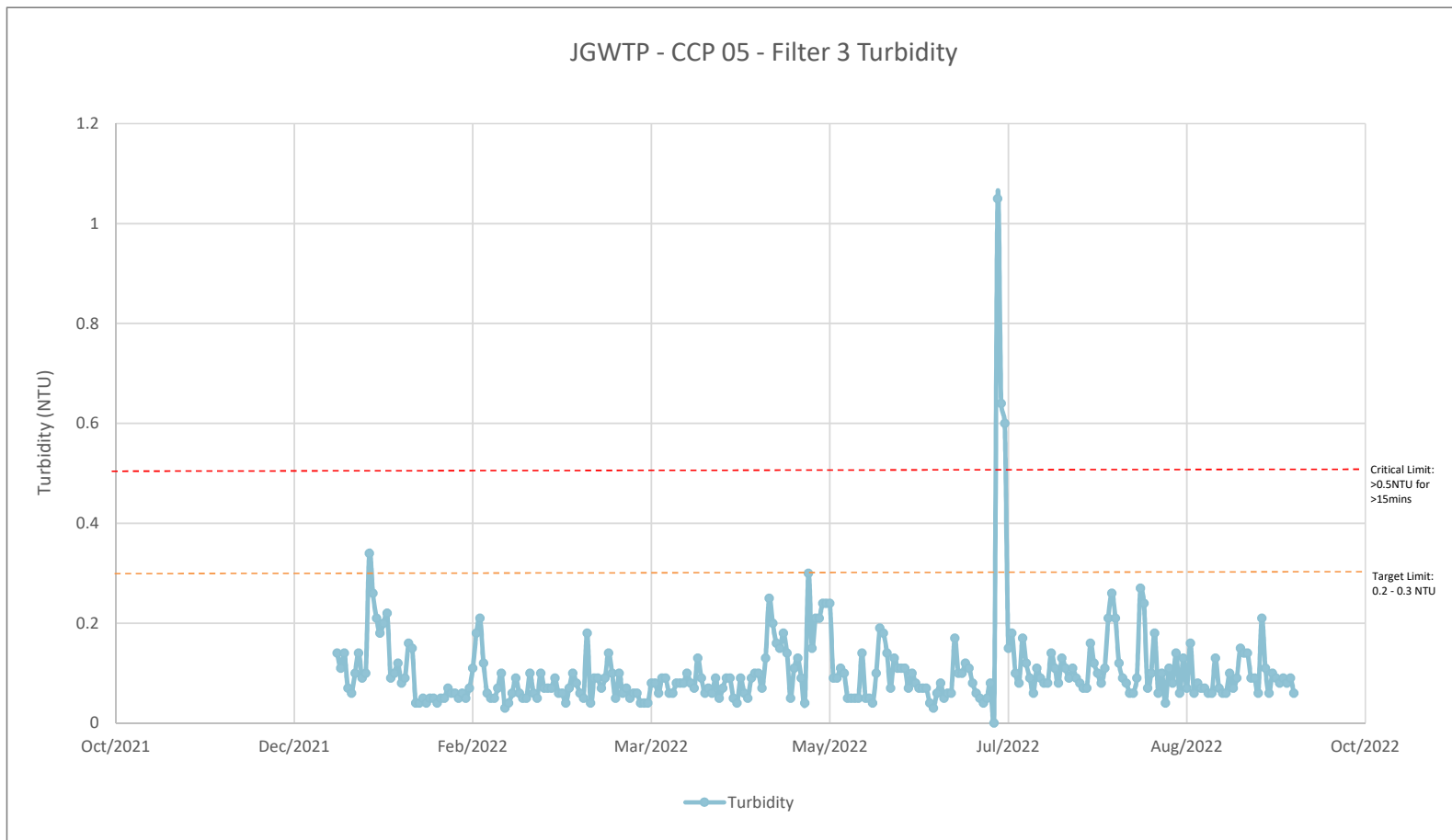
#### Dubbo Scheme Water Quality Graphs

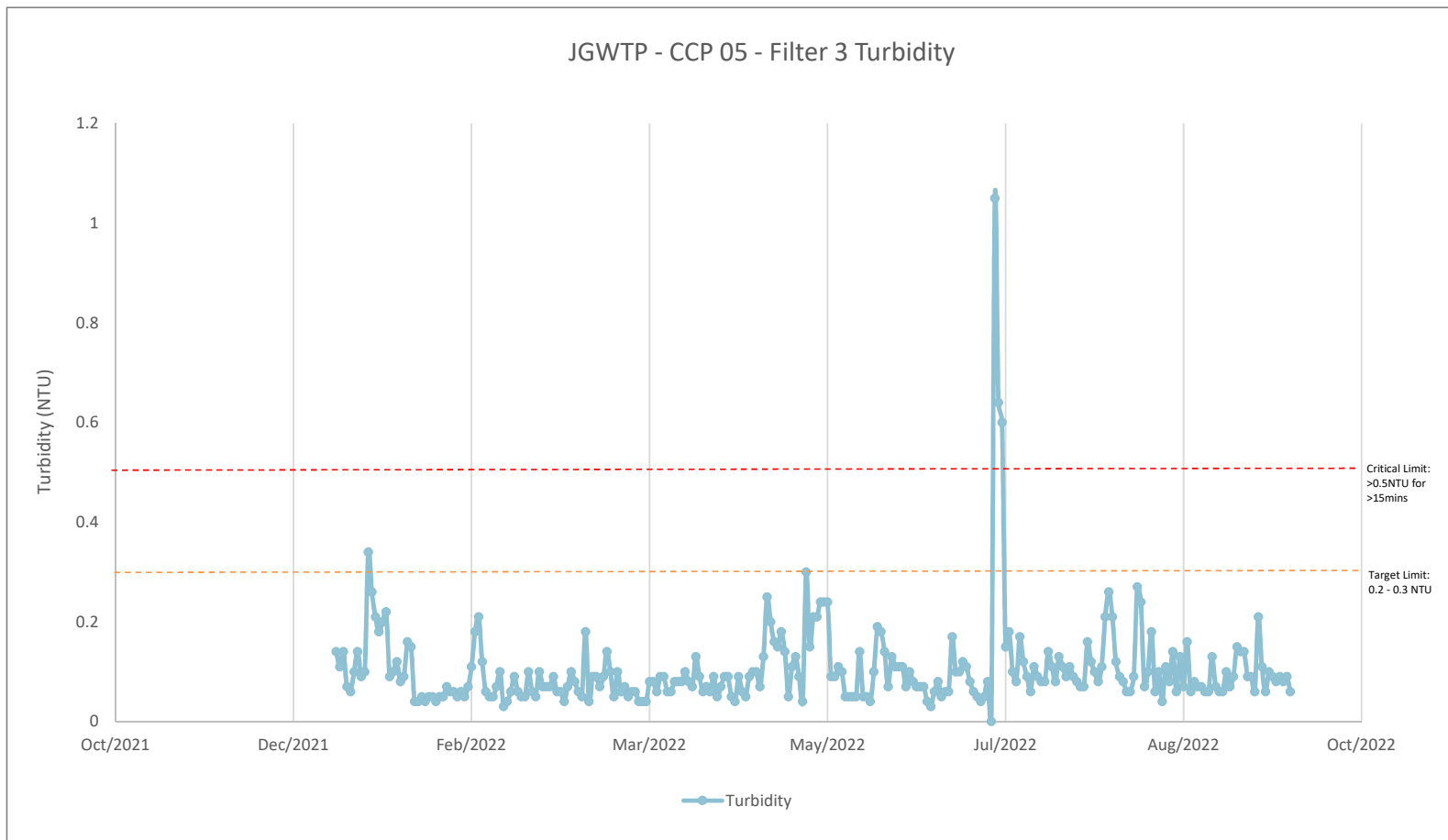


Dubbo JGWTP - CCP Individual Filter Water Quality Graph – 2022

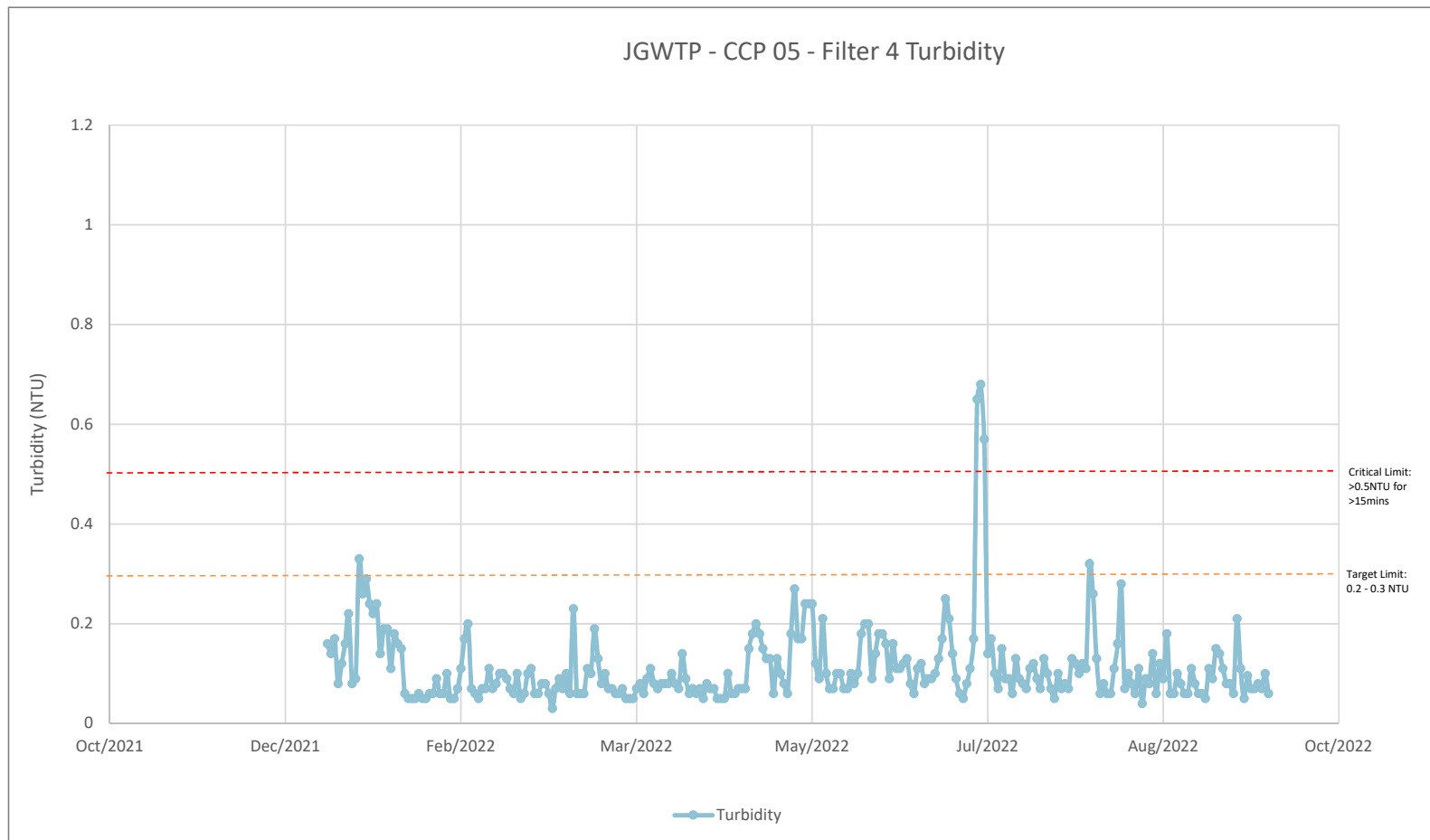


Dubbo JGWTP - CCP Individual Filter Water Quality Graph – 2022



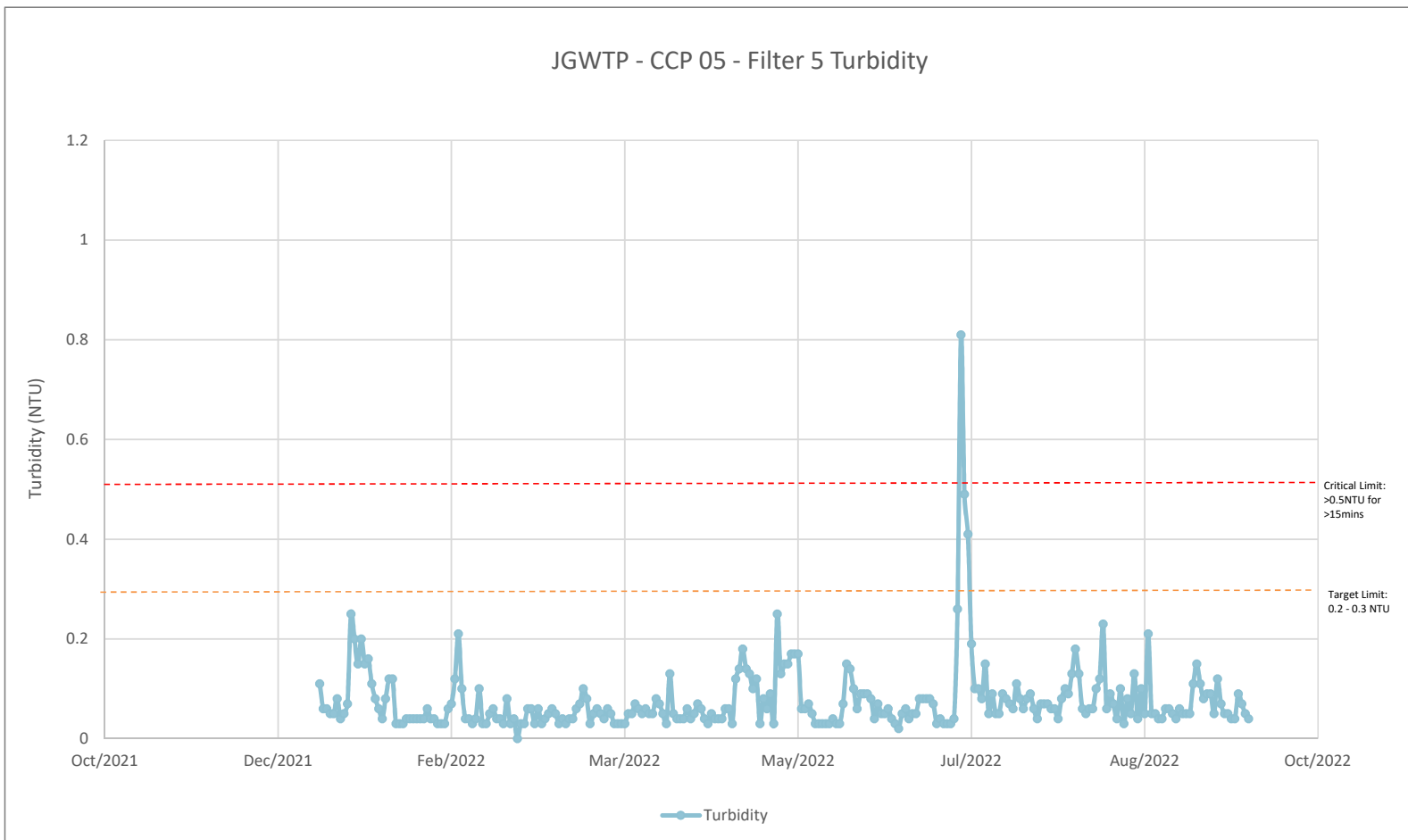


Dubbo JGWTP - CCP Individual Filter Water Quality Graph – 2022

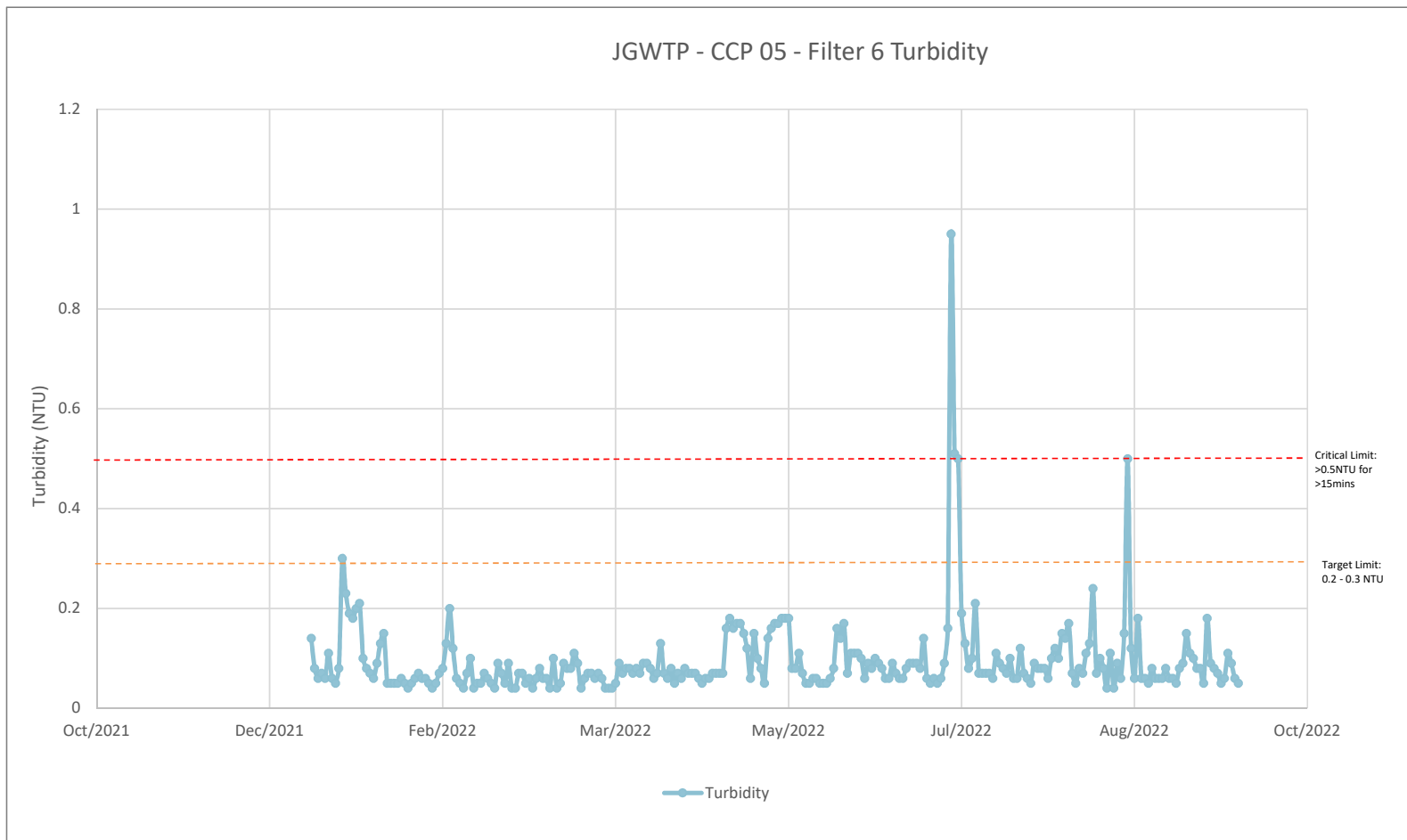


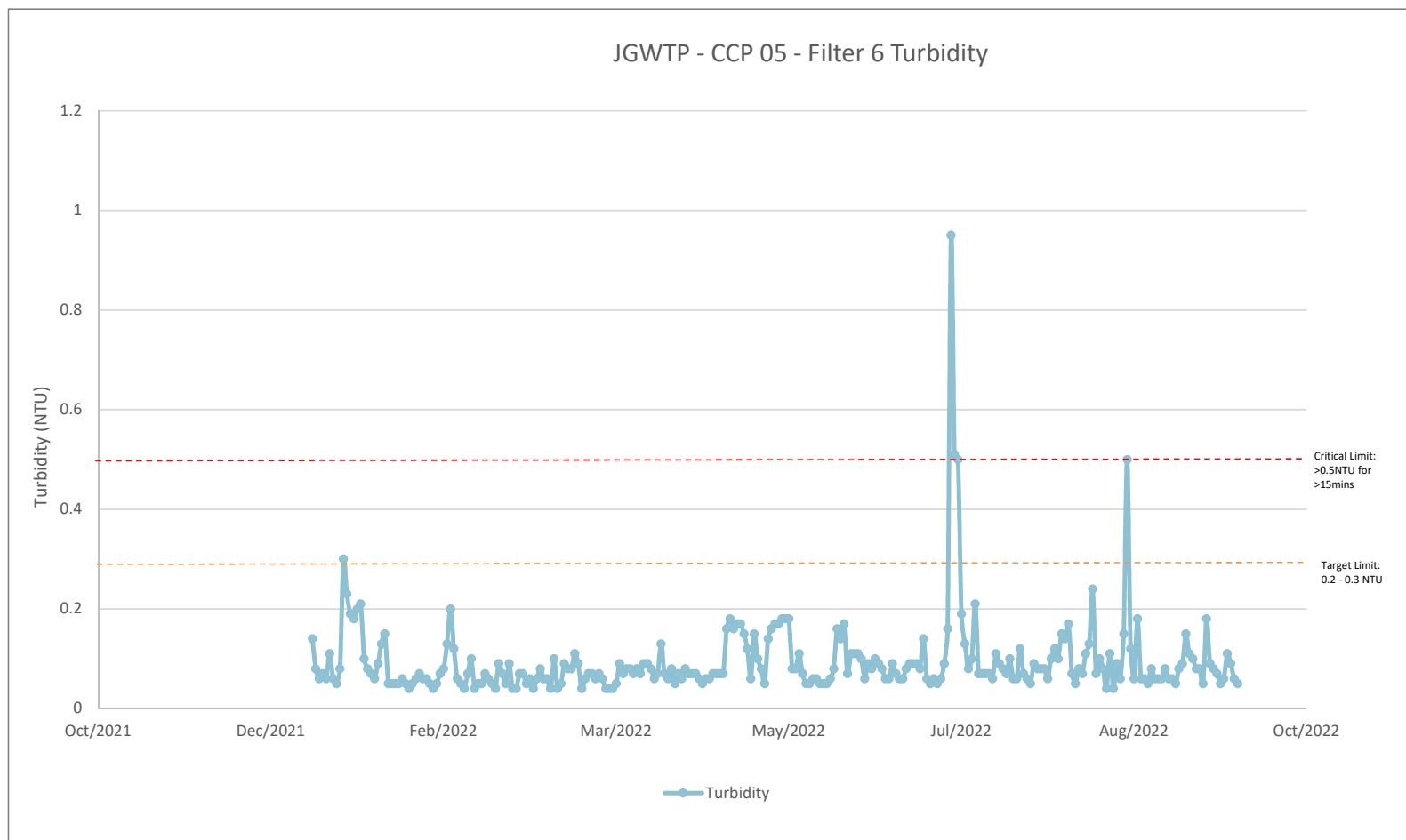
Dubbo JGWTP - CCP Individual Filter Water Quality Graph – 2022



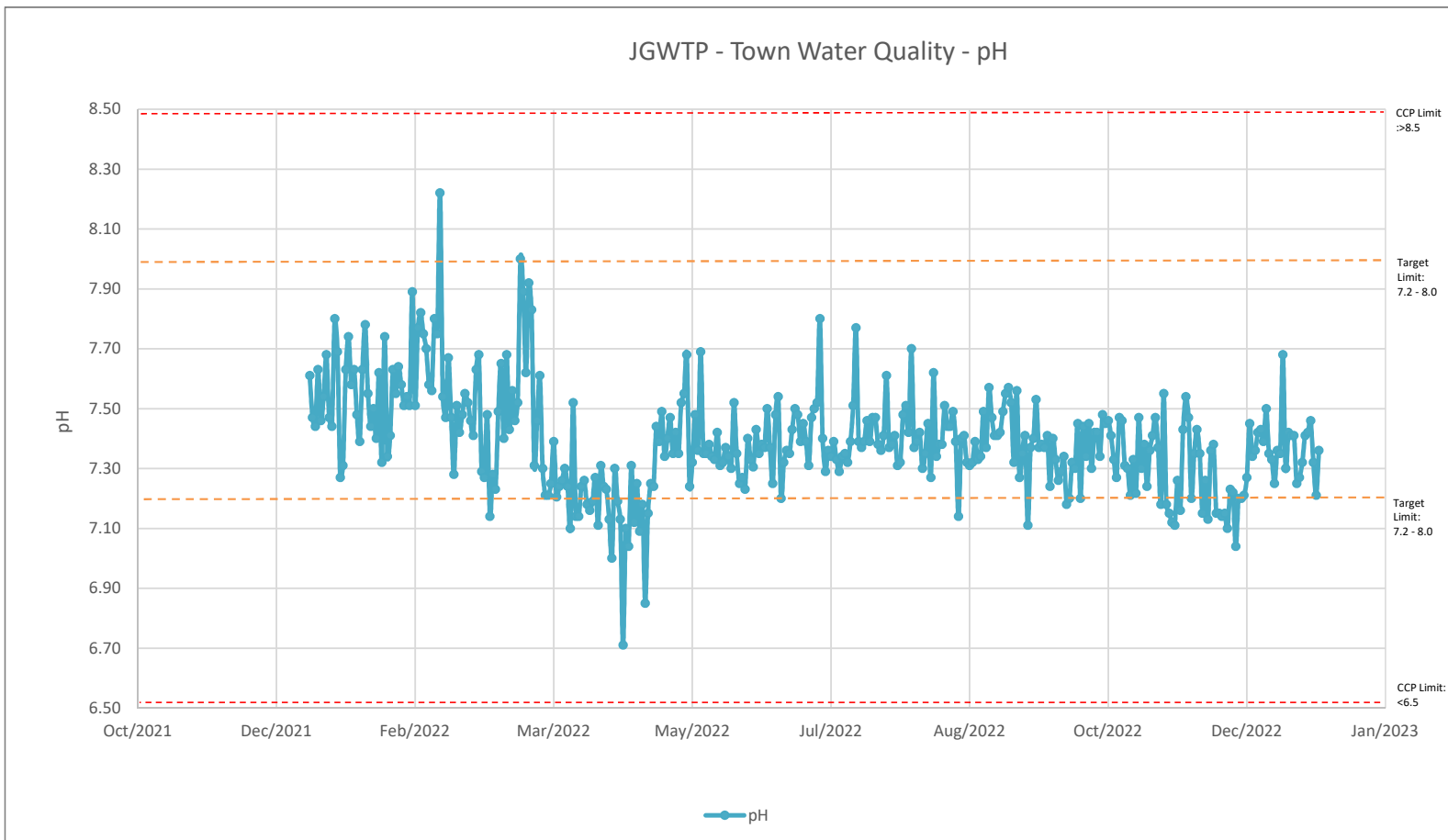


Dubbo JGWTP - CCP Individual Filter Water Quality Graph – 2022

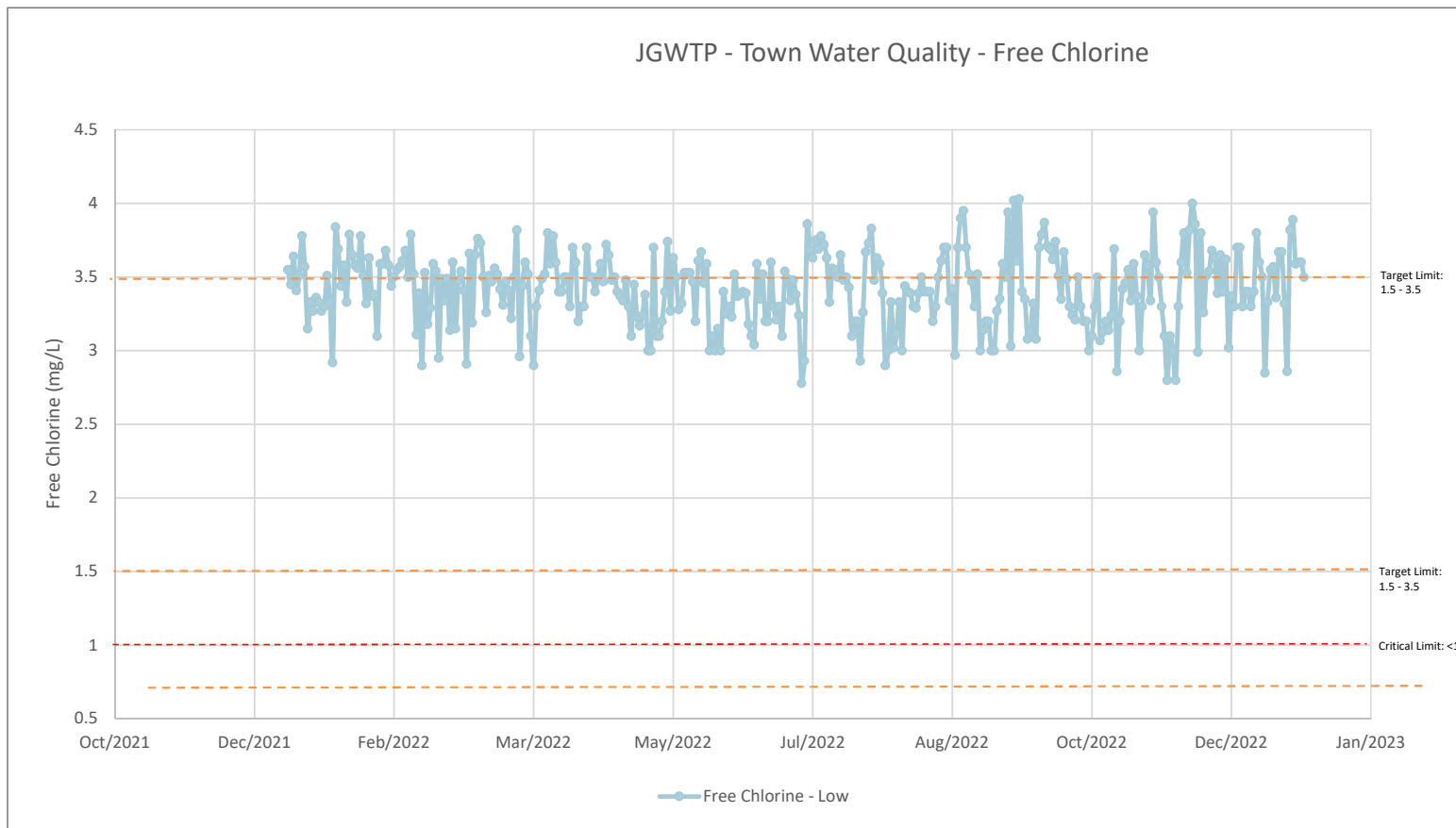




Dubbo JGWTP - CCP Individual Filter Water Quality Graph – 2022

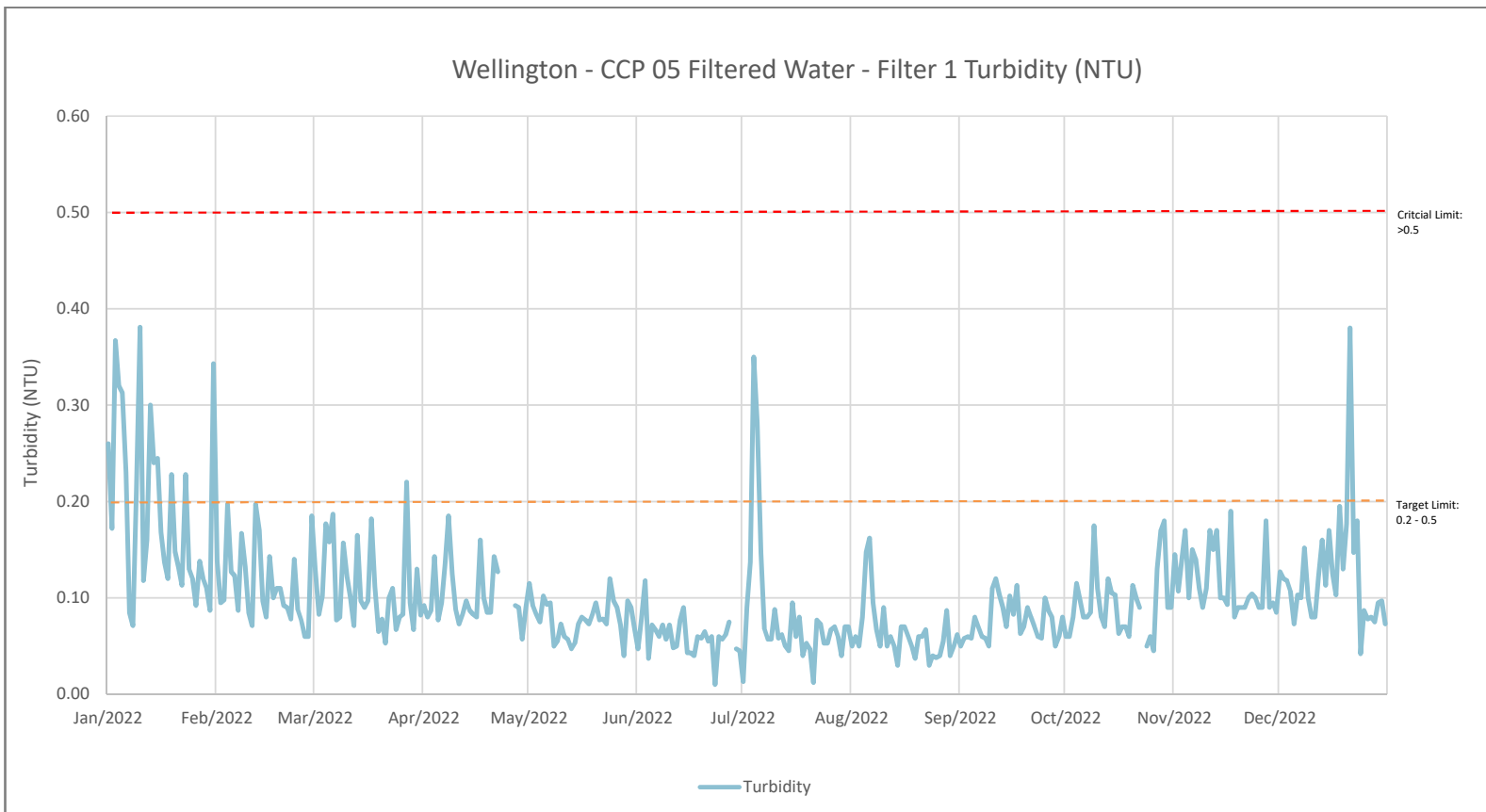


Dubbo JGWTP – CCP Treated Water Quality Graph – 2022

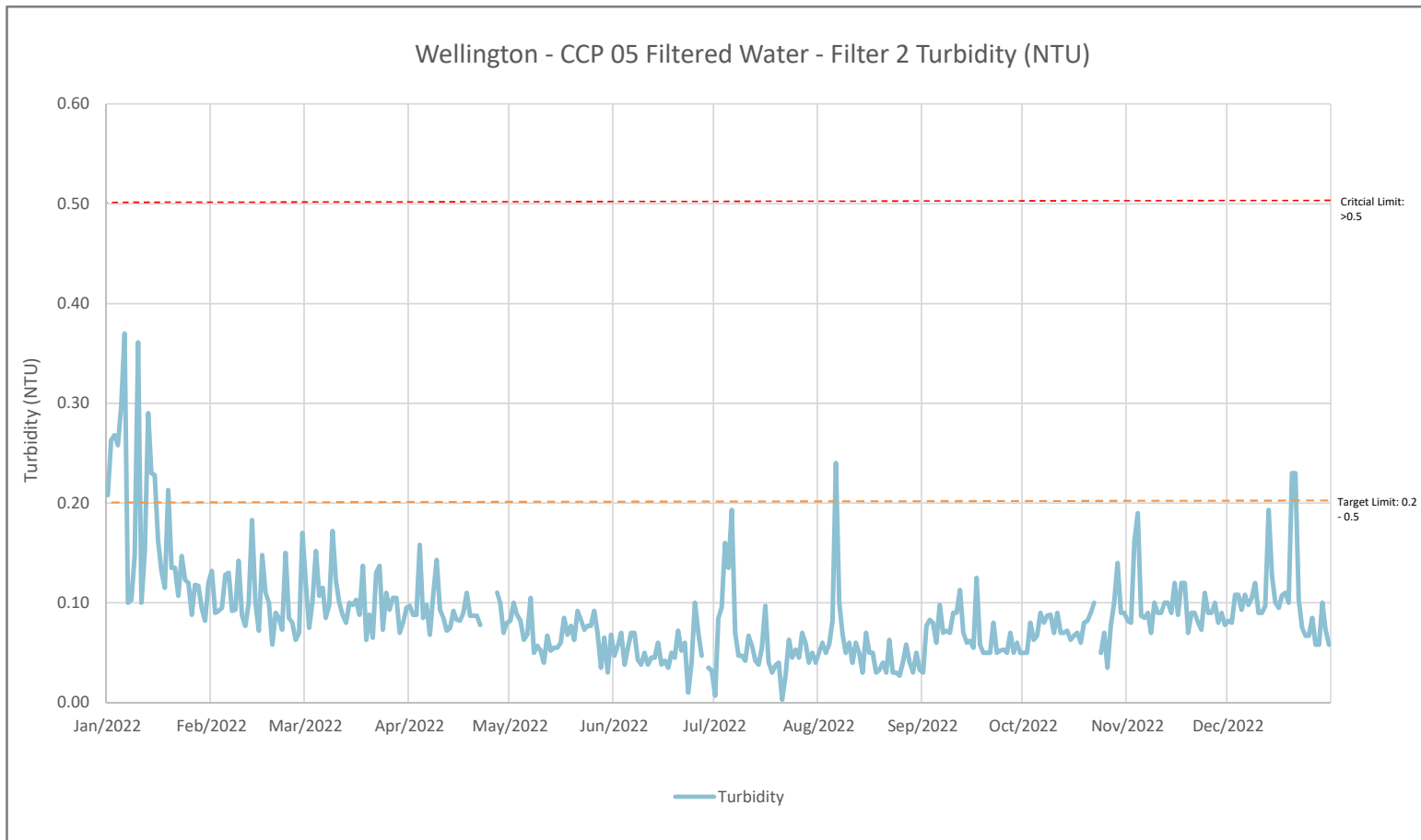


Dubbo JGWTP - CCP Treated Water Quality Graph - 2022

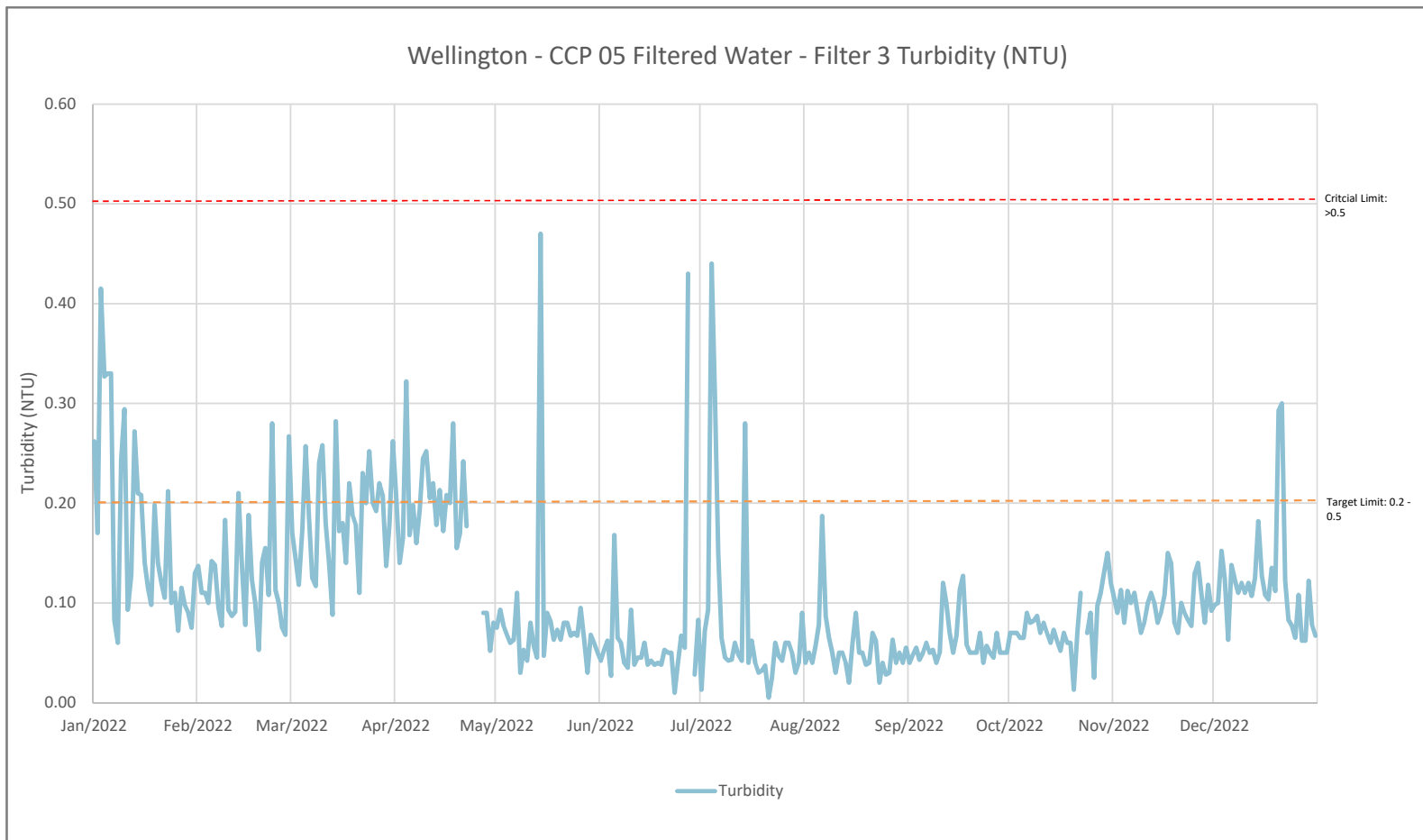
### Wellington Scheme Water Quality Graphs



Wellington WTP - CCP Individual Filter Water Quality Graph – 2022

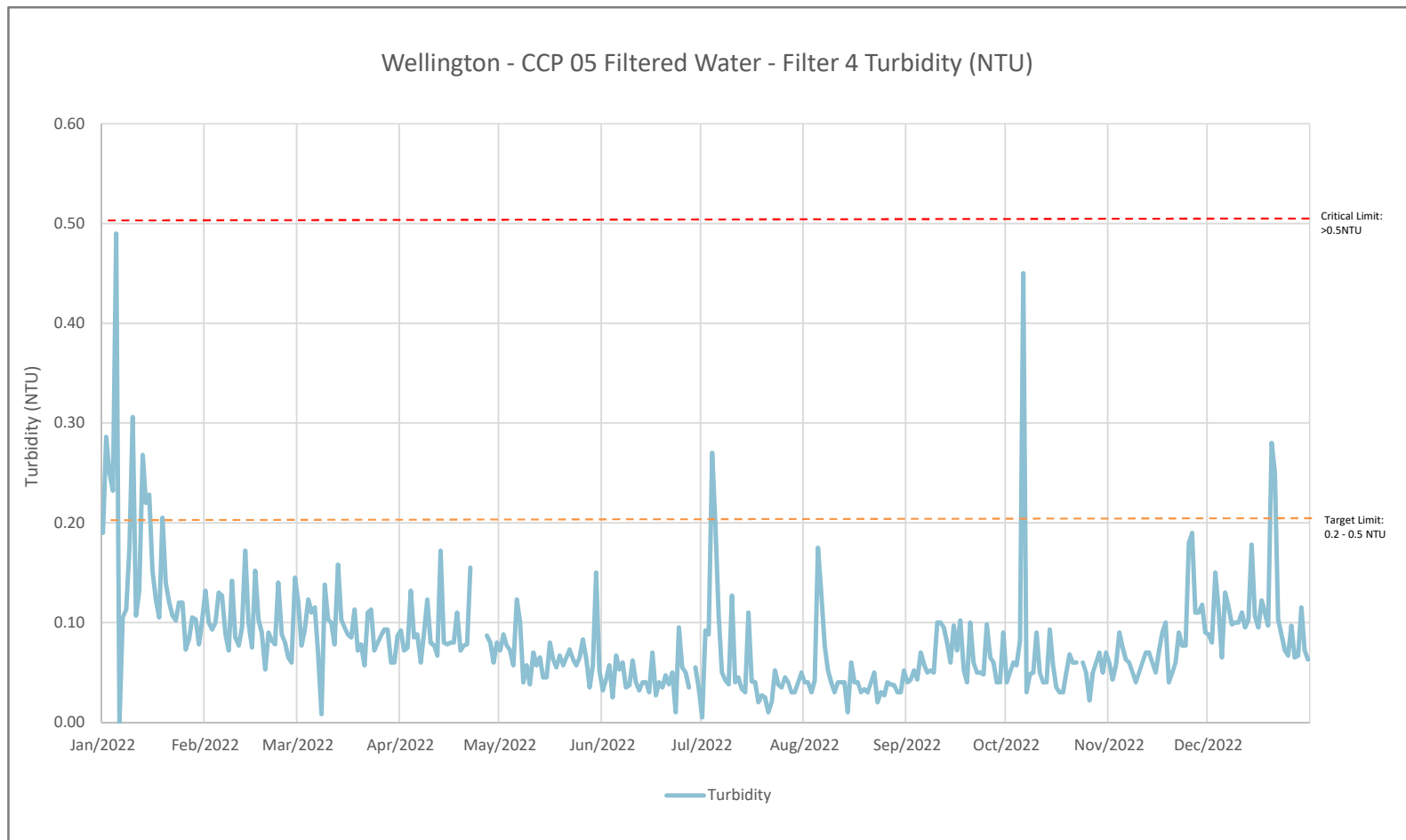


Wellington WTP - CCP Individual Filter Water Quality Graph - 2022

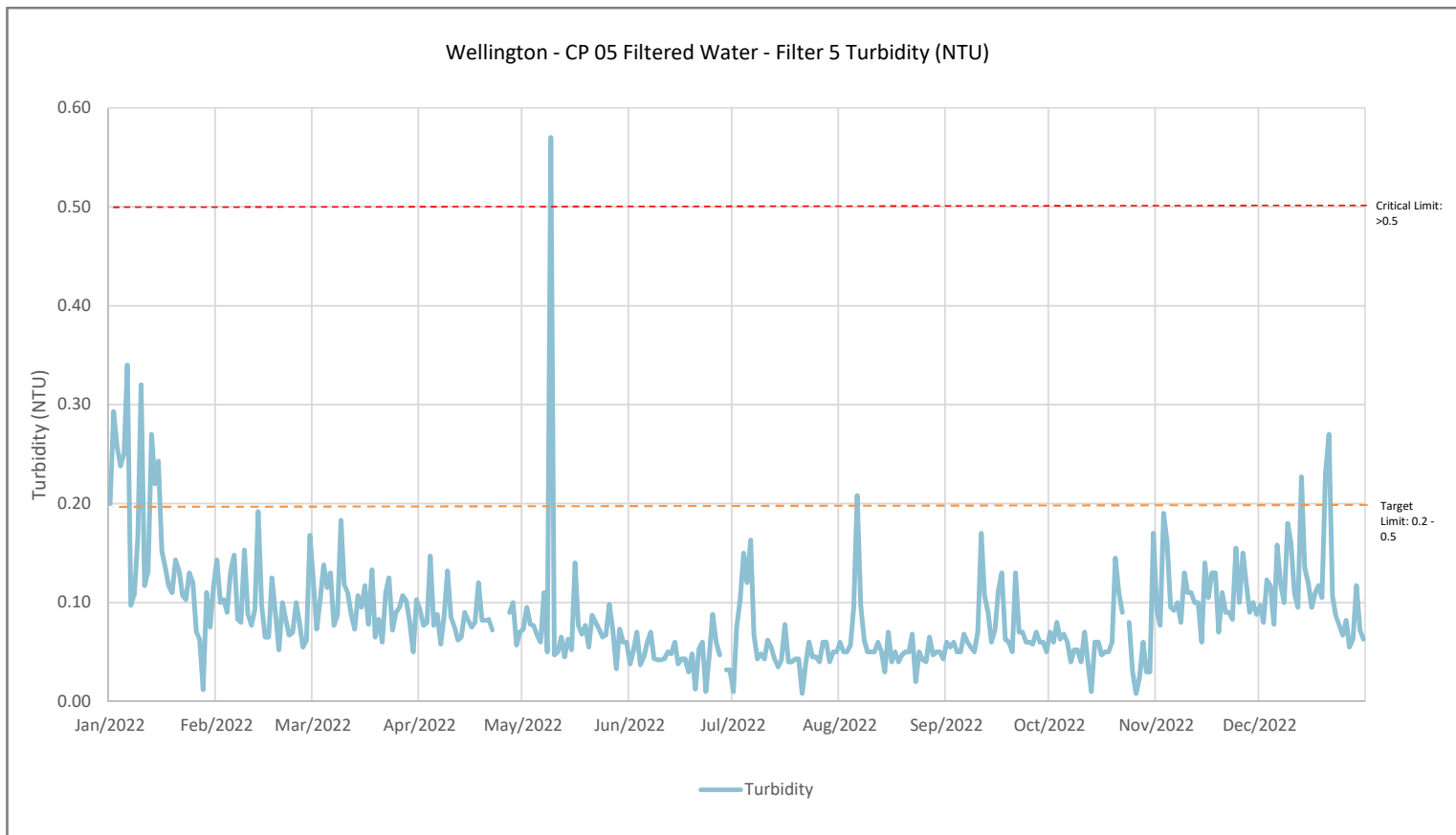


Wellington WTP - CCP Individual Filter Water Quality Graph - 2022

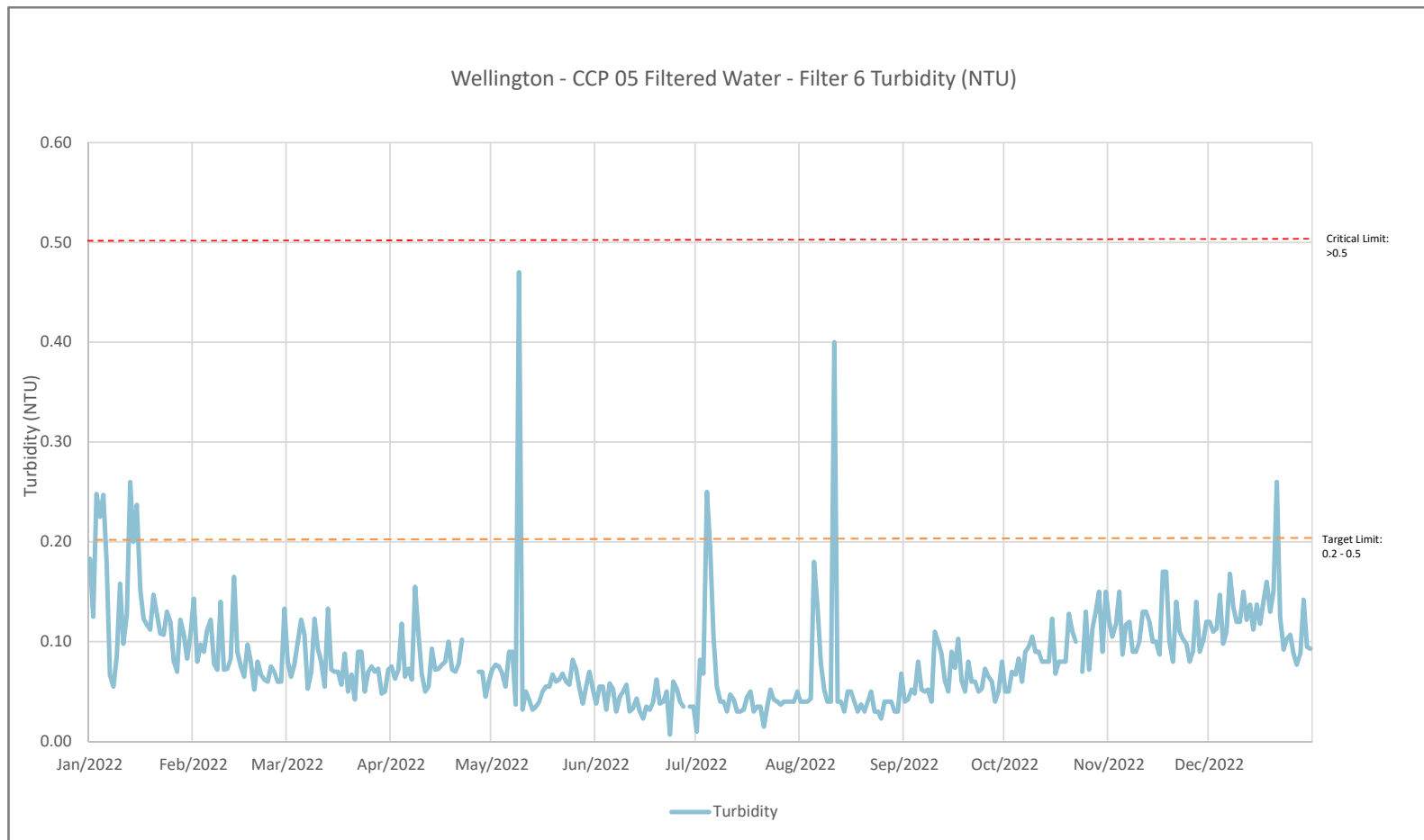




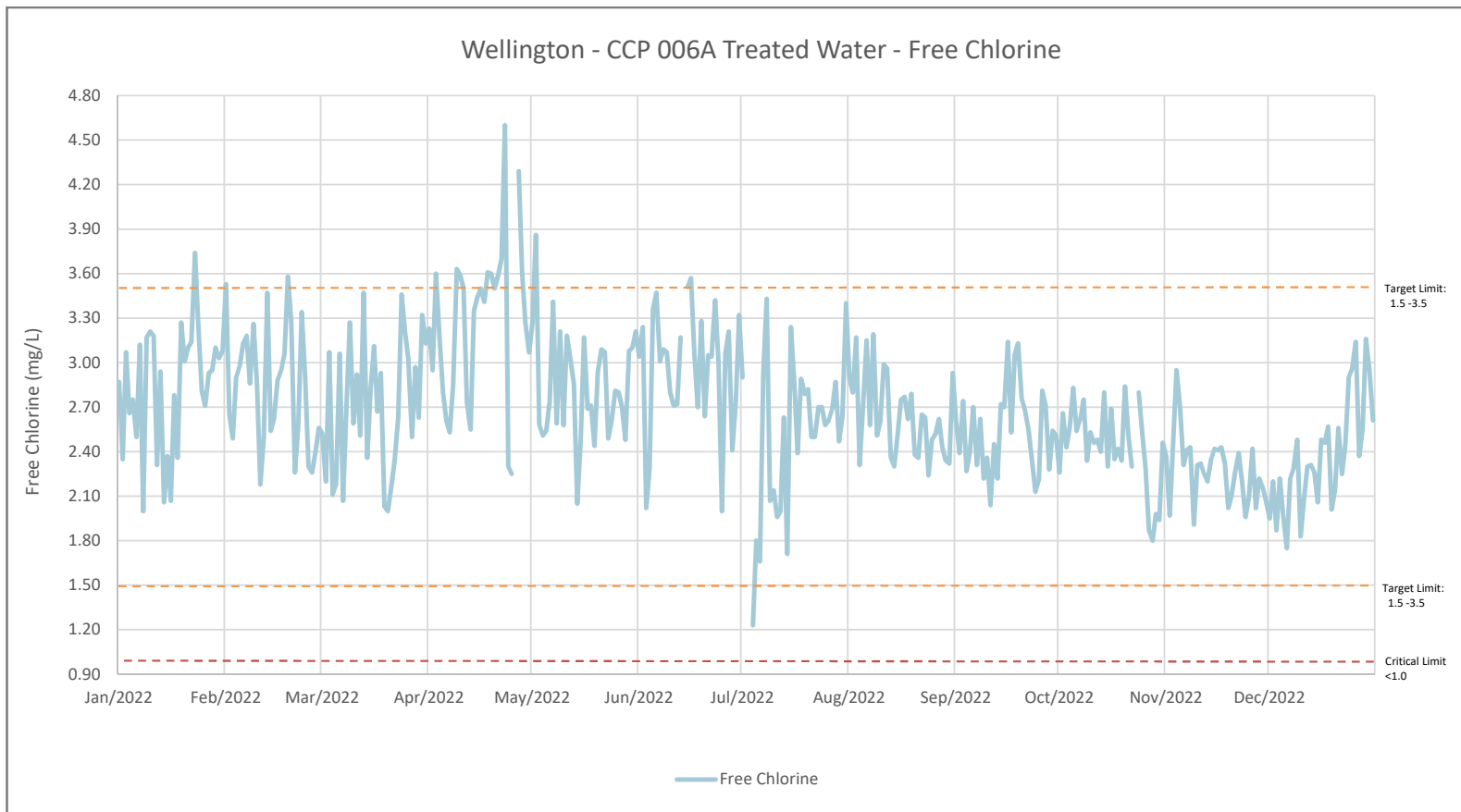
Wellington WTP - CCP Individual Filter Water Quality Graph - 2022



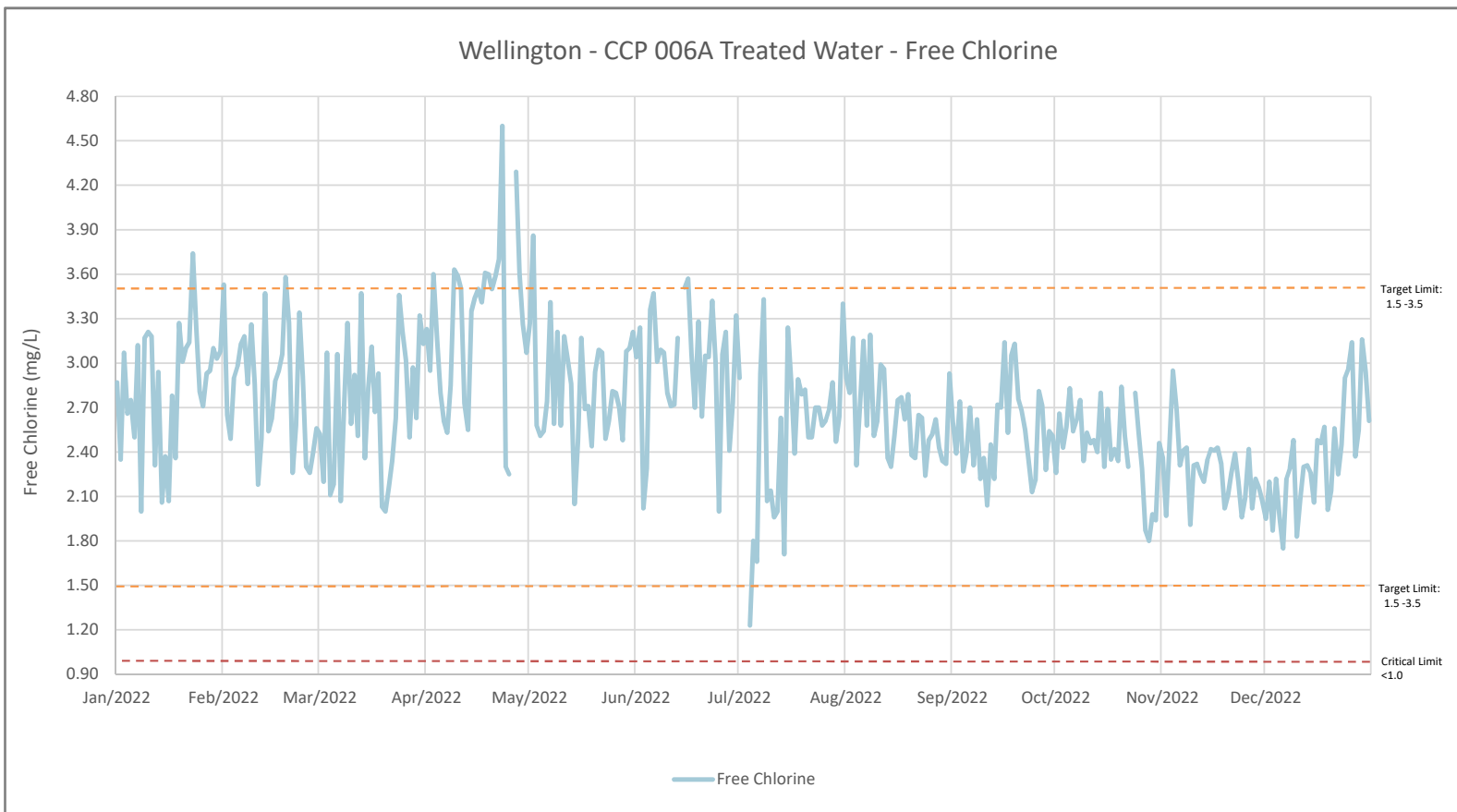
Wellington WTP - CCP Individual Filter Water Quality Graph - 2022



Wellington WTP - CCP Individual Filter Water Quality Graph - 2022

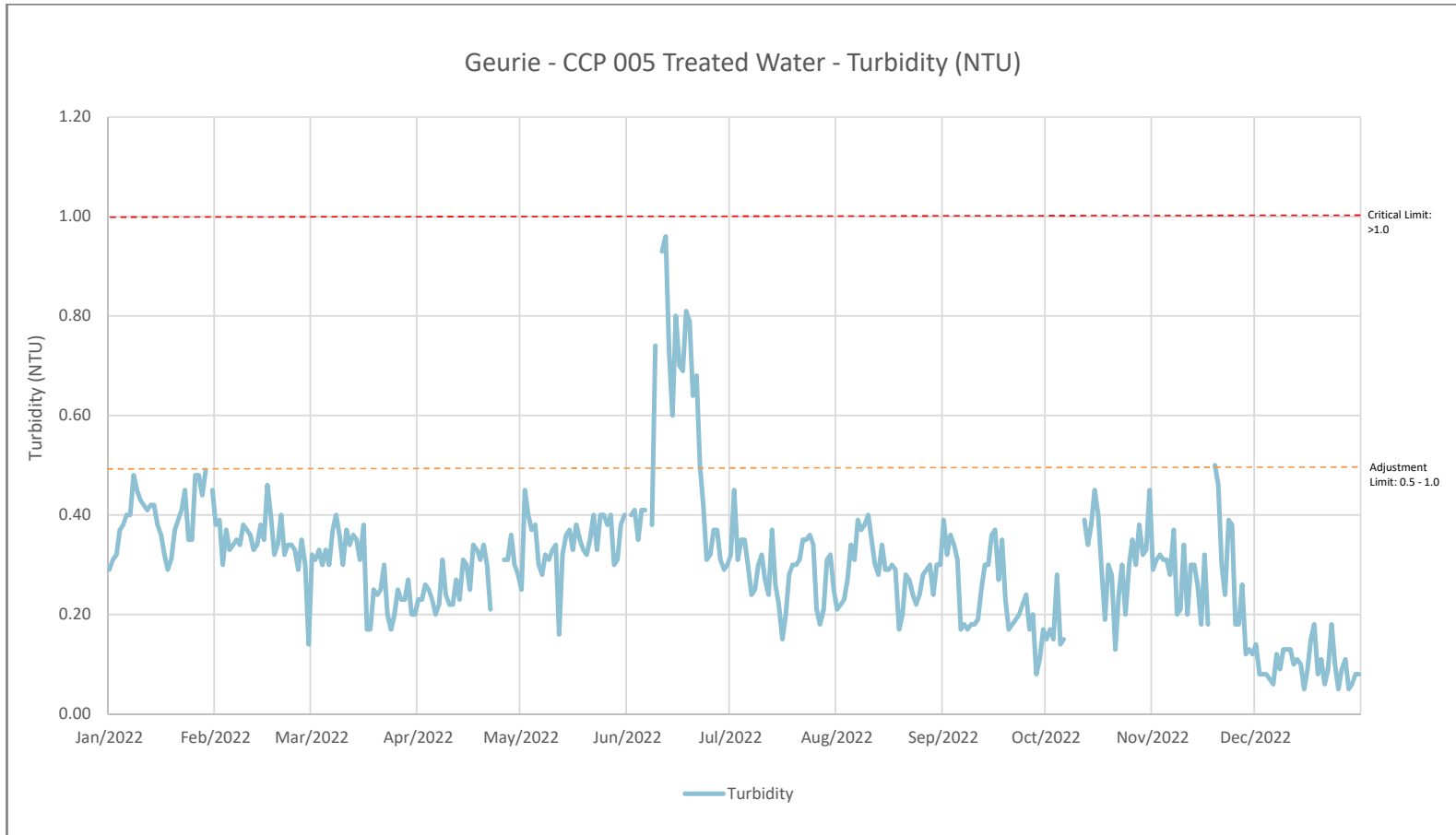


Wellington WTP - CCP Treat Water Quality Graph - 2022

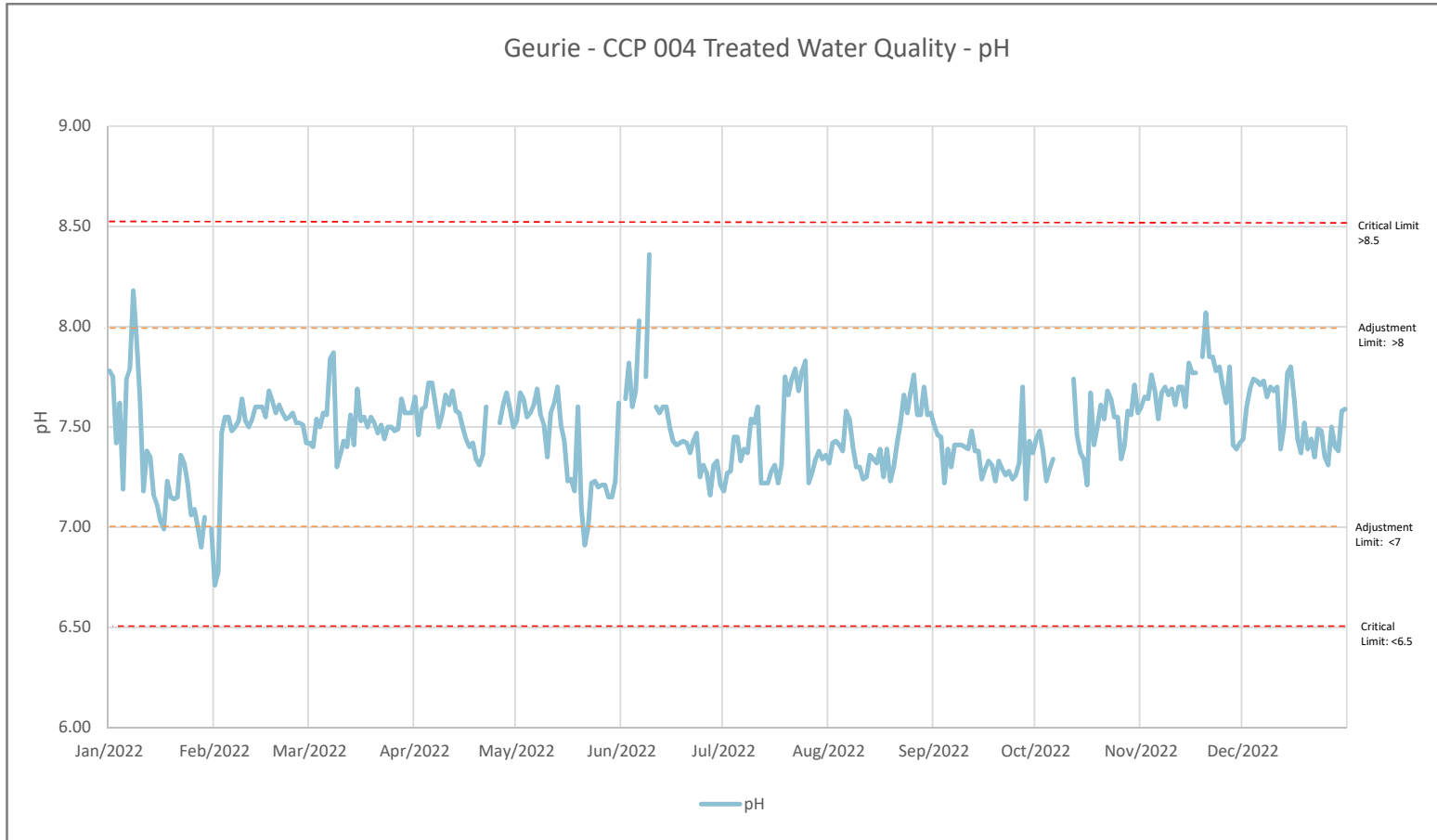


Wellington WTP - CCP Treat Water Filter Quality Graph - 2022

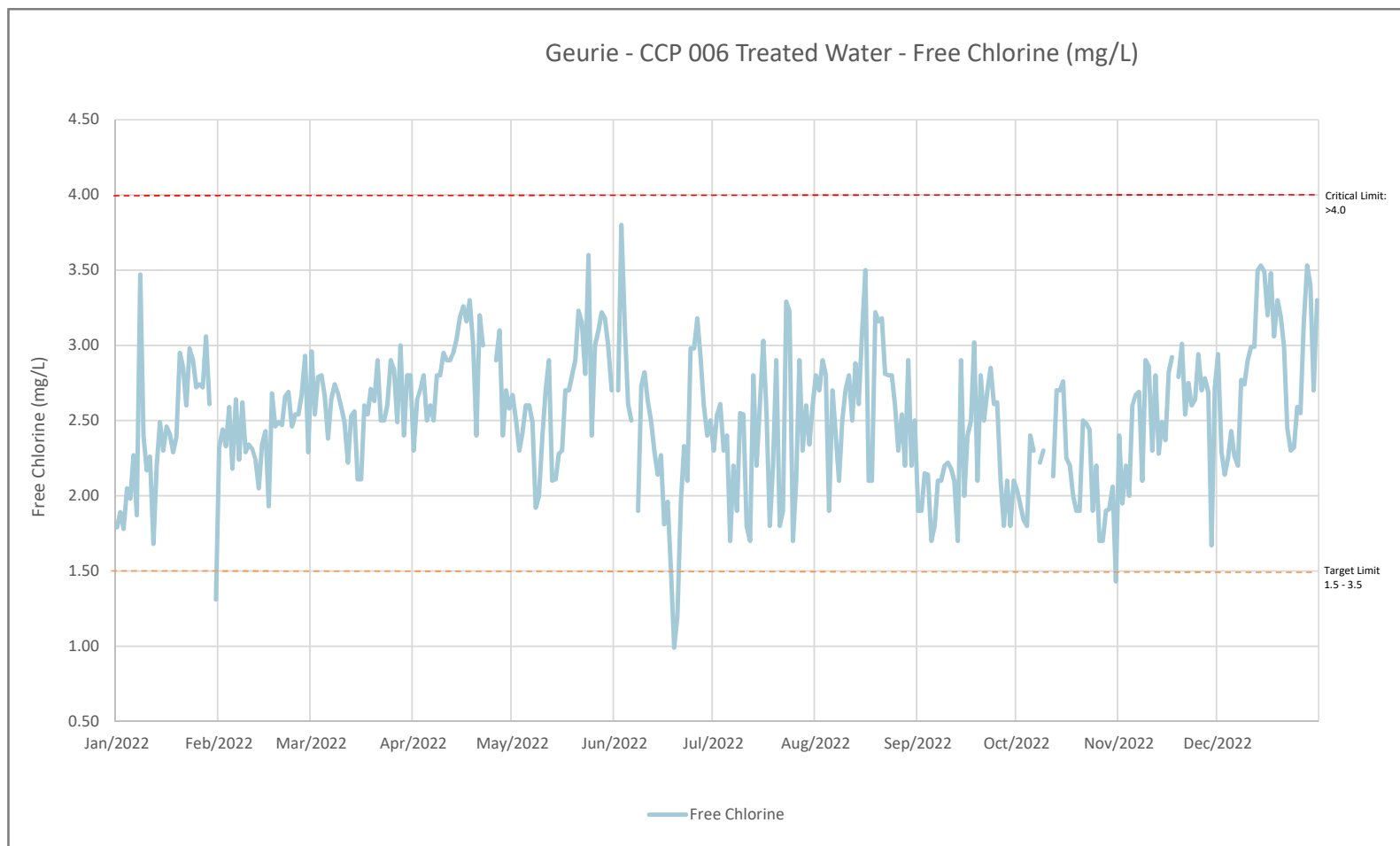
Geurie Scheme Water Quality Graphs



Geurie WTP - CCP Treat Water Quality Graph - 2022

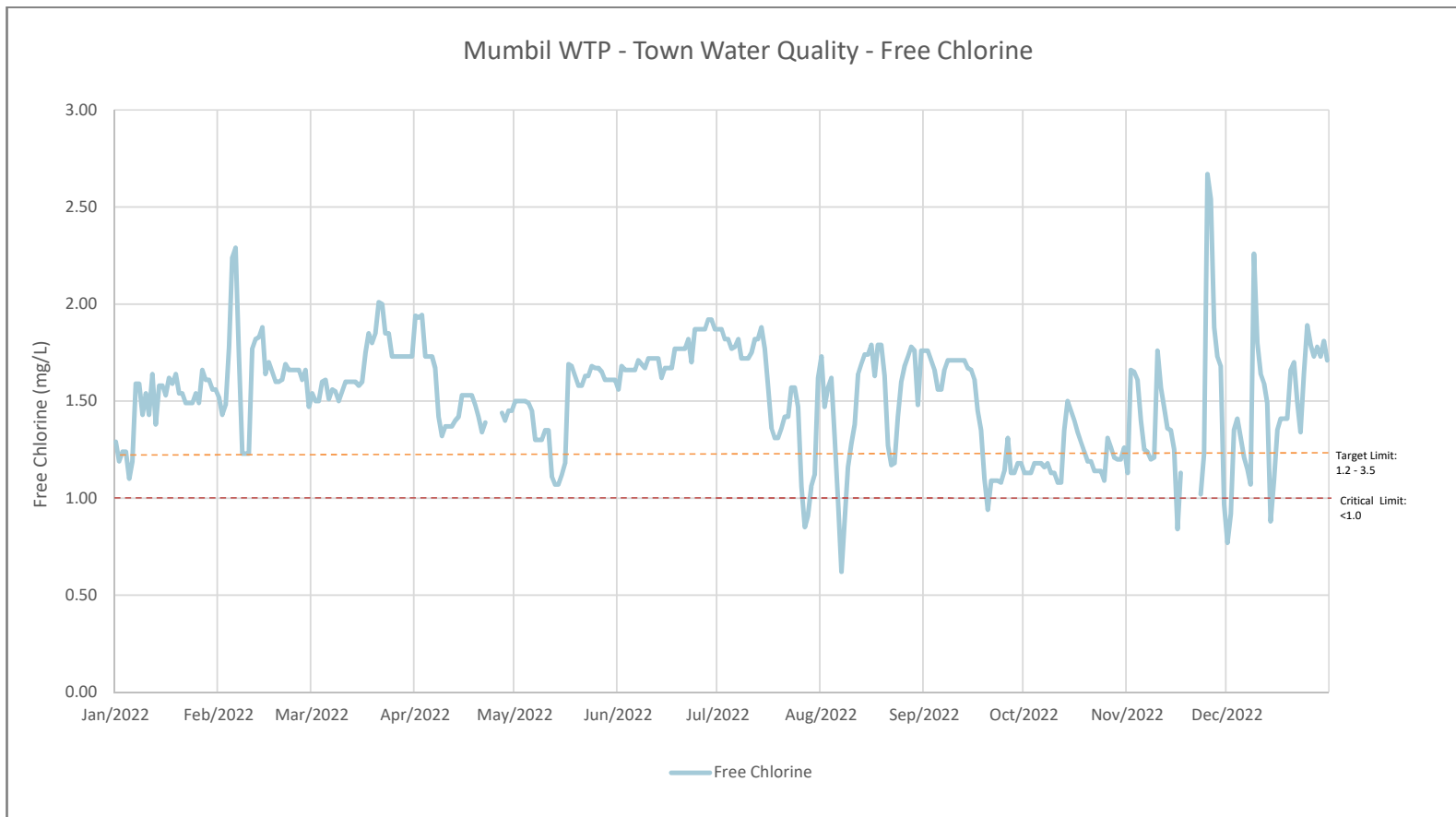


Geurie WTP - CCP Treat Water Quality Graph - 2022



Geurie WTP – CCP Treat Water Quality Graph - 2022





Mumbil WTP - CCP Treated Water Data Quality

**Drinking Water Quality Committee Meeting Minutes 2022**

## Water Quality Meeting Minutes (May) 2022

Dubbo Regional Council

**Date:** 16 June 2022

**Time:** 9:00-10:30

### Attendees:

Stephen Carter	Manager Water Supply and Sewerage
Rebecca Eade	Water and Sewer Client Services Coordinator
Babu Radhakrishnan	Treatment Operations Coordinator Water JGWTP
Jason Kirk	Treatment Operations Coordinator
Hendrik Gouws	Water Sewer Operations Specialist Reticulation
Ashley Quinn	Technical Officer Operations
Venuja Hewayalage	Strategic Water Officer

### Agenda

- Raw and Treated Water Quality Summary -May 2022
- Discuss prevailing Water quality incidents and issue
- Consumer Water Quality Complaints/ Enquires
- Follow up on previous Water quality improvement plan
- Plant Performance

### Minutes

Steve emphasises the importance of keeping filter turbidity under ADWG guidelines. Above 0.5 NTU, there is no control of pathogen removal. When filter turbidity is 0.2, there would be no pathogens going through.

Ballimore and Wongarbon are known for high PH issues because of concrete pipes.

Because Water stability is related to pH, alkalinity and calcium carbonate concentration (CaCO<sub>3</sub>), water that is considered unstable can strip cement linings as there is insufficient CaCO<sub>3</sub> in the water.

Conversely, when CaCO<sub>3</sub> is low, the unstable water has insufficient CaCO<sub>3</sub>, drawing from the concrete assets themselves. This has implications for the long-term sustainability of cement assets, such as reservoirs and cement-lined pipes.

Alternatively, precipitation or scaling can occur if too much CaCO<sub>3</sub> in the water. This can also impact the assets as scaling can form uneven deposits that reduce pipe diameter, increase friction head loss, and cause pit corrosion.

In addition to the corrosion implications, increasing the pH profile due to absorption of CaCO<sub>3</sub> Aggressive water can lead to an increasing pH profile throughout the reticulation system as it draws CaCO<sub>3</sub> from the concrete pipes. This can impact water quality as increasing pH reduces the efficiency of chlorine disinfection and can lead to biofilms and microbiologically induced corrosion.

95% Filter Turbidity	Max	Average	Min	Alert Level 1	Alert Level 2	Exceedances of Alerts		Unit	Count Samples	% Exceedance
						High (Level 1)	Low (Level 2)			
Filter 1 - Turbidity	0.11	0.08	0.00	0.5	0.3	0	0	NTU	31	0%
Filter 2 - Turbidity	0.11	0.07	0.00	0.5	0.3	0	0	NTU	31	0%
Filter 3 - Turbidity	0.10	0.06	0.00	0.5	0.3	0	0	NTU	31	0%
Filter 4 - Turbidity	0.78	0.11	0.00	0.5	0.3	2	0	NTU	31	6%
Filter 5 - Turbidity	0.11	0.07	0.00	0.5	0.3	0	0	NTU	31	0%
Filter 6 - Turbidity	0.09	0.06	0.00	0.5	0.3	0	0	NTU	31	0%

Wellington filter 4 turbidity exceedance is due to backwashing. Babu suggested making a note in SCADA for circumstances like that in future.

Babu Treatment Operations Coordinator JGWTP highlighted following issues in JGWTP.

1. Clarifier inlet valves/actuators need replacing. It is hard to control the flow always goes up and down. It makes chemical dosing inaccurate and complex to run the plant. Steve commented that Michael approved getting electrical FM Is under work.
2. Filter media nozzles and valves, inlet back wash valve must be replaced. Steve said public works is looking into Filter Project includes Media, Nozzle replacement for Filter 1, 2 3, and also looking into replacing Inlet valves and Backwash Valves.
3. PAC dosing system needs an upgrade to maintain the water quality. Steve mentioned Michael gave that to Clearwater technologies and will follow up.
4. Maintain chlorine residual at an adequate level at Brocklehurst. Both Operational and Retic staffs have an additional workload to maintain the chlorine residual. Hennie also mentioned that even an automatic flushing system didn't help. We must consider why we are losing Chlorine after STP to Brocklehurst. Also, need to look into options for an additional Chlorination dosing unit at Dubbo STP
5. Address the high PH issue at Brocklehurst, Wongarbon and Ballimore. It looks like it is going to extend to Eumungerie as well.
6. Arrange staff training certificates III and IV for operators. Steve mentioned that DPE would only do the training. This is because they no longer certify employees. Requested Bec to follow up to see with other Tafe in NSW does the training, and also Steve is also following up with WIOA for any other options.

### Jason Treatment Operations Coordinator-Water Supply & Sewerage highlighted following issues

The current filter turbidity at Geurie is a colour issue, not a filter breakthrough. However, the current filter turbidity at Geurie is a colour issue, not a filter breakthrough. However, he mentioned filter ran okay for a short period. They could commission bores and feed only bore water until the problem is fixed. Steve mentioned that the Geurie water treatment plant was not designed to run from KMnO<sub>4</sub>, Pre Cl<sub>2</sub> and Poly. Nevertheless, NSW health stopped pre-Cl<sub>2</sub> to avoid THMs. Adding soda ash creates high PH issues.

Steve advised Jason to follow up by restoring air diffusers and baffles.

### Hendrik Gouws Water Sewer Operations Specialist Reticulation raised following concerns.

#### **New Obley Rd to Rifle range Reservoir pipeline**

New Obley Rd to Rifle range Reservoir pipeline hasn't been used since commissioning as some valves were turned off. Steve said to pump the stagnant water into one of the reservoirs and treat it there, but the operators are not happy with it and want Retic to drain the water. Hendrick made the call and instructed his staff to drain the water and monitor the chlorine levels through the pipeline. Once the acceptable levels are reached, put them back into the Rifle Range reservoirs. Currently busy doing it now and it will be completed today. Retic will be checking the valves on the pipelines from the WTP that crosses underneath the river to Obley rd as the operators are saying that the lines are turned off, and they can't use two pumps.

Hendricks mentioned they would work on installing the valve at Rifle range old-line next Tuesday, which shouldn't affect the operations.

**Babu suggested organising a meeting with the retic team once a month.** He mentioned that Eumungerie has a sound chlorine reticulation system.

#### **New underground bores**

Steve asked to check whether the new underground bores were online or closed. Babu pointed out that they cannot run to pumps at the same time. Retic team is testing from Obley Rd to Riffel road. They are going to drain that line today. To relocate, they need a new reservoir.

#### **Changes to the inflow and outflow of the Rifle Range reservoirs**

Once all the work of relocating the water mains is completed. Retic will be making changes to the inflow and outflow of the Rifle Range reservoirs to have dedicated to in and out from the Reservoirs. First, the valve configuration will be changed so the pumps will be pumping through the new line into the Old Reservoir. Water will then be flowing through to the new reservoir and out into the Reticulation (Network) and supply the customers. This change will take away the pressurising of the reticulation mains when the pumps start to fill the Reservoirs. Or operate each reservoir on its own.

Shut off the old reservoir and use the new reservoir. And couple and drain the old one while using the new one to feed the town. Alternatively, use both in and out.

**Issues in SCADA**

Hendrik further mentioned that there are issues in SCADA. It doesn't send messages. They will flush the reticulation now.

Babu suggested organising a **meeting with the retic team once a month.**

Hendrik mentioned with the chlorocams that if there are stormwater or sewer lines nearby, they are putting the drains of the chlorocams into these lines. Wash line in the Rifle range. Put Chlorine into that. He mentioned that Eumungerie has a sound chlorine reticulation system.

Steve asked Babu to do a sanity check. Once a week. First, look if Chlorine is there in the system. Only if there is no chlorine in the system, add Chlorine which saves time.

**Map new PRV zones in south lakes**

Hendrik mentioned that they must map new PRV zones in south lakes considering future developments such as boundary road and Sheraton road extensions.

**Microbiological sample point's calculation for the Dubbo complex water distribution system**

Steve explained the new proposed microbiological sample point's calculation for the Dubbo complex water distribution system based on reservoir feed areas. DRC is planning to request NSW health to increase the number of sampling points per annum based on new calculations. Venuja is working on that. Hendrik said he would share the map he drew with former water specialist Michael for new sampling points covering the town.

**Clarifier 2 maintenance**

Babu informed that they would take clarifier 2 under maintenance from next week onwards for six weeks despite the current issues with clarifier 1. Steve told Babu to do jar tests and drop tests to run the plant smoothly.

Steve wanted to know how many drop tests JGWTP is doing per day. Babu said it's one drop test per day.

Steve advised doing more than one drop test because there could be issues in dosages like feeder or blockage issues. Steve suggested doing one drop test in the morning and one after lunch each day.

Steve suggested Babu Try do a jar test to determine the possibilities of using Alum instead of Fe3Cl2 at JGWTP.

Next week public works will come to do a feasibility study for the Fluoride project.

Under plant performances, Babu highlighted current issues underdosing of PAC feed rate, which needs to be upgraded and clarifier 01 dosing systems to VSD.

**Mumbil**

Under the plant performance of Mumbil, Steve asked Jason to check if the chlorine cylinder at Mumbil was empty.

**June and July 2022 Water Quality Meeting Minutes - Dubbo Regional Council**

**Mumbil**

Small discrepancies in flow meters between pumps and tanks

Floes discrepancies Bores?

Air blocks in chlorine injection

Customer complaints

Dulbunty pipeline getting replaced end of September.

**Discussion**

**Bore water PFAS**

**There are no PFAS data after March 2022 in**

PFAS analysis (U:\Water Supply and Sewerage\Water Operations\WATER OPERATIONS FILES\Water Quality)

Babu Knows where they are Ashley has to share with Ashley.

Steve said Venuja to compare the PFAS values with the PFAS levels of bore water when it reaches the water treatment plant. Although PFAS values might seem high when checked from the bore, by the time it reaches the treatment plant PFAS values decrease. Therefore have to include PFAS values of Bore water at the treatment plant as well.

Treatment plant test PFAS values once a month.

**Cross check the PFAS analysis spreadsheet to see if Perfluorooctanoic acid (PFOA) and Sum of perfluorohexane sulfonate (PFHxS) + perfluorooctane sulfonate (PFOS) alert levels are same as ADWG.**

**Source in (U:\Water Supply and Sewerage\Water Operations\WATER OPERATIONS FILES\Water Quality).**

According to ADWG Perfluorooctanoic acid (PFOA) is 0.56µg/L. However, in the excel sheet it is 0.01(µg/L)

Sum of perfluorohexane sulfonate (PFHxS) + perfluorooctane sulfonate (PFOS) -ADWG guideline 0.07(µg/L). Nevertheless, Excel sheet give individual LORs PFHxS 0.02 and PFOS 0.01 which is not in ADWG

Jason Treatment Operations Coordinator-Water Supply & Sewerage highlighted following issues

[Listen to the recording](#)

Geurie

**Filter 02 Backwash needs limit switch adjustment**

Mark had a look did not get a feedback yet.

**Install VSD in Raw Water Pump 1**

[Listen to the recording](#)

Item	Issue	Currently assigned to
Filter 2	Backwash needs limit switch adjustment	Will
Raw Water Pump 1	Install VSD	Will
Geurie Booster Pump	<ul style="list-style-type: none"> <li>Replace sump Pump</li> <li>Put water level heights on pit in SCADA</li> <li>Organise new sensors and actuator for booster pump.</li> </ul>	
Butterfly Valve on Lagoon 1	Replace	Jason
Raw Water	Restore Automatic functionality	Safegroup

Exceedances

Filter turbidity July 2022 JGWTP

Filters	Max	Average	Min	Alert Level 1	Alert Level 2	Exceedances of Alerts		Unit	Count Samples	% Exceedances
						High (Level 1)	Low (Level 2)			
Filter 1	1.00	0.17	0.06	0.5	0.3	3	0	NTU	31	10%
Filter 2	0.78	0.15	0.04	0.5	0.3	2	1	NTU	31	10%
Filter 3	1.05	0.16	0.00	0.5	0.3	3	0	NTU	31	10%
Filter 4	0.68	0.15	0.05	0.5	0.3	3	0	NTU	31	10%
Filter 5	0.81	0.13	0.03	0.5	0.3	1	2	NTU	31	10%
Filter 6	0.95	0.14	0.05	0.5	0.3	3	0	NTU	31	10%

7<sup>th</sup> of July out of spec water for a 12 hr window period. So there is an overall exceedance of 10% for the month.

Town water quality exceedances Dubbo June

CWI/Town Water	Max	Average	Min	Alert Level 1	Alert Level 2	Exceedances of Alerts		Unit	Count Samples	% Exceedances
						High (Level 1)	Low (Level 2)			
pH	7.54	7.4	7.2	8.5	6.5	0	0	pH	30	0%
Turbidity	0.418	0.156	0.074	1.0*	0.2*	0	4	NTU	30	13%
Colour	5	1.26666667	0	15		0		Hazen	30	0%
Free Chlorine - High	3.6	3.3		4.5	3.0	0	30	mg/L	30	100%
Free Chlorine - Low		3.3	3	1	1.5	0	0	mg/L		0%
Fluoride - High	0.14	0.1		1.5 #	1.05 #	0	0	mg/L	30	0%
Fluoride - Low		0.1	0.1	0.9 #	0.94 #	30	0	mg/L		100%



**Town water quality exceedances Dubbo July**

CWT/Town Water	Max	Average	Min	Alert Level 1	Alert Level 2	Exceedances of Alerts		Unit	Count Samples	% Exceedances
						High (Level 1)	Low (Level 2)			
pH	7.8	7.4	7.29	8.5	6.5	0	0	pH	31	0%
Turbidity	0.737	0.167	0.07	1.0*	0.2*	0	4	NTU	31	13%
Colour	7	1.870967742	0	15		0		Hazen	31	0%
Free Chlorine - High	3.86	3.5		4.5	3.0	0	28	mg/L	31	90%
Free Chlorine - Low		3.5	2.78	1	1.5	0	0	mg/L		0%
Fluoride - High	0.15	0.1		1.5 #	1.05 #	0	0	mg/L	31	0%
Fluoride - Low		0.1	0.11	0.9 #	0.94 #	31	0	mg/L		100%

**CCL23/76 Short-Term Worker Accommodation in the Local  
Government Area**

**Attachment 1:** Research Report - Analysis of Short-Term Worker  
Accommodation Needs ..... 139



## Research Report

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Analysis of Short-Term Worker  
Accommodation Needs

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March 2023



## Research Report

### Analysis of Short-Term Worker Accommodation Needs

March 2022

Dubbo Regional Council	DRC
Local Government Area	LGA
Renewable Energy Zone	REZ
Designated Area Migration Agreement	DAMA
Regional Development Australia	RDA
Urban Areas Development Strategy	UADS
Rural Areas Development Strategy	RADS

#### Acknowledgement of Country

Delos Delta would like to acknowledge the Ngunnawal, Boon Wurrung and Wurundjeri Peoples who are the traditional custodians of the land on which we work. We would like to express our respect for their Elders past and present.



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# 1. Introduction



Understanding the nature, demand, and opportunities for short-term worker accommodation is important to ensuring policy and planning responses adequately address potential implications on regional centres.

Dubbo Regional Council (Council) intends to analyse its short-term worker accommodation needs. The need to do this is based on:

- ▶ The requirements of local employers currently and into the future, such as Central West and Orana Renewable Energy Zone (REZ), Critical Minerals Hub and others in health, government and industry
- ▶ Community engagement insights gained during development of the 2040 Community Strategic Plan, which consistently identified accommodation availability as a challenge in attracting workers to the region, especially across Dubbo and Wellington.

## 1.1 Project Scope

Council has partnered with Delos Delta to understand the dynamics of short-term worker accommodation in the region and explore possible solutions. The objectives of this project include to:

- ▶ Analyse short term accommodation needs in the Local Government Area (LGA)
- ▶ Understand industry stakeholders' accommodation needs and insights
- ▶ Provide a suite of recommendations regarding short-term worker accommodation in Dubbo and Wellington
- ▶ Consider the wider need for accommodation models from an investment attraction perspective, including such models that provide a positive lasting legacy

For the purposes of this project, short-term worker accommodation refers to accommodation available for workers and their dependents to use in the Dubbo region for a short time frame (3 – 12 months), with minimal intention of settling permanently in the LGA. This definition excludes emergency/crisis accommodation.

This Research Report provides a contextual overview within which the project sits. A needs and shortfall analysis follows, as well as insights from stakeholder engagement to understand the scope of the problem in the Dubbo LGA context. These findings have informed recommendations and their phasing, which will be highlighted at the end of this Report.

## 2. Regional Context



Dubbo Regional LGA is situated in central NSW. It forms part of the Orana Region, which covers the central and north-western areas of NSW. This report will focus on the key localities of the LGA, Dubbo and Wellington, and the surrounding villages of Eumungerie, Wongarbon, Geurie, Stuart Town, Mumbil, and Elong Elong.

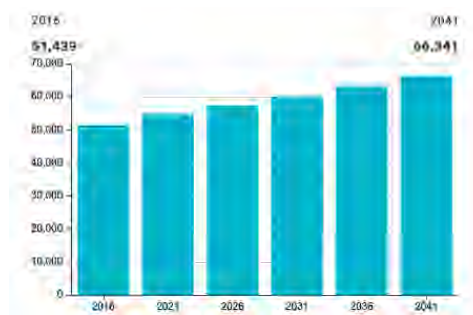
ORANA REGION IN NEW SOUTH WALES<sup>1</sup>



### 2.1 Population

Dubbo Regional LGA's population is expected to grow from 54,195 in 2021 to 66,341 in 2041, which equates to a projected growth rate of approximately 1.02% per year (Graph 1). The area within Dubbo which is forecast to experience the largest increase is South East Dubbo, which is expected to represent 38.96% of Dubbo's total population growth in this time.

GRAPH 1. DUBBO REGIONAL LOCAL GOVERNMENT AREA POPULATION FORECAST TO 2041<sup>2</sup>



<sup>1</sup> RDA Orana, 2019: <https://www.rdaorana.org.au/about-us/#:-:text=RDA%20Orana%20is%20an%20incorporated,to%20local%20priorities%20and%20needs>.

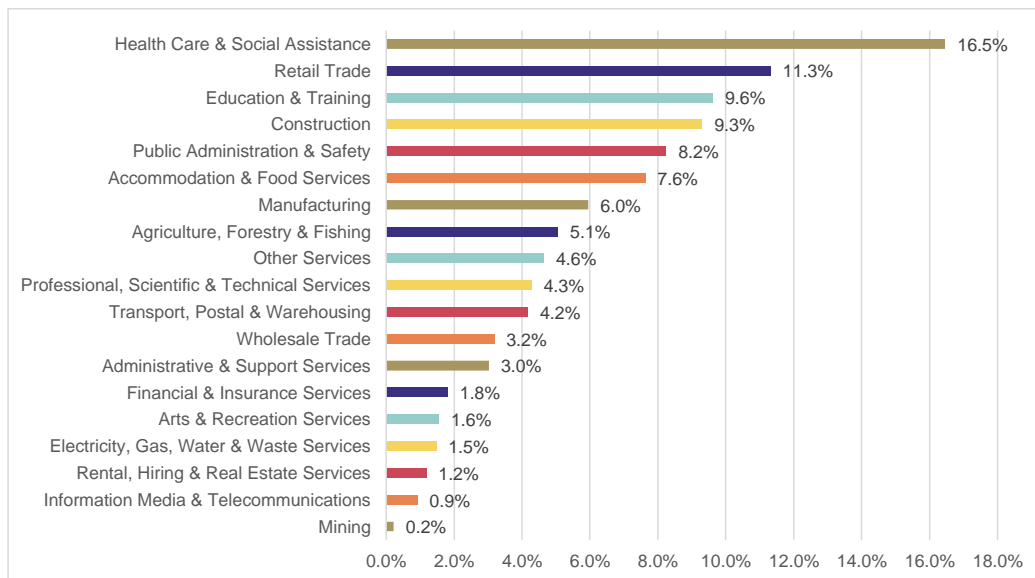
<sup>2</sup> Remplan, 2022: <https://app.remplan.com.au/dubboregionalcouncil/economy/summary?state=MLy4F4X2dl5mGNzsMNdkAltEHwHVwB>

Dubbo is the largest locality in the region, with a population of 43,516, while Wellington has a population of 4,096 (Remplan, 2022). In 2021, 37 was the median age in the LGA, compared to 38 years in 2016.

## 2.2 Economy and Labour Force

The Dubbo Regional economy is driven by a labour force of 22,957. The largest employer in the region is health care and social assistance, making up 16.5% of jobs in the LGA (Graph 2).

**GRAPH 2. ECONOMIC SECTORS RANKED BY PERCENTAGE OF JOBS IN DUBBO LGA<sup>3</sup>**



Of note to this project is the combined 38.5% of jobs in the Dubbo region supported by sectors for which short-term accommodation would be particularly impactful:

- ▶ Health Care & Social Assistance (e.g. at Dubbo Base Hospital, primary hospital for the Far West)
- ▶ Manufacturing
- ▶ Electricity, Gas, Water & Waste Services (for example through projects comprising the Central West and Orana Regional Energy Zone)
- ▶ Construction (e.g. Inland Rail at Narromine)
- ▶ Agriculture, Forestry and Fishing
- ▶ Mining (for example through the Critical Minerals Hub, including Australian Strategic Minerals project at Toongi)

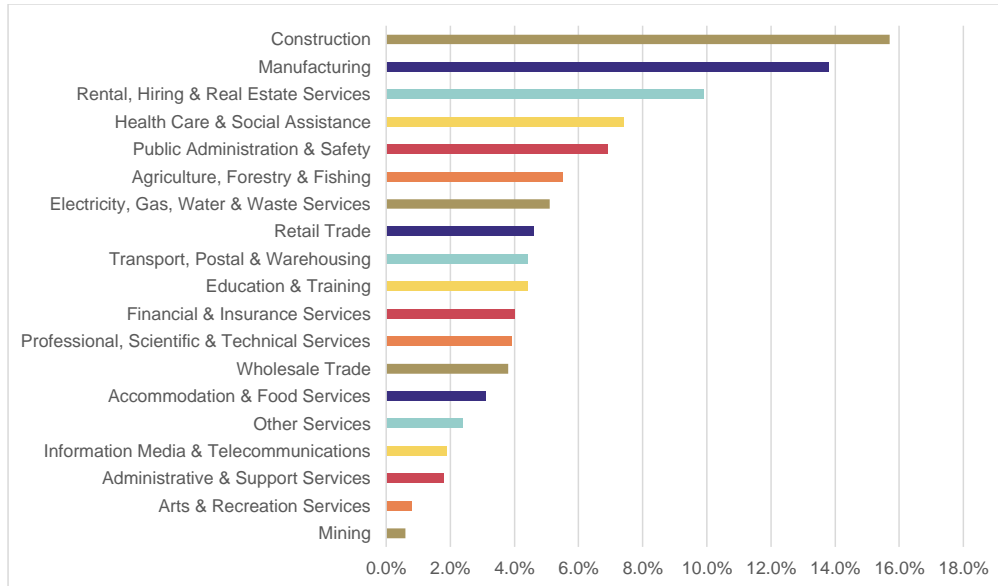
<sup>3</sup> Remplan, 2022: <https://app.remplan.com.au/dubboregionalcouncil/economy/summary?state=MLy4F4X2dl5mGNzsMNdkAltEHwHVwB>



The unemployment rate for the Dubbo LGA as of March 2022 was 2.9%, substantially below the NSW rate of 4.0%, indicating strong employment demand across the region.

The Dubbo LGA has a Gross Regional Product (GRP) of \$3.79 billion, representing 0.6% of the NSW Gross State Product (GSP).

**GRAPH 3. ECONOMIC SECTORS RANKED BY PERCENTAGE OF DUBBO GRP CONTRIBUTED<sup>4</sup>**



Of the 6 economic sectors identified above as most likely to be impacted by the need for short-term worker accommodation, 5 are within the 7 largest contributors to Dubbo's GRP. This indicates that the expansion of local short-term accommodation is essential to maintaining and growing the Dubbo economy now and into the future.

## 2.3 Housing

The following observations have been made regarding housing in Dubbo Regional LGA.

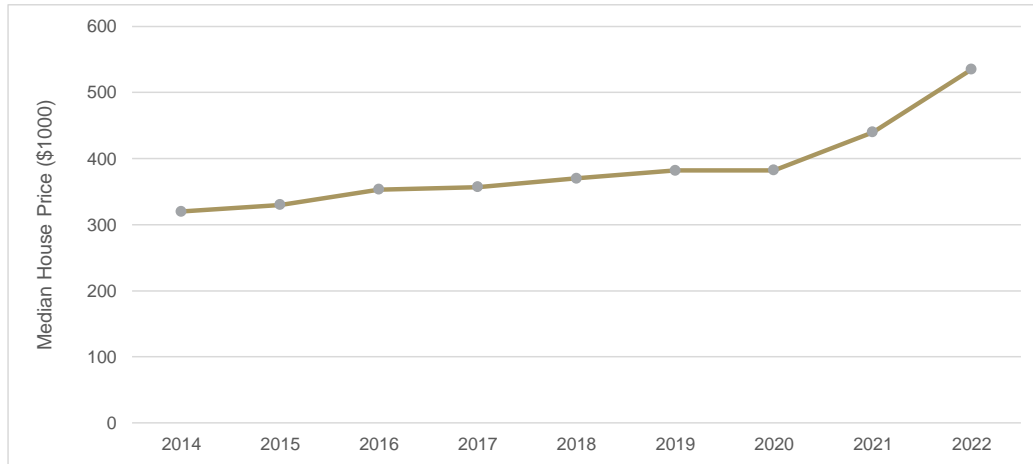
### 2.3.1 Supply and Demand

Land release for residential development is focussed in Dubbo's North West, West and South East, as initially outlined in the *Residential Areas Development Strategy* (1996) and enacted through later project documents such as *South-East Dubbo Residential Urban Release Area Stage 1 Structure Plan* (2016).

<sup>4</sup> Remplan, 2022: <https://app.remplan.com.au/dubboregionalcouncil/economy/summary?state=MLy4F4X2dl5mGNzsMNdkAltEHwHVwB>

As demonstrated in Graph 4, Dubbo has experienced a significant increase in median house price (44.5%) in the period 2018-2022.

**GRAPH 4. MEDIAN HOUSE PRICES IN DUBBO 2018-2022 (CORELOGIC, 2022)**



Rental prices have followed a similar trajectory, demonstrating the growing demand for accommodation in the region. This trend is demonstrated in Table 1 below.

**TABLE 1 RENT INCREASES PER DWELLING TYPE IN DUBBO BETWEEN 2011 AND 2022 (PRD NATIONWIDE RESEARCH, 2011; HTAG ANALYTICS, 2022)**

Dwelling	2 Bedroom	3 Bedroom
2011 Median Weekly Rent	\$170	\$260
2022 Median Weekly Rent	\$324	\$378
\$ Increase	\$154	\$118
% Change	90.5%	45.4 %

**2.3.2 Vacancy Rates**

Dubbo has a rental vacancy rate of 0.5%, indicating significant rental demand and limited supply. The vacancy rates of Central West and Regional NSW were 1.30% and 1.33% respectively for June 2022 (REINSW, 2022).

## 3. Strategic Context



Understanding the strategic context of a regional area is critical to any policy analysis and recommendations. A brief summary of the regional and local context is below.

### 3.1 Regional Context

Important context for the wider region surrounding the LGA includes:

#### 3.1.1 Central West and Orana Regional Plan

The NSW Government has developed the Central West and Orana Regional Plan as a 20-year land-use blueprint to support a prosperous future for the region, of which Dubbo Regional LGA is a core part. The Plan outlines objectives, and subsequent strategies that provide guidance for councils in preparing local strategic plans, project plans, and planning proposals, as well as setting direction for state agencies to support the objectives of the Plan.

Objective 10 of the Plan is to provide accommodation options for temporary workers, recognising that the area experiences high demand for short-term accommodation due to large scale infrastructure, renewable energy and mining projects, as well as seasonal agricultural employment. Under this objective, Councils are guided to prepare local housing strategies and local plans which enable safe, secure, quality and well-located housing for temporary workers.



### **3.1.2 Regional Development Australia Orana**

Regional Development Australia (RDA) Orana aims to support economic development of the Orana Region by:

- ▶ Facilitating industry collaboration
- ▶ Encouraging public and private investment
- ▶ Supporting cooperation between all stakeholders.

This is achieved by building partnerships and working with all relevant governments and agencies to respond to local priorities and needs.

#### **ORANA REGION DESIGNATED AREA MIGRATION AGREEMENT**

RDA Orana and the Australian Government have reached agreement on the *Orana Region Designated Area Migration Agreement* (DAMA). The Orana DAMA is an-employer sponsored visa program to provide employers a tool to sponsor skilled overseas workers in specified industries in the region that are currently experiencing critical skill and labour shortages. The occupations list sets out eligible occupations for sponsorship in the area. These occupations are mainly in the health and social assistance, agricultural, and professional services sectors.

### **3.1.3 Central West Orana Renewable Energy Zone**

The Central West Orana Renewable Energy Zone (REZ) will be the first in NSW and covers 20,000 square kilometres, including Dubbo and Wellington. Some key points include:

- ▶ By 2030, it is expected to provide at least 3000 megawatts of cheap, reliable electricity, enough to power 1.4 million homes and drive \$5.2 billion in private investment into the Central West.
- ▶ The REZ is expected to support around 3,900 peak construction jobs and 500 ongoing positions in the Central West Region.

EnergyCo NSW will act as Infrastructure Planner to assess and recommend REZ network infrastructure projects that best suit each community's needs. One of the first phases of the REZ development will be transmission corridor upgrades, set to begin in 2023.

## **3.2 Local Context**

The Dubbo Regional LGA local context is important to consider. This section will outline the strategic underpinnings for development and growth in the LGA that may influence the supply and demand for housing, and short-term worker accommodation.

The *Community Strategic Plan* (CSP) is the highest-level strategy that will guide and influence the direction of Council, the community and other levels of Government over the coming years. A major theme of the CSP is housing with the following objectives pertaining to housing, including short-term accommodation:

- ▶ Housing meets the current and future needs of our community
- ▶ An adequate supply of land is located close to community services and facilities
- ▶ Short-term and emergency accommodation is available

### **3.2.1 Land Use Planning**

The *Urban Areas Development Strategy* (UADS) and the *Rural Areas Development Strategy* (RADS) were adopted in 1996 and reviewed in 2007. These form the basis for land use zoning and planning controls in the *Dubbo Regional Local Environmental Plan 2022* (LEP).

The mechanisms and controls to ensure orderly residential development is outlined in the Residential Release Strategies that guide the provision, timing, and level of residential development in the Urban Release Areas identified in the west and the southeast of the City.

The UADS outlines the economic basis for a coordinated and logical evolution of urban development to the west, and southeast of the City, where new development will 'balance' the predominant easterly spread of Dubbo.

### **3.2.2 Economic Development**

The *Economic Development Strategy* outlines the strategic themes that have been identified as the 10 Steps to Dubbo's Economic Success:

- ▶ Infrastructure development
- ▶ Tourism destination development
- ▶ Agricultural sustainability and diversification
- ▶ Workforce and skills development
- ▶ Marketing and investment attraction
- ▶ Mining and mining services
- ▶ Transport and distribution
- ▶ The region's service centre
- ▶ Advocacy and leadership
- ▶ Business and industry expansion

### **3.2.3 Dubbo Mining Areas Land Use Strategy**

The *Dubbo Mining Areas Land Use Strategy 2015* promotes growth in the mining and mining technology/services industry. It aims to ensure the impacts of mining are adequately managed to maintain the unique quality of life residents enjoy and the environmental values of the LGA.

Strategy Two of the overall document notes the importance of ensuring the housing needs of the Dubbo community are met, acknowledging that housing is a significant issue Council and the mining industry must carefully consider. Outcome 2.6 states that mining accommodation should be integrated into existing residential areas and provides for ongoing sustainable permanent infrastructure.

Other relevant Strategies and their key features are noted in the table below:

Document	Strategic Directions
<i>CBD Precincts Plan</i>	<ul style="list-style-type: none"> <li>▶ Provides the strategic direction for Dubbo's Centre</li> <li>▶ Aims to encourage increased activity through placemaking and development in the City Centre that will encourage economic development and build a stronger business environment within the commercial centre</li> </ul>
<i>Smart City Strategy</i>	<ul style="list-style-type: none"> <li>▶ Seeks to develop Dubbo in an innovative, liveable, and sustainable manner</li> <li>▶ Embraces technology in town planning</li> </ul>
<i>Health, Education and Wellbeing Precinct Master Plan</i>	<ul style="list-style-type: none"> <li>▶ Partnership between DRC, Charles Sturt University, the Western NSW Local Health District and Department of Planning, Industry and Environment</li> </ul>
<i>Wellington Town Centre Plan</i>	<ul style="list-style-type: none"> <li>▶ Provides a strategic framework to re-vitalise the Town Centre and establish a vision for its future</li> <li>▶ The key aim of the Plan is to create a safe, attractive and vibrant Town Centre for the future</li> </ul>
<i>Dubbo Transportation Strategy</i>	<ul style="list-style-type: none"> <li>▶ This Strategy provides a blueprint to resolving current transport issues in Dubbo, and maintain quality of life accounting for the growth in the region</li> </ul>
<i>Wellington Settlement Strategy</i>	<ul style="list-style-type: none"> <li>▶ Sets the strategic direction for planning in Wellington</li> </ul>

## 4. Needs Analysis



Whilst a detailed quantitative supply/demand analysis of short-term worker accommodation and the broader Dubbo housing market exceed the scope of this project, the following forces have been assessed.

### 4.1 Supply

The current supply of accommodation in the Dubbo region is outlined below.

#### 4.1.1 Dedicated Short-term Accommodation

Current short-term accommodation options in Dubbo primarily consist of motels, hotels, motor inns and cabins across the region. As of March 2022, there are 55 such venues across the LGA, offering a combined total of 1526 rooms and a capacity of 5684 occupants.

55	1526	5684
Motels, hotels, motor inns and caravan park proprietors	Total number of bookable rooms/lots/cabins available	Maximum capacity of all venues

Average occupancy of short-term accommodation in Dubbo is 75%, though this fluctuates throughout the year and periodically peaks at around 85-95% occupancy. That the region semi-regularly approaches near-complete short-term accommodation occupancy demonstrates the supply challenges it could face when projects such as the REZ, Critical Minerals Hub and Inland Rail cause worker populations to swell.

75%	85-90%	381
Average short-term accommodation room/lot occupancy in DRC	Peak occupancy levels for Dubbo short-term accommodation	Average number of rooms/lots available per night throughout the year

#### 4.1.2 AirBnB Supply

Council may note that accommodation supply in Dubbo through Airbnb and other online rental-brokering platforms has grown in recent years.

Short-Term Rental Data Analytics platform AirDNA estimates there are approximately 150 dwellings available for short-term rent on these platforms in Dubbo LGA<sup>5</sup>. Using ABS figures for average people per dwelling in Dubbo (2.5), at full occupancy these dwellings could house an additional 360 short-term visitors to the region<sup>6</sup>. However, the availability of Airbnb accommodation is highly volatile (i.e. while motels are permanent, Airbnb properties can be withdrawn from the market at any time). Additionally, its scope and availability is not easily controlled by Council.

<sup>5</sup> AirDNA, 2022: <https://www.airdna.co/vacation-rental-data/app/au/new-south-wales/dubbo-regional-council/overview>

<sup>6</sup> ABS, 2022: <https://abs.gov.au/census/find-census-data/quickstats/2021/10503>

**4.1.3 Land Release**

Council planned and publicised the release of 52 residential lots as part of the Keswick East Stage 5 Release 2. These lots were presented under auction in October of 2022.

However, using house and land sales as proxies, it appears Council’s current land release schedule could be under-equipped to meet demand trends. According to a 2021 analysis completed by CoreLogic Asia Pacific, between 2012 and 2021, Dubbo averaged 797 house sales per annum and 237 land lot sales per annum.<sup>7</sup> Thus Council could likely consider accelerating its land release schedule planned for the immediate future in order to improve residential property supply.

Housing in the Dubbo region is predominantly made up of low-density dwellings; separate houses constitute 82% of primary dwelling stock in Dubbo and 85% in Wellington. Townhouses constitute 8% of dwellings in Dubbo and units/flats 10%; in Wellington, they constitute 5% and 2% of dwellings respectively.

82%	10%
Percentage of dwelling stock that are separate houses in Dubbo	▶ Percentage of dwelling stock that are units/flats in Dubbo

**4.1.4 Future Developments**

There are several medium-high density developments in various stages of development applications, which may have an impact on accommodation supply in the future. These include:

- ▶ No. 1 Church Street, Dubbo – 80 units
- ▶ Liberal Development, Macquarie Street, Dubbo – 162 Hotel Rooms and 41 residential apartments

**4.1.5 3D Homes Potential**

To address accommodation demand amid material and labour shortages, Council has initiated a trial of 3D-printed homes. While this innovative and exciting trial presents great potential for rapid accommodation construction at minimal cost, its implementation at scale will most likely only be possible in the medium-to-long term. Thus, it is unlikely to make a sizeable contribution to Dubbo’s short term worker supply quickly enough to address major industry project demands (see ‘Demand’ analysis below).

<sup>7</sup> CoreLogic Asia Pacific, <https://d218r57cmet8do.cloudfront.net/downloads/Economic-Development-%E2%80%93-Dubbo-Suburb-Statistics-Report-%E2%80%93-October-2021.pdf>



## 4.2 Demand

An overview of current and potential future demand for accommodation in the Dubbo Region is outlined below.

### 4.2.1 Population growth

Dubbo's population has grown consistently in recent years. According to REMPLAN data provided by Council, since 2016, the population has grown by 4,645 people to 56,049 in 2022. The population is predicted to grow to 58,048 by 2026, 60,514 by 2031 and 65,327 by 2041.<sup>8</sup>

### 4.2.2 Industry demands

There is a suite of major infrastructure and industry projects planned to commence or continue across the Dubbo region in the short-to-medium term.

Project proposals are not clear on the proportion of staff who will travel from outside the area and will require accommodation in Dubbo. However, given the proximity of each project, and given its facilities as a regional hub it is reasonable to expect a large fraction of travelling staff will seek accommodation in Dubbo.

Review of project timelines suggests that demand for short-term worker accommodation will peak across 2024-2025. The projects and enterprises that will contribute most significantly to worker accommodation demand are listed below, along with their expected **peak** staffing numbers:

- ▶ Inland Rail at Narromine: 250
- ▶ Regional Rail Maintenance Facility: 120
- ▶ Central West and Orana Region Regional Energy Zone: 3,900
- ▶ Australian Strategic Minerals project at Toongi: 1,000
- ▶ Fletcher International Exports processing plant: 400
- ▶ Transport for NSW / other NSW Government Departments: 500

The following analysis has assumed that these projects, along with other smaller ones, will create a **peak** demand at 5000 workers. This assumption has been reached on the bases that:

- ▶ Not all project workers will require accommodation (i.e. some staff will be locally based)
- ▶ Not all short-term workers requiring accommodation will do so in the Dubbo LGA (and therefore will not place strain on Dubbo's accommodation supply)
- ▶ It is unlikely that the maximum staffing amount for each project will neatly overlap (so the overall peak at any one time is less than simple addition of every individual project peak)

This expected peak would cause the LGA's population to swell by approximately 10% if all workers were housed in Dubbo. Note the analysis has also accounted for the permanent/ongoing workers associated with these projects, who have been allocated to long-term rather than short-term accommodation.

<sup>8</sup> Remplan, 2022: <https://app.remplan.com.au/dubboregionalcouncil/community/summary?state=Z4QnTq1yxuwzQ52Sr1Dr0JsWfFaJZ>

## 5. Shortfall Analysis



This section estimates the magnitude of Dubbo's present and projected housing shortage, based on available information. It incorporates estimates of supply, demand, standard population growth, permanent/ongoing workers across major projects, and short-term workers across the same projects.

### 5.1 Calculations and Key Assumptions

To present a comprehensive estimation of Dubbo's present and projected dwellings shortfall, several important assumptions were made. These are major considerations in the analytical process and are summarised below to assist interpretation of key findings. A more detailed explanation of each assumption can be found in Appendix A.

#### 5.1.1 Worker Demand

Worker Demand data was provided to Delos Delta by Council, and consisted of the following information:

ASSUMPTION / INPUT	→	INTERPRETATION / MEANING
At peak demand, 5000 short-term workers will be employed by major projects across the Dubbo region	→	Provides quantitative basis for accommodation demand across the 10-year scope
Analysis has assumed that 10% of this short-term worker peak (500 workers) will elect to stay in Dubbo permanently after project completion	→	Short-term workers also affect Dubbo's permanent housing supply for residents
1,860 ongoing full-time employment opportunities will be supported by upcoming projects across the Dubbo region	→	Ongoing employment is longer-term, and therefore will affect long-term accommodation demand

#### Standard Population Growth

Standard population growth accounts for births and permanent migration due to normal factors and forces. This takes place regardless of major projects in the Region. REMPLAN projections provided by Council were applied across the assessment period and included in the analysis as a factor that increases accommodation demand.

**ASSUMPTION/ INPUT**

Dubbo Regional Council is expected to grow from 56,049 (2022) to 60,935 (2032) – an increase of 8.7%

**INTERPRETATION / MEANING**

Provides the quantitative baseline for accommodation demand excluding short-term workers

**Dwelling Occupancy**

Using statistics procured from the ABS alongside data acquired from short-term accommodation providers, Dubbo's average dwelling occupancy rates were calculated for both accommodation types<sup>9</sup>.

**Long-term accommodation:** 2.5 people per household

**Short-term accommodation:** 1.75 people per dwelling

**Short-term Accommodation Supply**

Short-term accommodation in Dubbo was limited to the following types to calculate accurately accommodation supply. They have been incorporated in the analysis as 'short-term dwellings'. It is important to note that when included in the supply calculation across the 10-year period, these accommodation types were assumed to grow in proportion to (or in-step with) standard population growth.

**ACCOMMODATION TYPE**

**ASSUMPTION / INPUT**

**INTERPRETATION / MEANING**

Hotels/Motels/Short-stay accommodation



On average, **381** rooms/cabins/short-stay houses are available (vacant) per night across the Dubbo LGA



Vacant accommodation that could house short term workers; included in the accommodation supply calculation

Australian Strategic Minerals (ASM) Drive-In-Drive-Out (DIDO) worker accommodation



Data provided by Council suggests this supply type can house **200** short-term workers



Included in the supply calculation

Locum Drs



Data provided by Council suggests this supply type can house **50** short-term workers



Included in the supply calculation

AirBNB



Data procured from AirBNB suggests that this supply type can house **360** in short-term stays

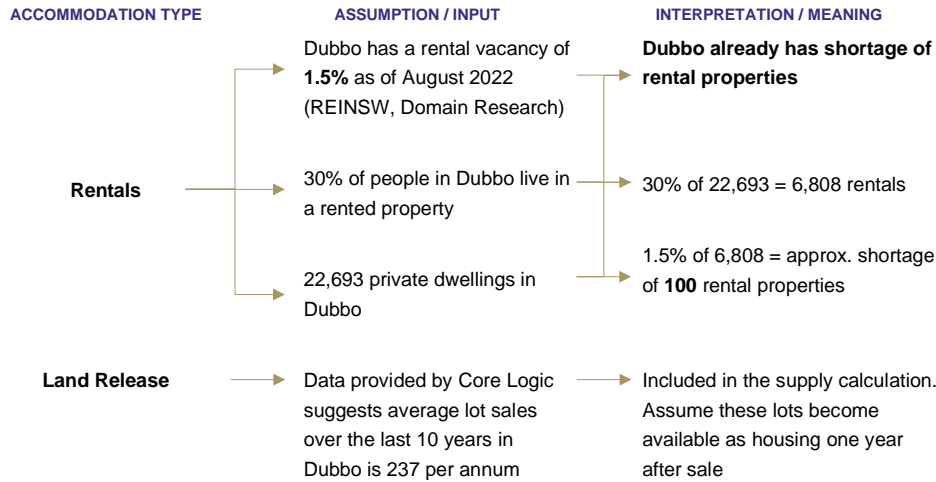


Included in the supply calculation

<sup>9</sup> ABS, 2021: <https://abs.gov.au/census/find-census-data/quickstats/2021/10503>

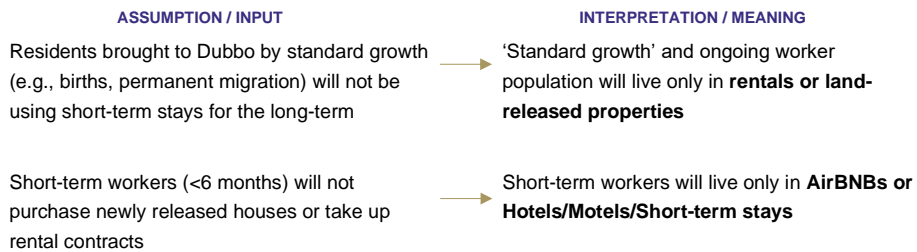
**Long-term Accommodation Supply**

The following long-term supply elements have been incorporated as ‘**long-term dwellings**’. Parallel to the short-term supply assumptions made above, these accommodation types are assumed to grow in proportion to standard population growth.



**Allocation of People to Accommodation Types**

It is unrealistic to treat all available room types (e.g., hotels/motels, land release, rentals) as equally available to all prospective permanent and temporary migrants. As such, the following assumptions were made with regards to population type and accommodation access. See Appendix B for a full breakdown of housing shortfall by population type.



## 5.2 Analysis Scenarios

Shortfall modelling was conducted across a variety of scenarios. Each includes the short-term worker peak of 5,000 and a constant ongoing worker demand of 1,860 people. The scenarios differ only in their distribution of demand over the assessment period: for example, how quickly the demand peak is reached and how quickly it subsides as short-term workers leave the area. They are designed to reflect different possibilities regarding the need for short-term workers in the area over time.

The study period spans 10 years from 2023 to 2032 inclusive.

- ▶ **Scenario 1:** Rapid acceleration of worker demand to the peak (in 2026) followed by a rapid decline in worker demand, completely subsided by 2029
- ▶ **Scenario 2:** Gradual growth in short-term workers up to a peak in 2027, followed by a gradual decline in demand subsiding completely in 2031
- ▶ **Scenario 3:** Fast growth to the peak (in 2026) followed by a gradual decline (subsiding in 2030)
- ▶ **Scenario 4:** Slow growth to the worker peak (in 2027) followed by a rapid decline (finished in 2030)

Note that each of these scenarios was analysed across three demand assumptions, recognising that some short-term workers would be locally sourced and thus would not require new accommodation, or would find accommodation elsewhere than in DRC. Based on our experience, a figure approximately between Assumptions 2 and 3 is most realistic. Assumption 1 presents a theoretical maximum demand figure but is unlikely to eventuate in practice.

- ▶ **Assumption 1:** 100% of non-ongoing/short-term workers would require accommodation in Dubbo
  - ▶ **Assumption 2:** 75% of non-ongoing/short-term workers would require accommodation in Dubbo
  - ▶ **Assumption 3:** 50% of non-ongoing/short-term workers would require accommodation in Dubbo
- ▶ Based on the 'short-term worker only' analysis throughout the next section, it can be observed that short-term workers will likely absorb a significant proportion of accommodation at the peak of each scenario. This impact the accommodation types that Council may wish to prioritise.



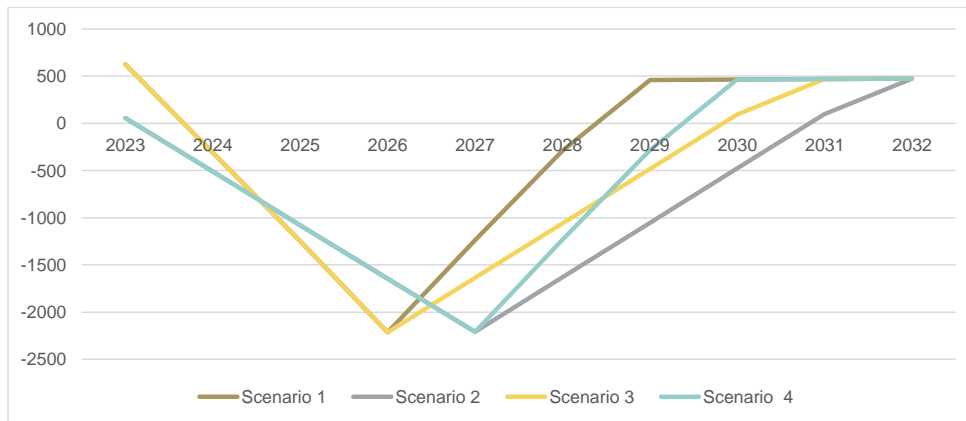
### 5.3 Key Findings

The below findings demonstrate the estimated accommodation shortfall for short-term workers across the assessment period. Note that each graph takes short-term worker demand against Dubbo's accommodation supply, with each of these inputs created via the assumptions and calculations made prior. For supplementary information and computations regarding this process, please refer to Appendix B.

The insights highlighted in this section focus on the demand of short-term workers only, as measured against the supply of appropriate short-term accommodation. It should be noted that the figures provided in the graphs are representative of short-term accommodation dwelling requirements.

#### Assumption 1: 100% of short-term workers require accommodation in Dubbo

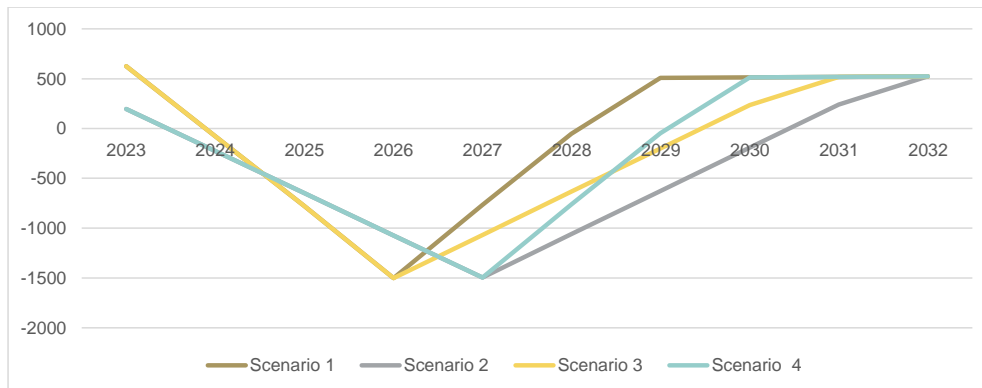
**GRAPH 5. SHORTFALL PROJECTIONS – 100% SHORT-TERM WORKER DEMAND ONLY**



The intensity of the short-term accommodation shortfall peaks at different times for different for scenarios. In 2026 Scenarios 1 and 3 demonstrate a shortfall of 2216 short-term dwellings, whereas that peak is reached in 2027 for Scenarios 2 and 4. All scenarios result in a surplus of 474 properties by the end of the assessment period, providing potential opportunity to repurpose infrastructure to address other forms of housing demand.

**Assumption 2: 75% of short-term workers require accommodation in Dubbo**

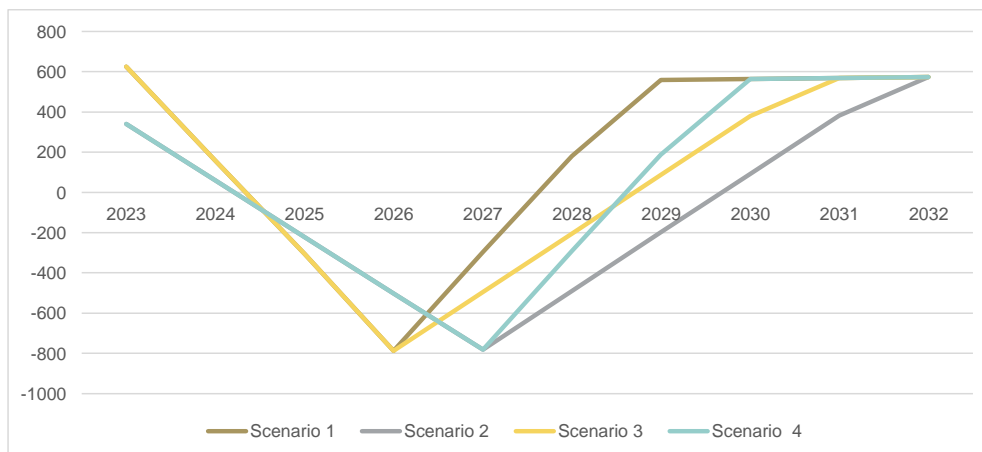
**GRAPH 6. SHORTFALL PROJECTIONS – 75% SHORT-TERM WORKER DEMAND ONLY**



The short-term accommodation shortfall peaks at 1500 dwellings – in 2026 for Scenarios 1 and 3, and in 2027 for Scenarios 2 and 4. Each scenario presents a surplus of 524 short term accommodation dwellings by the end of the assessment period.

**Assumption 3: 50% of short-term workers require accommodation in Dubbo**

**GRAPH 7. SHORTFALL PROJECTIONS – 50% SHORT-TERM WORKER DEMAND ONLY**



The short-term accommodation shortfall peaks at 784 dwellings – in 2026 for Scenarios 1 and 3, and in 2027 for Scenarios 2 and 4. Each scenario presents a surplus of 574 short term accommodation dwellings by the end of the assessment period.

## 6. Engagement Insights



The following section provides key insights generated through Delos Delta's engagement process. It draws on the experience and expertise of various community, government and industry members and leaders.

### 6.1 Current Strengths

This section articulates Dubbo's underlying unique strengths that, in the view of stakeholders engaged, could be leveraged to provide sufficient short-term housing.

#### 6.1.1 Abundant Land Availability

Stakeholders noted that undeveloped land was widely available in and around Dubbo, especially in the town's South and East. These were identified as potential sites where accommodation supply could be provided. Stakeholders also noted that release of this land could be completed relatively quickly, in light of the sentiment that Dubbo is approximately three years behind in the land release required to match demand for accommodation.

#### 6.1.2 Significant Tradesperson Supply

Stakeholders noted that the Dubbo region is home to a substantial supply of residential builders. This was noted as providing a workforce that could be leveraged to efficiently construct short-term housing stock in response to significant worker demands in the immediate future.

#### 6.1.3 Economic Stability

Stakeholders noted Dubbo's economic growth and stability. This was noted as making the region a safe and attractive place for investment, including for housing/accommodation. Stakeholder recognised Dubbo's status as a regional service and economic hub to a catchment area exceeding 100,000 residents. They noted that the value of local assets is highly likely to grow stably, and this could attract lucrative partnerships with external investors to develop local accommodation.

### 6.2 Current Challenges

This section highlights the challenges recognised by Stakeholders within the Dubbo region in its attempts to provide adequate short-term worker accommodation.

#### 6.2.1 Rapid Growth

Stakeholders felt that Dubbo's population growth, even excluding seasonal worker fluctuations, is outstripping the development of infrastructure, including accommodation and housing. Thus, it is likely that construction of longer-term housing solutions can only commence following development of a broad infrastructure suite (e.g. roads, electricity, sewerage). Stakeholders recognised that extending project timelines could be an implication of infrastructure supply not keeping up with housing demand.



### **6.2.2 Limited Rental Supply**

Stakeholders acknowledged Dubbo has low rental availability, with a rental vacancy rate of 0.5%, coupled with increasing rental costs. This low availability was recognised as potentially deterring companies and/or workers taking residence in the town for medium term stays (e.g. 6-12 months).

### **6.2.3 Inflexible Zoning**

Several stakeholders expressed their view that medium density housing could be an effective and important solution in solving accommodation supply issues. However, they also noted that since the *Residential Areas Development Strategy* (1996), through which the then Council elected against medium density housing, zoning for this housing type has been virtually eliminated across the city. Thus, developers and builders skilled and willing to produce medium density housing are no longer present in Dubbo, despite demand shifting towards this housing type.



## **6.3 Trends**

This section expands upon broader demographic and economic trends identified by stakeholders as drivers of their current housing state. These trends potentially need to be addressed in the planning of a future state.

### **6.3.1 Demand Make-up Shift**

Stakeholders noted that smaller families and single occupancy dwellings now constitute a larger proportion of Dubbo's housing and rental market than historically. This was revealed by stakeholders as providing broader impetus for higher density housing beyond just major industry projects. Demand posed by these trends leans away from traditional house-and-land blocks towards lower maintenance (even pre-furnished), smaller properties. Stakeholders considered that these housing types may reflect what is desired by workers moving to Dubbo for short-term work.

### **6.3.2 Motel Occupancy Rates**

Analysis completed by Maas Construction analysed Dubbo's motel occupation rates. Demand is generally very high (70-90% occupancy) and tends to peak midweek as opposed to on weekends, suggesting these rooms are generally occupied by short-term workers rather than tourists and recreational visitors.

## **6.4 Opportunities**

This section summarises the opportunities stakeholders noted that Dubbo could implement to leverage strengths and mitigate challenges.

### **6.4.1 Innovative Housing Solutions**

Several stakeholders expressed the view that large sections of Dubbo's available land area should be rezoned, to allow development of medium-density housing. Stakeholders also felt that landowners should be given the opportunity (and indeed, incentive) to subdivide larger blocks and facilitate more effective use of land in providing accommodation.

### **6.4.2 Industry Partnerships**

Stakeholders felt that large industry projects and enterprises attracting large number of workers to the region could meet their worker accommodation demands by forming local partnerships. For example, employers could work with Council to identify existing accommodation for their workers or could contract local tradespersons directly to construct short-term accommodation tailored to their project needs.

Additionally, project teams could work with local employment agencies to identify suitable workers who could be trained to staff projects, as this would offset demand for new staff housing. However, stakeholders felt it important to recognise that wholesale local recruitment should be avoided to avoid potential skills shortages in other industries. Analysis by Umwelt suggests it would be feasible for approximately 10% of large project staff to be sourced from pre-existing residents of the Dubbo LGA.

### **6.4.3 Worker Camps**

Several stakeholders identified purpose-built short-term worker camps as a solution to staffing accommodation demands for the large industry projects discussed above. They also emphasised the importance of tailoring camp design not only to worker demand but also to community needs, as well as to pragmatic concerns of efficacy, including that:

- ▶ Camps should be located close to town so that workers have adequate access to services
- ▶ Camps should be built such that underlying infrastructure (sewer, water, power, digital) can remain for longer term community benefit when temporary structures are removed
- ▶ Camp design would cheaply and feasibly account for its position on the flood plain; for example, so that it could be easily evacuated in event of emergency

#### **6.4.4 Improve village service delivery**

In general, stakeholders felt that infrastructure and other services provided to Wellington and other towns surrounding Dubbo had been reduced. This was noted as forcing both pre-existing residents and migrants to the region to seek accommodation specifically in Dubbo, magnifying housing demand. They felt this demand could be more sustainably distributed across the region's townships if services were adequate. However, they also recognised that this distribution of demand would also be contingent on reliable transport between surrounding towns and Dubbo.



## 7. Recommendations and Options Analysis



Dubbo Regional Council faces the challenge of a housing shortfall. Without intervention, the impacts of this shortfall may be exacerbated by short-term accommodation supply and demand between 2025-2030 as major projects across the region see a spike in worker demand.

This section distils prior analysis into a series of actionable recommendations Council may consider regarding short-term worker accommodation in the LGA to overcome these potential effects. The suggested phasing (and as such, the period of time, be it immediate, short, or long term) is indicated in the following section. These options encompass methods including Policy Levers, Incentives and Direct Interventions (by Council):

1. Create, and support over the medium term, a 'Housing Coordinator' role in Council. Develop a job description, resourcing plan, and run a recruitment process.
2. Develop a supporting governance group within Council, including a housing taskforce or steering committee (hereafter referred to as The Taskforce). This group will identify and consider the key housing issues for Council at any point in time.
3. Build and strengthen data collection and management around housing in the Region, to inform an understanding of challenges, measuring progress and reporting. Regularly review these processes. Where appropriate, some of this data can be released publicly to drive innovation and public awareness.
4. Develop a single stakeholder engagement group to work with The Taskforce, bringing together stakeholders from across the housing market, Council, and New South Wales Government.
5. Leverage the Taskforce to investigate immediate policy options, market interventions, and partnerships including:
  - ▶ Updating land release plans to immediately increase supply with a pricing strategy that dynamically reacts to changes in market sentiment
  - ▶ Review of underutilised commercial and Council buildings, and investigate viability for residential, public housing, and short-term accommodation
  - ▶ Incentives to property owners to maintain properties in the long-term rental market (including a limited timeframe for take-up of a rates waiver for a limited number of current Airbnb properties to return to the rental market)
  - ▶ Development of a short-term worker camp to be eventually re-purposed for tourism
  - ▶ Build-to-rent options for Council owned land
  - ▶ Review relevant Council and NSW Government policies and strategies (e.g. Council Policy for Solar and Windfarm) to develop an embed a framework of for short term accommodation over the duration of projects

- ▶ Mandatory developer contributions for affordable and community housing, with consideration to the overall impact this may have on supply.
  - ▶ Incentives for the development of shop top housing
  - ▶ Incentives for the development of residential flat buildings
  - ▶ Transportable and modular housing construction for residential release in the short term
6. Develop a Housing Strategy for Dubbo and Wellington, led by the Housing Coordinator. This should include an Affordable & Key Worker Housing Plan giving focus to affordable housing, housing availability, choice, and sustainability.
7. Collaborate with Community Housing Providers to understand accommodation requirements and investigate partnership opportunities, including:
- ▶ The provision of land on a shared equity basis for construction of affordable and key worker housing
  - ▶ Tripartite partnerships between Council, New South Wales Government, and Community Housing Providers
  - ▶ The gifting of land to Community Housing Providers
  - ▶ Possible partnerships to provide key worker housing in the short term, and community housing in the long term
8. Advocate to New South Wales and Australian Governments to ensure issues of housing availability in the Region are understood.
9. Review and update density targets to gradually increase population density over time. Include this update in Council's spatial planning, and reference in the Housing Strategy for Dubbo and Wellington.
10. Review Council systems and process to assess avenues for acceleration, and improved efficiency, effectiveness, and transparency. Investigate methods to expedite all priority projects as identified by the Housing Coordinator, likely to include medium and high-density projects, dual-occupancies, and workers' camps.

## 8. Indicative Phasing



The following phasing is recommended to deliver improved housing outcomes over the short and medium term. Timings are indicative only and are to be confirmed in detail by Council.

Action	Year 1				Year 2				Year 3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Light Purple	Light Purple										
2	Light Purple											
3		Medium Purple	Medium Purple			Medium Purple				Medium Purple		
4	Dark Purple	Dark Purple	Dark Purple									
5		Light Purple	Light Purple	Light Purple	Light Purple	Light Purple	Light Purple	Light Purple	Light Purple			
6				Light Purple	Light Purple	Light Purple	Light Purple	Light Purple				
7					Medium Purple	Medium Purple	Medium Purple	Medium Purple	Medium Purple	Medium Purple	Medium Purple	Medium Purple
8						Dark Purple	Dark Purple	Dark Purple	Dark Purple	Dark Purple	Dark Purple	Dark Purple
9				Light Purple	Light Purple				Light Purple			
10		Light Purple	Light Purple	Light Purple	Light Purple	Light Purple	Light Purple					

## 9. Case Studies



The following examples demonstrate the efficacy of methods suggested above in practice.

### 9.1 Marketing and facilitation: Parkes-ARTC Partnerships

Rather than requiring workers to arrange accommodation of their own accord, ARTC (project lead of Inland Rail) leveraged local partnerships to house short-term workers staffing the Parkes-to-Narromine Inland Rail project. This development initially caused significant worker inflow and accommodation shortages in Parkes, but these were ultimately remedied by direct partnership between ARTC (Inland Rail project company) and local accommodation providers. They allowed systematic and efficient identification of vacant dwellings from across the township and allowed workers to be accommodated by making innovative use of existing resources.

### 9.2 Workers' Camps and Funded Housing: Gilgandra Inland Rail Workers' Camp

A workers' camp can prove a cost-effective and conditions-appropriate method for housing a large quantity of workers for a short-to-medium term project. This is demonstrated by the Temporary Workers Camp' proposed by Gilgandra Shire Council to house workers on the Inland Rail.

Located adjacent to Dubbo Regional Council, Gilgandra Shire Council faces a series of similar housing challenges which demonstrate the applicability of this solution to Dubbo:

- ▶ The township is predominantly low density housing
- ▶ Rental vacancy is 0%; all rentable properties are tenanted and real estate agencies operate waiting lists
- ▶ Housing stress and affordability currently affect a considerable portion of the population
- ▶ Large undeveloped Council lots occupy fringes of the township
- ▶ Inland Rail project will bring roughly 500 workers to the area, rapidly swelling the LGA's population by ~12%

Recognising that attempts to house these workers within existing supply will place extreme stress on an already strained Gilgandra housing market, Council have proposed a 500-person worker camp on the outskirts of the township. It is located such that residents can conveniently integrate into and participate in the Gilgandra community and economy without endangering housing stock for existing/longer-term residents.

In addition, Council will construct 10 prestige 'turn-key' properties (estimated \$5 million in construction costs total) that will be leased to Inland Rail to house project managers across the 5-7 year project span. The lease agreement by Inland Rail provides Council the financial security needed to construct the homes, which will then be available for sale or rent to essential professional workers after the project concludes.

Given similar characteristics regarding housing stress and short-term worker demand by the two LGAs, Dubbo Regional Council could use this case study as a guide for its own short-term worker accommodation demands.

### 9.3 Transportable/modular housing: Dublin, Ireland

Council may wish to explore transportable housing as a means to quickly broaden the supply pool. This method quickly creates new housing stock at a low cost.

For example, Dublin City Council faced similar problems of short-term housing supply shortages, at times even resorting to placing families in bed and breakfast accommodation on an emergency basis. It remedied this shortage by quickly expanding its social housing supply base by placing modular housing on previously underutilised public land<sup>10</sup>.

This allowed quick construction (for example, 50 houses in 20 weeks in the initial phase) of quality high-density modern housing (e.g. 2-storey, 3-bedroom houses on 97 square meters). As the trial expanded to larger plots it proved a generally cost-effective method of alleviating extreme emergency and short-term housing demand.



<sup>10</sup> Dublin City Council Housing Delivery Action Plan, 2022



## Appendix A: Shortfall Analysis Assumptions



The table below details assumptions involved in the shortfall analysis.

TABLE A1: DETAILED CALCULATIONS AND KEY ASSUMPTIONS

Assumption	Description
Worker Demand	<p>Based off worker data provided to Delos Delta by Council:</p> <ul style="list-style-type: none"> <li>▶ An estimated 1860 ongoing FTEs will be supported by the major projects. Ongoing employment means these workers will live in the Dubbo region for a longer term, if not all, of the project period and thus will require more permanent accommodation</li> <li>▶ At peak demand, 5000 short-term workers will be employed by major projects across the Dubbo region</li> <li>▶ Note also that the analysis has assumed 10% of the short-term worker peak (500 workers) will elect to stay permanently in Dubbo once the projects have concluded, thereby facing greater demand on the region's permanent housing supply.</li> </ul>
Standard Growth	<p>Demand for housing in Dubbo will also be exerted by standard population growth; that is, births and permanent migration other than that attracted by major projects.</p> <p>According to REMPLAN projections provided by Council, Dubbo Regional Council is expected to grow from 56,049 (2022) to 60,935 (2032) across the assessment period, a growth of 8.7%.</p>
Dwelling Occupancy	<p>Calculations for <b>long term accommodation</b> (i.e. rentals, purchasable homes, released land) have been performed by assuming the validity of ABS estimates of dwelling occupancy rates in Dubbo (<b>2.5 people per household</b>).</p> <p>Calculations for <b>short term accommodation</b> (see below for accommodation types considered in this category) have been performed by assuming on average across all dwelling types, each individual motel room, cabin, AirBnB property, and other short-stay dwelling will house <b>1.75 occupants</b>.</p>
Short-Term Accommodation Supply	<p>The following supply elements have been incorporated as <b>'short-term dwellings'</b>:</p> <ul style="list-style-type: none"> <li>▶ <b>Hotels/motels/short-stay accommodation providers:</b> On an average night, 381 rooms/cabins/short-stay houses are available across accommodation providers in the Dubbo LGA. This figure was incorporated because it refers to vacant accommodation that <i>could</i> house short-term workers; as opposed to the region's ~1100 other rooms which are occupied and thus unable to accommodate further demand</li> </ul>

Assumption	Description
	<p>► <b>Locum Drs:</b> Data provided by Council suggests this accommodation supply can house 50 short term workers</p> <p>► <b>AirBNB:</b> Data from AirBNB suggests this accommodation supply can house 360 people in short-term stays</p> <p>►</p> <p>Overall, it is assumed that supply of these accommodation types grows in proportion to standard population growth. <b>This assumption is not likely not realistic;</b> as demand for short-term accommodation swells it is likely that the market will respond more sensitively than simple proportionate growth. This input is used merely to demonstrate the scale of the issue if no concerted effort is made to substantially improve supply.</p>
Long-Term/Permanent Accommodation Supply	<p>The following supply elements have been incorporated as '<b>long term dwellings</b>':</p> <p>► <b>Rentals:</b> Dubbo Regional Council had a rental vacancy rate of 1.5% in August 2022 (REINSW, Domain Research). Anything less than 3% is considered a shortage by REINSW, significantly driving up accessibility and affordability of rentals even if some properties are on the market. Thus rather than providing vacant supply, <b>Dubbo already has a rental shortfall.</b> To quantify the magnitude of this shortfall, the following ABS data was applied:</p> <ul style="list-style-type: none"> <li>• 30% of people in Dubbo live in a rented property</li> <li>• 22,693 private dwellings in Dubbo = 6,808 rental properties</li> <li>• Current shortfall to a healthy market = 1.5% (3% - 1.5%)</li> <li>• 1.5% of 6,808 = approximately 100 properties</li> </ul> <p>► Thus the analysis was conducted on the assumption that there is a shortage of 100 rental dwellings (limiting general migration and population growth in Dubbo) rather than vacant dwellings that can be used for accommodation.</p> <p>► <b>Land Release:</b> Data provided by Core Logic indicates that across the last ten years, averaged combined lot sales in Dubbo has averaged 237 lots / year. The analysis has assumed that these lots become available as housing one year after sale.</p> <p>Overall, it is assumed that supply of these accommodation types grows in proportion to standard population growth.</p>
Allocation of people to dwellings	<p>It is unrealistic to treat all available room types (e.g. hotels/motels, land release, rentals) as equally available to all prospective permanent and temporary migrants:</p> <p>► Residents brought to Dubbo by standard growth (e.g. births, permanent migration) will not be using hotel rooms for the long-term</p> <p>► Short-term workers (i.e. &lt;6 months) are not going purchase newly released houses or take up rental contracts</p> <p>Thus this analysis has assumed that:</p>

Assumption	Description
	<ul style="list-style-type: none"> <li>▶ 'Standard growth' and ongoing worker populations will live only in <b>rentals or land-released properties</b> (and given how many dwellings in the supply pool are actually motel rooms, this significantly restricts supply for this growth stream)</li> <li>▶ Short-term workers will live only in AirBnBs or motels/hotels and other short-term accommodation</li> </ul> <p>See the Appendix for a full breakdown of housing shortfall by population type (e.g. shortfall specifically for permanent/long-term migrants vs for short-term workers only).</p>

## Appendix B: Additional Shortfall Modelling

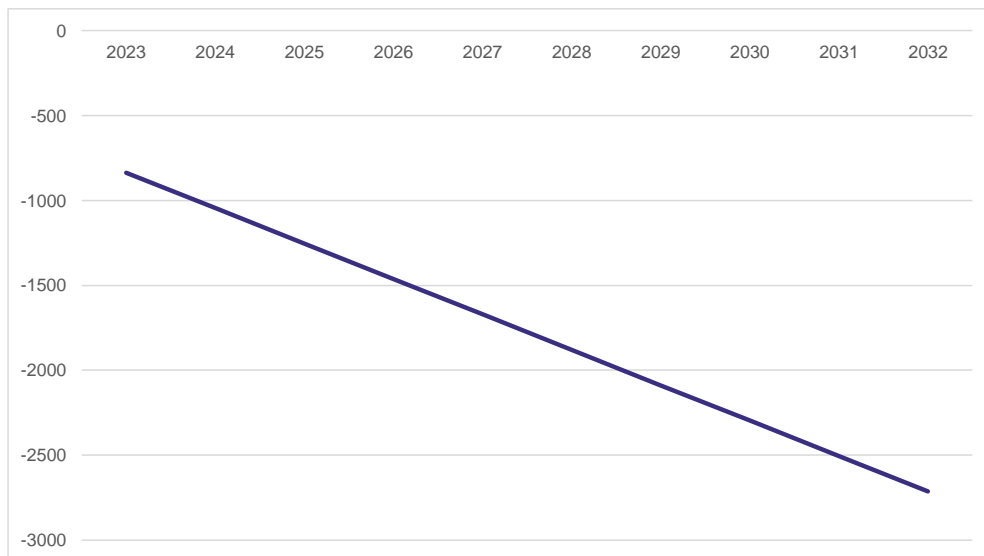


The following items are provided as auxiliary information to support the shortfall modelling findings denoted prior in the report. Included are the demand projections for various levels of ongoing workers - the 4 scenarios used throughout the report used here for consistency - as well as the total shortfalls of these levels, and the shortfall correlated to the standard growth model. When observing the demand projections, it is important to recognise that the initial shortfall, as discussed above, has been adjusted according to standard population growth and is included in each scenario. The base case is defined as:

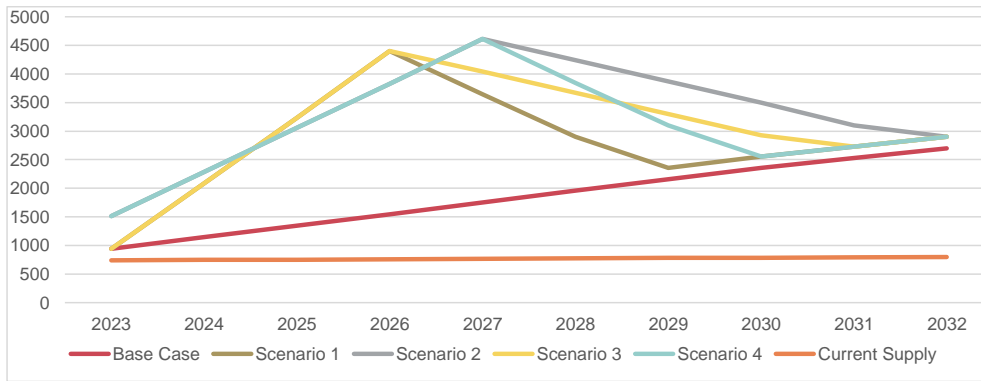
- **Base Case:** No short-term workers (Ongoing workers & standard population growth only)

As well as this, note that there is only one representation of the standard growth shortfall; this is because the standard growth model does not consider the varying levels of non-ongoing workers, as it is for standard growth and permanently based workers only. As such, this model remains consistent across all scenarios.

**GRAPH 8.** LONG-TERM RESIDENT SHORTFALL PROJECTIONS (STANDARD GROWTH & ONGOING PROJECT WORKERS; NO INCORPORATION OF SHORT-TERM WORKER DEMAND)

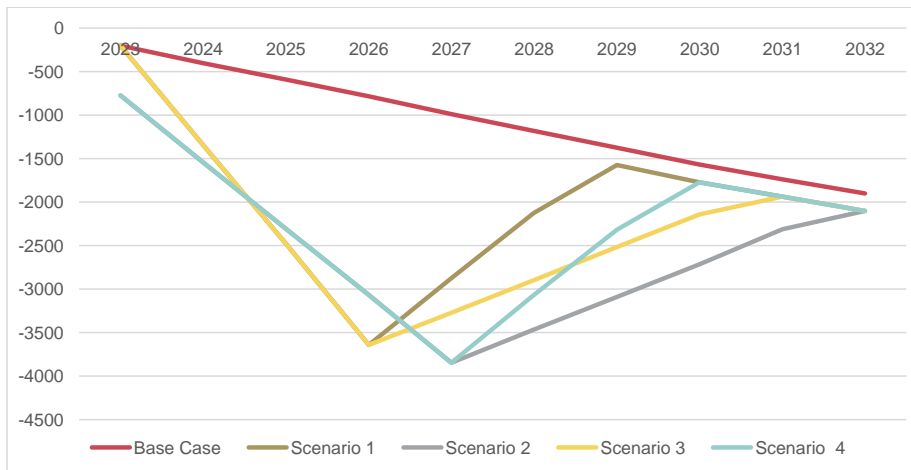


**GRAPH 9.** ASSUMPTION 1 DEMAND PROJECTIONS: NUMBER OF DWELLINGS REQUIRED IN ADDITION TO EXISTING SUPPLY (INCLUDING PERMANENT AND 100% SHORT-TERM STREAMS)



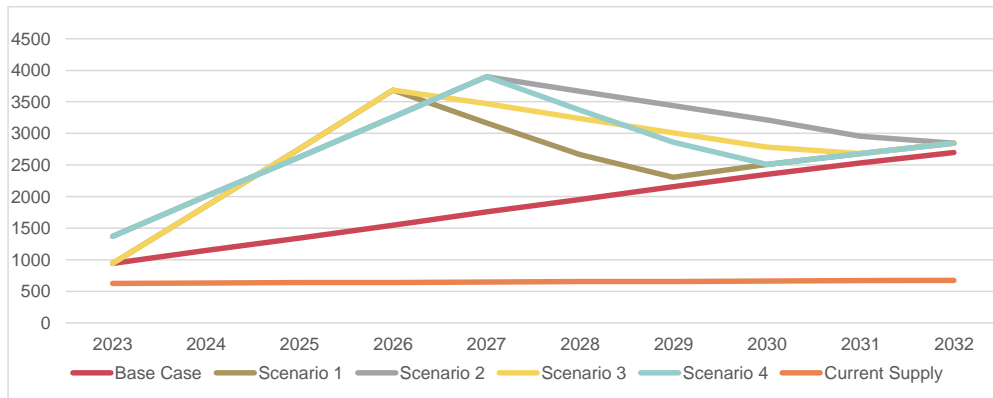
Overall accommodation demand (**all types**) peaks in 2027 at 3846 additional dwellings based on the worker distributions in Scenarios 2 and 4. All scenarios end the assessment period with a demand of 2898 additional dwellings by 2032 (relative to 2022 stock).

**GRAPH 10.** TOTAL SHORTFALL (ALL ACCOMODATION TYPES) FOR ASSUMPTION 1 (100% NON-ONGOING WORKERS ACCOMODATED IN DUBBO)



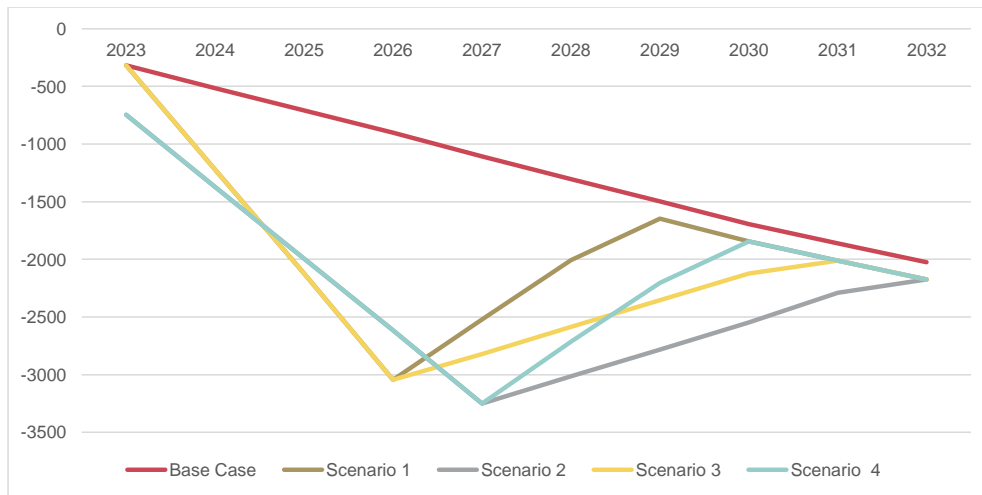
Shortfall in overall accommodation (across **all types**), under assumption 1, whereby 100% of short-term workers are accommodated in Dubbo.

**GRAPH 11. ASSUMPTION 2 DEMAND PROJECTIONS: NUMBER OF DWELLINGS REQUIRED IN ADDITION TO EXISTING SUPPLY (INCLUDING PERMANENT AND 75% SHORT-TERM STREAMS)**



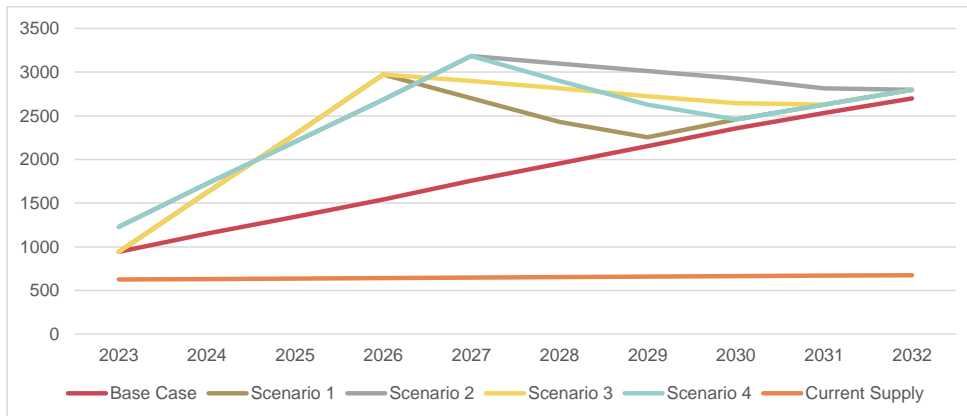
Overall accommodation demand (**all types**) peaks in 2027 at 3898 additional dwellings based on the worker distributions in Scenarios 2 and 4. All scenarios end the assessment period with a demand of 2,848 additional dwellings by 2032 (relative to 2022 stock).

**GRAPH 12. TOTAL SHORTFALL (ALL GROWTH STREAMS) FOR ASSUMPTION 2 (75% NON-ONGOING WORKERS ACCOMMODATED IN DUBBO)**



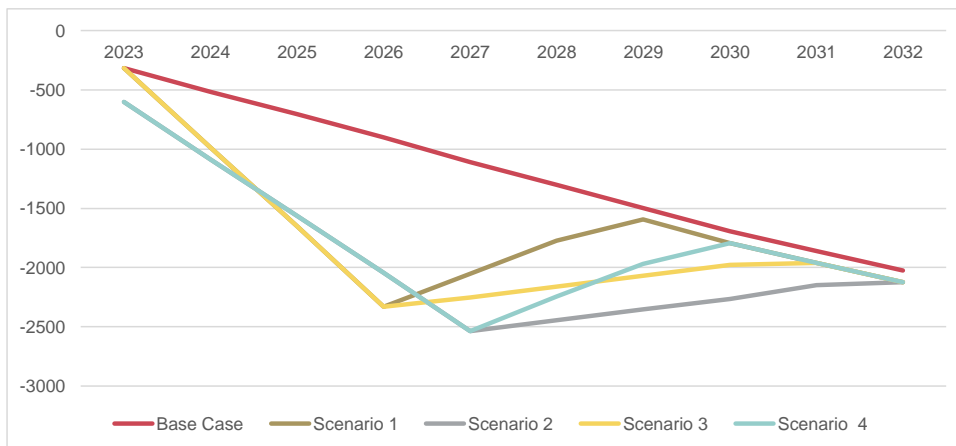
Shortfall in accommodation across all growth streams, under Assumption 2.

**GRAPH 13.** ASSUMPTION 3 DEMAND PROJECTIONS: NUMBER OF DWELLINGS REQUIRED IN ADDITION TO EXISTING SUPPLY (INCLUDING PERMANENT AND 50% SHORT-TERM STREAMS)



In the medium term, overall demand peaks across the scenarios in 2026-27 (2972 additional dwellings for Scenarios 1 and 3 on 2022 stock; 3184 for Scenarios 2 and 4); then grows gradually to the end of the assessment period where all scenarios require an additional 2798 dwellings beyond 2022 supply.

**GRAPH 14.** TOTAL SHORTFALL (ALL GROWTH STREAMS) FOR ASSUMPTION 3 (50% NON-ONGOING WORKERS ACCOMMODATED IN DUBBO)



Total shortfall across all growth streams under Assumption 3.

## References



Key data is referenced below.

**Median House Prices, Dubbo, 2018-2022:** CoreLogic (2022). *Dubbo Property Market Trends*. Accessible at: <https://www.yourinvestmentpropertymag.com.au/top-suburbs/nsw/2830-dubbo#market-trends>

**Median Rent Prices, Dubbo, 2011:** PRD Nationwide Research (2011). *Property Watch: Dubbo LGA*. Accessible at: [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjz7CZw6b9AhUQRsAKH U2SCkqQFnoECA0QAQ&url=https%3A%2F%2Fwww.prd.com.au%2Fdocuments%2F776%2FDubbo%2520LG A%2520I%2520Q2%25202011.pdf&usq=AOvVawOVHn9gUaxx9F-nGp2W\\_iVg](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjz7CZw6b9AhUQRsAKH U2SCkqQFnoECA0QAQ&url=https%3A%2F%2Fwww.prd.com.au%2Fdocuments%2F776%2FDubbo%2520LG A%2520I%2520Q2%25202011.pdf&usq=AOvVawOVHn9gUaxx9F-nGp2W_iVg)

**Median Rent Prices, Dubbo, 2022:** HtAG Analytics. (2022). *Dubbo Regional Council Property Market Snapshot*. Accessible at: <https://www.htag.com.au/nsw/nsw333-dubbo-regional-council/>

### **Parkes-ARTC Partnerships:**

<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-9487%2120220823T051158.199%20GMT>**Parkes-ARTC Partnerships:** Australian Rail Track Corporation (2022). *Narromine to Narrabri Social Impact Management Plan*. Accessible at: <https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-9487%2120220823T051158.199%20GMT>

**Gilgandra Inland Rail Workers' Camp and Funded Housing;** Middleton, M (2022, August 1). '10 new houses for Gilgandra shire: GSC's partnership with Inland Rail'. *Gilgandra Weekly*, Accessible at: <https://www.gilgandraweekly.com.au/latest-news/10-new-houses-for-gilgandra-shire-gscs-partnership-with-inland-rail>



**CCL23/77 Draft North-West Urban Release Area Precinct Plan - Results  
of Public Exhibition**

<b>Attachment 1:</b>	Agency submissions to the Draft North-West Precinct Plan .....	178
<b>Attachment 2:</b>	Public submissions to the Draft North-West Precinct Plan .....	190
<b>Attachment 3:</b>	Draft North-West Urban Release Area Precinct Plan ~ includes Indicative Layout Plan March 2023.....	231

Archived: Monday, 13 February 2023 2:27:50 PM

From: [REDACTED]

Sent: Sun, 22 Jan 2023 23:32:25

To: [REDACTED]

Cc: [REDACTED]

Subject: RE: SINSW Advice - Growth in West Dubbo

Importance: Normal

Sensitivity: None

Attachments:

SINSW Submission - Growth in West Dubbo URAs - NW URA - Amended Advice.pdf [REDACTED]

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**⚠ ? CAUTION:** This email came from outside the organisation. Be cautious clicking links and do not open attachments unless they are expected.

Hi [REDACTED]

Following on from our earlier advice below, please see attached our formal review of the Draft Precinct Plan for the North-West Dubbo Urban Release Area.

This contains an amendment to our previous advice regarding the cumulative service need impact of the Dubbo West Urban Release Areas.

Please feel free to contact me or the Strategic Planning inbox at [REDACTED] if you would like to discuss.

Kind Regards,

[REDACTED]

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Education

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

[REDACTED]

Sent: Monday, 7 November 2022 12:15 PM

To: [REDACTED]

Cc: [REDACTED]

Subject: SINSW Advice - Growth in West Dubbo

Hi [REDACTED]

Apologies for the delay in getting this across to you – please see attached our formal advice. This provides preliminary feedback on both planning for schools in Western Dubbo generally and the planning proposal for 13L Narromine Road.

SINSW look forward to working with Council and DPE to ensure that growth in Dubbo's Urban Release Areas is supported by appropriate social infrastructure.

Should you require further information on this submission, please feel free to contact me or the Strategic Planning inbox at [REDACTED]

Kind Regards,

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Education

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

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Education

20<sup>th</sup> January 2023

Dubbo Regional Council  
P.O. Box 81  
Dubbo NSW 2830

Attn: [REDACTED]

Dear [REDACTED]

**RE: SINSW SUBMISSION – NORTH WEST GROWTH AREA PRECINCT PLAN**

School Infrastructure NSW (SINSW), as part of Department of Education (the Department), welcome the opportunity to provide comments on the North West Dubbo Urban Release Area Draft Precinct Plan (the draft Precinct Plan).

The advice is an update to the previous comments provided to Dubbo Regional Council by the Department (dated November 2022), regarding the cumulative service need impact of development within Dubbo's Western Urban Release Areas (URA); these being the North West, Central West and South West Release Areas.

As stated in the November submission, the growth from the combined URA's will result in demand for additional school accommodation across the western portion of the Dubbo LGA. The letter also noted that it is likely that at least one school site will be required within the South West URA boundary, with any additional locations subject to the SINSW optioneering process, as well as additional investigation and the satisfaction of the SINSW '*School Site Selection and Development Guidelines*' (2020).

On review of the draft Precinct Plan and its low, medium and high dwelling yield scenarios, SINSW has updated its original analysis of the cumulative scale of demand from the three West Dubbo URAs and wish to advise that an additional school site will likely be required (in the NW URA) to service the future long term population projected for the North West URA.

SINSW requests ongoing consultation with Council and DPE as detailed planning progresses for each URA. This will ensure that public schools are supporting community needs and continue to be appropriately resourced to respond to changes to its student population.

SINSW welcomes the opportunity to engage further on the content contained in this submission. Should you require further information please contact the SINSW Strategic Planning, team at [REDACTED]

School Infrastructure NSW (SINSW)





Education

Yours Sincerely,





## Department of Planning and Environment

Our ref: DOC22/967487  
Your ref: CD22/4655

Chief Executive Officer  
Dubbo Regional Council  
council@dubbo.nsw.gov.au

Dear Mr Wood

**North-west Urban Release Area Precinct Plan**

Thank you for your referral dated 14 October 2022 to the Biodiversity, Conservation and Science Directorate (BCS) of the Department of Planning and Environment (DPE) inviting comments on the draft North-west Urban Release Area Precinct Plan.

BCS understands the draft Precinct Plan seeks to identify future growth and development opportunities for the area, in addition to environmental constraints and infrastructure needs. It is noted that Council will further review the future land use zones in the area through a separate rezoning process.

BCS has the following primary areas of interest relating to strategic land use planning proposals:

1. The impacts of development and settlement intensification on biodiversity.
2. Adequate investigation of the environmental constraints of affected land.
3. Avoiding intensification of land use and settlement in environmentally sensitive areas (ESAs).
4. Ensuring that development within a floodplain is consistent with the NSW Government's Flood Prone Land Policy, the principles set out in the Floodplain Development Manual, and applicable urban and rural floodplain risk management plans.

We also understand that planning proposals must comply with current statutory matters such as the Local Planning Directions under s9.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

We generally support strategic planning proposals which:

- Avoid rural settlement intensification in areas of biodiversity value and other environmentally sensitive areas;
- Include objectives, such as 'no net loss of native vegetation'; and
- Minimise flood risk to human life, property and the local environment while maintaining floodplain connectivity for environmental benefit.

The Precinct Plan recognises that the eastern portion along the Macquarie River is subject to flooding. The Flood Planning Area (FPA) identified in the Dubbo Regional Local Environment Plan 2022 (LEP) will be considered and further flooding assessment will be performed. However, BCS has concerns that Land Use *R4 - High Density Residential* is located precisely where the FPA is located. A more sensible land use for that area would be *RE1 - Public Recreation* retaining the same land use as proposed for the left bank of the river.

BCS also notes that a detailed flora and fauna study to determine the significance of vegetation and maximise the protection of biodiversity values will be conducted.

BCS will provide comment when these additional studies are available, and the Dubbo LEP is amended.

1

If you have any questions about this advice, please do not hesitate to contact [REDACTED]

Yours sincerely

[REDACTED]

3 November 2022

[REDACTED]

[REDACTED]

---

**From:**  
**Sent:**  
**To:**  
**Cc:**  
**Subject:**

**⚠ CAUTION:** This email came from outside the organisation. Be cautious clicking links and do not open attachments unless they are expected.

Hi [REDACTED]

In response to the public exhibition of the Draft Precinct Plan, we provide the following comments for Council's consideration.

Strategic planning considerations

Regional context: The Department will work with Council to ensure development of the precinct aligns with the objectives of the *Central West and Orana Regional Plan 2041*. In particular, consideration will be given to:

- context in terms of how the precinct will impact supply and demand for housing across the subregion
- creating green and walkable places, utilising green infrastructure (green grid and tree canopy)
- natural hazards and resilience including flooding, bushfire hazard, salinity and impacts on the river and groundwater system
- planning for a secure and cost-effective water supply to support new development
- protecting biodiversity, cultural and heritage values
- riverfront activation, riverfront development and waterway health
- energy efficient and water sensitive design
- ensuring development standards support a variety of housing types to support changing needs of the community, including innovative solutions for affordable housing, older people, multigenerational families, group housing, people with special needs or people from different cultural backgrounds
- ensuring affordable housing options are permissible, with guidance provided for preferred locations
- creating an active precinct with local character and high-quality urban design
- ensuring retail and commercial investment supports the centres hierarchy of maintaining the primacy of the Dubbo Central Business District
- providing a coordinated approach to the design and delivery of infrastructure
- enhancing Dubbo as a Smart City and opportunities to enhance community engagement in the precinct planning process through use of smart technology
- enabling future growth and adaption of freight and logistic networks, the Dubbo City Regional Airport and industrial land uses which operate in proximity to the precinct by limiting the incompatible and sensitive land uses while considering potential land use conflict
- identifying and addressing potential road by-pass related impacts and opportunities
- working with the Local Aboriginal Land Council (LALC) and/or native title holders to assist engagement with the NSW planning system, including through the provision of planning advice, and working in partnership to inform strategic planning

The Department has prepared a *Draft Waterfront Development Guideline* to ensure a regionally consistent design approach to planning land use and development on waterfront land. The Macquarie River front area presents a range of opportunities for the precinct which should be explored by Council. Please refer to the Draft Guideline attached. In addition, we refer you to the Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions. We welcome further discussion on this matter.



Local context: The *Dubbo Local Strategic Planning Statement* (LSPS) identifies the precinct as urban area. A strip of land identified as rural lifestyle area is indicated along the western boundary of the precinct which reflects the current land use zoning. Council should look for opportunities to implement LSPS actions which enhance planning and delivery of the precinct.

The draft precinct plan is consistent with the *Dubbo Residential Areas Development Strategy* which identifies the land for medium term suburban residential expansion (following closure of the Bunglegumbie Treatment Plant). The relationship with the Central West Precinct and Bathla Masterplan should be considered in the precinct plan.

The *Dubbo Employment Lands Strategy* identifies that strategically important employment lands are to be protected from incompatible land uses and land use conflict. Consideration has been given to the proximity of the Dubbo City Regional Airport to the precinct, the ANEF contours and the future intended uses for the Airport Precinct. While the precinct is outside the influence of the Dubbo Airport, Ministerial 9.1 Direction 5.3 Development Near Regulated Airports and Defence Airfields is to be addressed in any planning proposal relating to the precinct.

Further consideration should be given to land uses adjoining the Industrial Precinct on the western boundary of the site (current zone IN2 Light Industry) with regard to incompatible land uses and land use conflict. The Ministerial 9.1 Direction 7.1 Business and Industrial Zones is to be addressed in any planning proposal relating to the precinct.

#### Land use zoning, minimum lot size and development controls

Residential land use zones: Further consideration should be given to the selection and justification of residential land use zones throughout the precinct. It is recognised that a key component of the precinct plan is to ensure housing choice and flexibility to meet housing requirements now and in the future. The Department's Urban Design team may be able to assist Council to define development intent and residential development capacity, as well as review design options to help achieve this. The Ministerial 9.1 Direction 5.1 Integrating Land Use and Transport, 6.1 Residential Zones, 9.1 Rural Zones and 9.2 Rural Lands are to be addressed in any planning proposal relating to the precinct.

Proposed Neighbourhood Centre and employment zones transition: Council should consider the proposed transition to the new employment zones, and the proposed land use tables that will apply to the land within the precinct for commercial uses. Specifically, the proposed E1 Local Centre zone (current B1 Neighbourhood Centre and B2 Local Centre) and MU1 Mixed Use zone (current B4 Mixed Use) land use tables draw similarities. Council should consider the specific types of uses intended in the precinct, and how these zones are proposed to be implemented to ensure the Dubbo Central Business District remains the centre of the commercial hierarchy. The area of commercial land proposed for the precinct should be informed by an assessment which considers the activity centres hierarchy and the Planning Principles of the Dubbo Employment Lands Strategy. The Ministerial 9.1 Direction 7.1 Business and Industrial Zones is to be addressed in any planning proposal relating to the precinct.

Minimum lot size (MLS): the draft precinct plan identifies that the R2 Low Density Residential zone will have a MLS ranging from 450m<sup>2</sup> – 750m<sup>2</sup> and the R1 General Residential zone ranging from 250m<sup>2</sup> – 450m<sup>2</sup>. Council should consider whether these lot sizes are suitable, appropriate and provide flexibility for the types of residential housing permissible within these zones.

Development Control Plan (DCP): The DCP should consider the overall subdivision design and linkages. Reference is made to the *Dubbo Residential Areas Development Strategy* which actions design of new areas be on a neighbourhood basis in which identity, focus, commercial and community facilities and recreation space are integral to the concept design. The Strategy acknowledges that environmental management will become an increasingly important factor in ensuring the appeal of Dubbo as a place to live and actions the consideration of ways of improving the urban environment in relation to climatic and convenience factors including for example shade and footpaths. We support this initiative, as we seek to create greater resilience in communities through the planning system. The Government Architect's *Greener Places Design Framework* has been developed as a best-practise guide for planning, designing and creating sustainable places through a multifunctional design approach. It could be used to inform or inspire design of green space within the precinct.

Planning Pathways: The site is mapped as being subject to the *SEPP (Exempt and Complying Development Codes) Amendment (Greenfield Housing Code) 2017*. Consideration should be given during planning proposal preparation of the appropriateness of the maps and the outcome achieved through the code.

#### Site specific considerations

Flooding: A significant area of land proposed to be zoned R4 – High Density Residential is mapped as high risk on the Urban Areas Flood Hazard Map in the *Dubbo Flood Prone Land Policy*. Council should consider amending the location of high-density residential land outside of the high-risk area, in accordance with the State and Council's flood policy. The Ministerial 9.1 Direction 4.1 Flooding is to be addressed in any planning proposal relating to the precinct.

Bushfire Hazard: The Ministerial 9.1 Direction 4.3 Bushfire Hazard is to be addressed in any planning proposal relating to the precinct.

Heritage: Local Heritage Item 178, "Mount Olive" is situated within the precinct. Consideration of the impacts of future development on the conservation of the heritage item should be included in any planning proposal relating to the site. An Aboriginal Archaeological Assessment will determine the extent and location of any artifacts culturally significant sites. The Ministerial 9.1 Direction 3.2 Heritage Conservation is to be addressed in any planning proposal relating to the precinct.

Potentially contaminated land: The precinct includes land occupied by the former Bunglegumbie Treatment Plant which is a potentially contaminated site. Details of the Plant closure and remediation are to be included in any planning proposal relating to the site. An assessment of other previous and current land uses should be undertaken to determine those that may be potentially contaminating and require assessment. Council needs to satisfy the Ministerial 9.1 Direction 4.4 Remediation of Contaminated Land.

Vegetation: The draft precinct plan identifies that a flora and fauna study is required, and that the site contains a number of remnant vegetation patches. Council should consider the future intended uses for these areas and identify an appropriate zone for these Plant Community Types (PCT). It is recommended that Council engage with NSW Biodiversity Conservation Directorate (BCD) early on this issue. The Ministerial 9.1 Direction 3.1 Conservation Zones is to be addressed in any planning proposal relating to the precinct. Avoidance of vegetation with high environmental value during the early stages of precinct planning is preferred. The need to update Council's LEP Terrestrial Biodiversity map should be considered.

Salinity: The site is identified in the *Dubbo Salinity Management Strategy* as being within the West Dubbo Hydrological Landscape and the Dubbo Macquarie Alluvium hydrological landscape which both have a medium salinity hazard. Further investigation and consideration of future land uses is recommended to determine salinity and groundwater impacts and proposed mitigation measures. The outcome of this investigation should be included in any planning proposal relating to the site.

Groundwater: The site is identified in the *Dubbo Regional LEP 2022* as having a high groundwater vulnerability classification. A planning proposal relating to the site should consider the impacts of aquifer recharge on groundwater health.

#### Infrastructure delivery

Enabling Infrastructure: Enabling infrastructure constitutes the infrastructure that is required upfront to allow lots to be registered and development to progress. This includes roads and intersections, water, sewer and gas services, telecommunication and electrical infrastructure. There is an identified need for collaboration between Government to prioritise coordination and delivery of enabling infrastructure to support development of the precinct in a timely and economic manner. Of particular benefit would be capturing the infrastructure delivery process for each agency responsible for the delivery of infrastructure that relates to housing. Council should engage early and regularly with all relevant Agency and non-Agency stakeholders. The Department is committed to supporting this and welcome Council's invitation to join any relevant forums and groups involved in the delivery of the precinct.

Transport for NSW (TfNSW) will be a key agency in terms of access to the precinct and early engagement with TfNSW is essential.

**Supporting Infrastructure:** Supporting infrastructure is infrastructure that is not required for lot registration, but rather supports the needs of the incoming community. This includes open space and recreation infrastructure such as parks, active and passive recreation, health facilities, community facilities and schools.

Council should consider the size, location and type of open space that is appropriate for the precinct. For all development, the Department's expectation is for at least 15% of the net developable area to be open space. This includes parklands and gardens, sportsgrounds, civic plazas and squares and walking/cycling trails. Open spaces are expected to be of varying sizes and within walking distance of all residents and workers. Further consideration should particularly be given to the accessibility to walkable open space in the southern and south-western areas of the precinct. The Department's Urban Design team may be able to assist Council with design options to help achieve this.

Council should engage with School Infrastructure NSW to determine if additional education facilities are required.

**Developer contributions:** The precinct is not within Council's contributions framework. Do Council intend to establish a Voluntary Planning Agreement (VPA) with developers, where the developer agrees to dedicate land, construct or make monetary contributions towards the delivery of infrastructure required to support the development? We welcome further discussion on this matter to ensure timely and cost-effective development of the precinct. In addition, the URA mapping will trigger clause 6.1 of Council's LEP. Council should ensure the mapping covers the precinct adequately and that the content of the clause is considered early.

The Department is available to assist Council with identifying and coordinating meetings with State agencies and organisations.

Please contact me on [REDACTED] if you would like to discuss any of the above matters.

Regards,

[REDACTED]

Local and Regional Planning | Department of Planning and Environment

[REDACTED]

[www.dpie.nsw.gov.au](http://www.dpie.nsw.gov.au)



*The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the traditional custodians of the land and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.*



## Department of Planning and Environment

CM9 Ref: DOC22/240115  
Your reference: CD22/4655

The General Manager  
Dubbo Regional Council  
PO Box 81 DUBBO NSW 2830

Email: [council@dubbo.nsw.gov.au](mailto:council@dubbo.nsw.gov.au)

Dear Sir/Madam

**Proposed Development:** CD22/4655  
**Applicant:** Dubbo Regional Council  
**Location:** North-West Precinct DUBBO

I refer to Council's email dated 14 October 2022 requesting comments for the above development proposal.

The Department of Planning & Environment - Crown Lands (the department), as adjoining landowner has reviewed the Draft North-West Precinct Plan in accordance with the principles of Crown land management (s.1.4 *Crown Lands Management Act 2016*) and offers no objections to the proposed land use zones as no impact to Crown land has been identified.

Should the development be modified in any manner that impacts the adjoining Crown land, e.g. by amendment to the development proposal or draft conditions of consent, the department requests an opportunity to further review the application prior to determination.

Should you require any further information, please do not hesitate to contact [REDACTED] at the Dubbo Crown Lands Office by email [REDACTED] or phone on [REDACTED].

Yours sincerely

[REDACTED]  
Department of Planning & Environment - Crown Lands

Date: 2 November 2022

**NSW RURAL FIRE SERVICE**

Department of Planning and Environment (Dubbo Regional Office)  
PO Box 58  
Dubbo NSW 2830

Your reference: CD22/4655

Our reference: DA20221016011178-Original-1

**ATTENTION:** Growth Planning Branch

Date: Thursday 16 February 2023

Dear Sir/Madam,

**Development Application****Other - Other Assessment - Other**

**Public Exhibition of the Draft North-West Precinct Plan - 6R Bunglegumbie Road Dubbo NSW 2830, 31//DP1219695, 32//DP1219695**

I refer to your correspondence regarding the above proposal which was received by the NSW Rural Fire Service on 14/10/2022.

The NSW Rural Fire Service has reviewed the Draft North-West Precinct Plan - 6R Bunglegumbie Road, Dubbo for Dubbo Regional Council, and support the directions, subject to future consultation with the NSW Rural Fire Service for Local Environmental Plans, masterplans and planning proposals.

Under Direction 4.4 Planning for Bush Fire Protection (PBP), draft Precinct Plans should follow the below objectives:

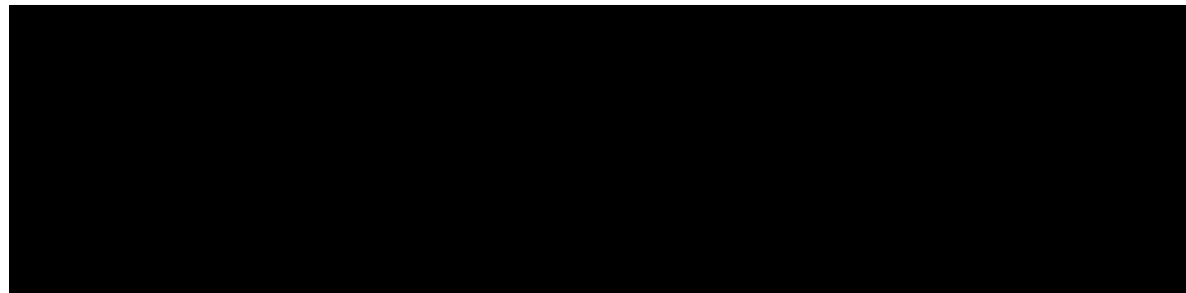
- i. to protect life, property and the environment from bush fire, by discouraging the establishment of incompatible land uses in bush fire prone areas; and
- ii. to encourage sound management of bush fire prone areas.

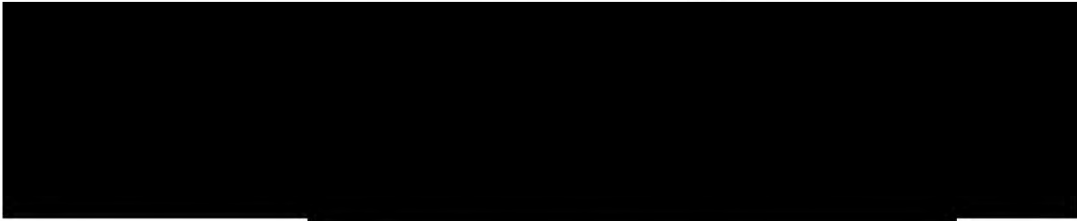
A bush fire risk assessment of the precinct needs to consider the strategic principles outlined in chapter 4 of PBP 2019, commensurate with the potential bush fire risk and the scope of works. The subject site includes predominately Category 3 vegetation, being grasslands. Bushfire considerations will be required when planning stages of any proposed subdivision and development within the precinct.

The proposed zoning allows, with consent, some Special Fire Protection Purpose (SFPP) developments, as such, future SFPP developments must demonstrate compliance with Chapter 6 of PBP 2019. Where increased density is proposed by subdivision of bush fire prone land, future dwellings on proposed lots must meet the requirements of Chapter 5 of PBP 2019.

For any queries regarding this correspondence, please contact [REDACTED] on 1300 NSW RFS.

Yours sincerely,





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The following information has been submitted from the Dubbo Regional Council:

First name:	[REDACTED]
Surname:	[REDACTED]
Residential address:	[REDACTED]
Contact number:	[REDACTED]
Email:	[REDACTED]
Written submission:	Hi Guys Please find attached a submission done by our urban designers [REDACTED] on our behalf. [REDACTED]
File Upload:	[REDACTED]



28/10/2022



## Dubbo North West Land Release

Dubbo Regional Council North West Urban Release Area Precinct Plan: Urban Design Review and Public Submission

**As requested, [REDACTED] have completed an Urban Design review of the current Dubbo Regional Council North West Urban Release Area Precinct Plan and provide below a public submission.**

We appreciate that the current precinct plan on public display is a preliminary proposition designed to gauge public sentiment on Dubbo Regional Council's potential strategic direction for land use type, scale and potential locations within the Northwest Community Precinct.

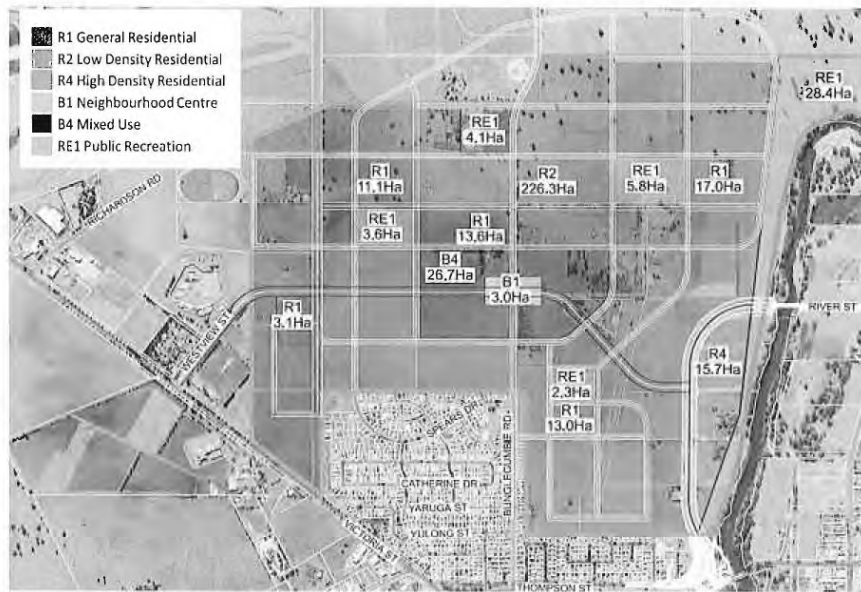
As a starting point to our feedback on the current precinct plan we have firstly reviewed Dubbo Regional Council's strategic vision available via <https://www.dubbo.nsw.gov.au/> to consider if the precinct plan aligns with the aspirations that Dubbo Regional Council are setting for future development in the region.

Additional policies listed below were reviewed to further understand Dubbo Regional Council's intent;

- State Planning Policy
- Dubbo Regional Local Environmental Plan 2022
- Draft Dubbo Regional Housing Roadmap
- Employment Land Strategy 2018
- Dubbo Transportation Strategy 2020
- Macquarie River North and South Precincts Master Plan
- Dubbo Local Strategic Planning Statement
- Residential Areas Development Strategy
- Recreational Areas Development Strategy

The policy and document review aligns with the following broad vision, themes and strategies understood to be the minimum expectations of any future development within the Northwest Precinct. These visions, themes and strategies are all positive best practice outcomes that appear to support a successful integration of the Dubbo West development into the broader Dubbo urban and natural fabric.

To assist, we have identified possible considerations that the precinct plan (shown below) may wish to explore to align with achieving DRC's vision more closely.



450m<sup>2</sup> – 700/750m<sup>2</sup> with 9m maximum building height  
 250m<sup>2</sup> – 450m<sup>2</sup> with 9m maximum building height

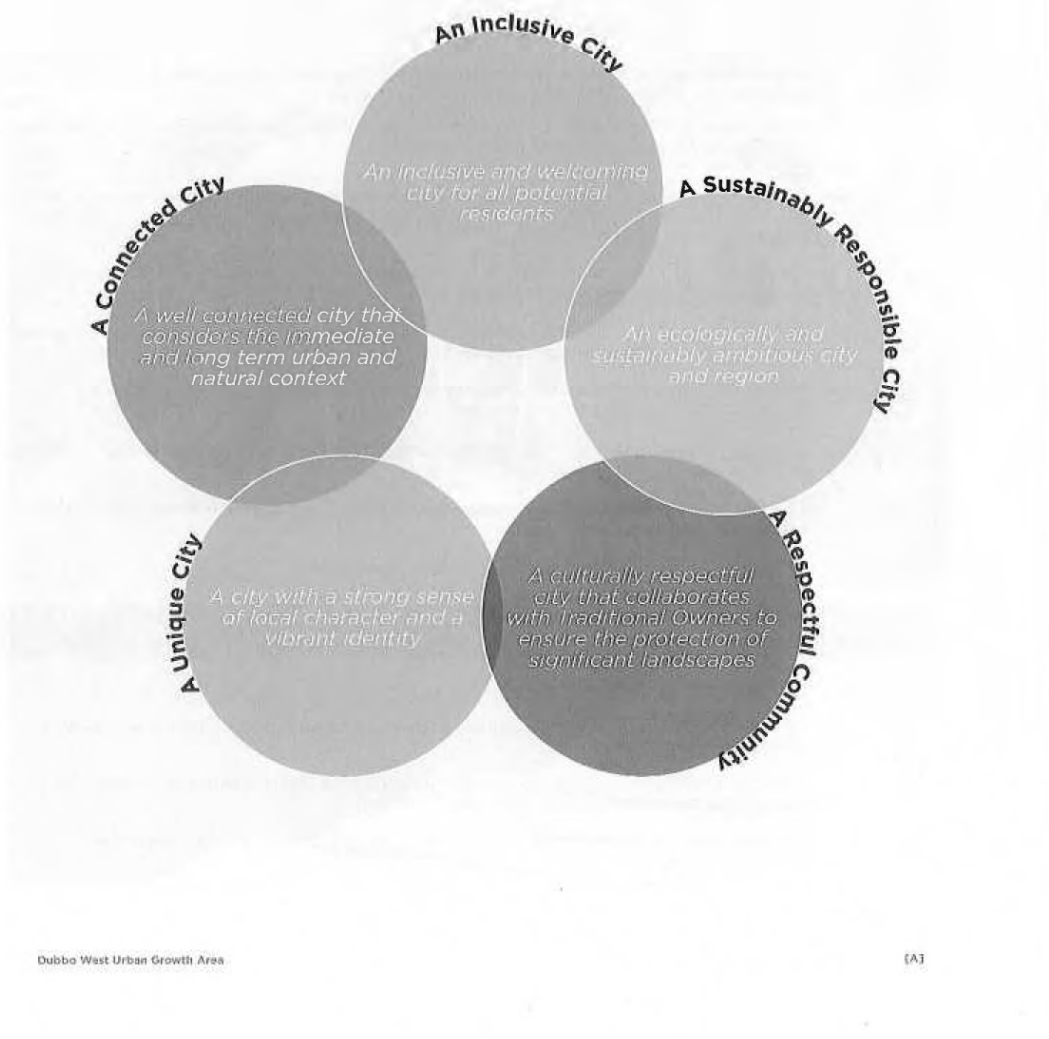
Above: Current precinct plan on public display



We understand from our review, that Dubbo Regional Council is committed to;

**Supporting the future growth of Dubbo in a sustainable and strategic manner, enhancing the natural and urban opportunities afforded of its location.**

The general recurring themes that are understood to support this include:



A summary of how the precinct plan may seek to achieve this may include but not be limited to:

#### Theme 1: A connected city

Item	Recommendation for future consideration
1.1	Consider a greater mix of compatible land uses within the development precinct
1.2	Plan for catchments that support the development of a '10 Minute City'
1.3	Plan for bus stops and open space within 400m of all dwellings
1.4	Include the provision of attractive land uses/activities such as restaurants, cafés, corner stores, parklands, etc. within the development precinct at key nodes
1.5	Consider efficient and sustainable transport connections to major nodes within Dubbo including district parks/reserves (including those planned in the Southern River Precinct), Dubbo Zoo, and CSU
1.6	Consider suitable pedestrian connections across the Macquarie River, between the East-West precincts, the North-South precincts, and the CBD (separately or in addition to planned or existing vehicular routes)
1.7	Consider connections that leverage off of the proposed 'Green Ring', enabling safe and accessible active transport movement around as well as within Dubbo
1.8	Consider the provision of active transport corridors that support traditional modes of transport (e.g., bicycles) as well as emerging modes (e.g., electric scooters)
1.9	Provide open spaces that are visually and physically permeable and enable cross-block connections for pedestrians and cyclists
1.10	Leverage the proximity of the development to the CBD by ensuring direct access is available for all modes of travel, not just vehicular
1.11	Consider future proofing transport systems and infrastructure to enable the provision of electric vehicles and other modes of travel

#### Theme 2: An inclusive city

Item	Recommendation for future consideration
2.1	Consider ensuring a minimum percentage of dwellings constructed are for the provision of affordable housing
2.2	Consider a variety of dwelling typologies that support the lifecycle of multiple household composition typologies (both existing and projected)
2.3	Consider ensuring universal access is provided to all dwellings, open space and retail/commercial venues

- 2.4 Consider the requirement of high quality architectural outcomes that protect individuality and identity at the macro scale
- 2.5 Foster a diverse community through the provision of a range of public assets of multiple functions
- 2.6 Consider adequate stakeholder and community engagement is undertaken that takes into account technological requirements/abilities, language barriers

#### Themes 3: A sustainably responsible city

Item	Recommendation for future consideration
3.1	Consider a significantly increased buffer from the Macquarie River that enables environmental restoration and appropriately mitigates the impacts of the proposed development
3.2	Create and implement a strategy to mandate urban greening, streetscape quality and open space provision, and ensure this is addressed in the early stages of planning
3.3	Significantly strengthen visual and physical connection to the river bank while protecting and improving critical riparian vegetation and biodiversity values
3.4	Consider the provision of additional high quality open spaces that integrate endemic species and consider local fauna habitat
3.5	Identify and protect areas of environmental significance
3.6	Increase permeable surfaces within public and private spaces to reduce contaminant run off towards the Macquarie River
3.7	Consider providing streetscapes that are well designed and provide adequate canopy coverage, taking into consideration the effects of climate change

#### Theme 4: A respectful community

Item	Recommendation for future consideration
4.1	Consider further acknowledgement and embracing of Aboriginal culture within the design process.
4.2	Protect and enhance the Devils Hole landscape, recognising its importance in indigenous culture. This may require further setbacks from future development, restrictions of acceptable adjacent uses, or directions on appropriate species to be used within the precinct.
4.3	Consider incorporating Aboriginal knowledge into future and current land management techniques
4.4	Ensure Aboriginal stakeholders are invited to participate throughout all project phases
4.5	Integrate indigenous knowledge regarding plant species, suitability and placement, including the potential incorporation of edible or medicinal species

#### Theme 5: A unique city

Item	Recommendation for future consideration
5.1	Encourage adaptive reuse of buildings capable of housing small scale business, office or retail. This may be suitable for 'Mount Olive'
5.2	Protect the unique visual amenity of the precinct through design guidelines, architectural expression, natural enhancement and high quality streetscapes
5.3	Consider a range of housing typologies, including traditional typologies as well as dwellings that support the required densification (e.g., townhouses, terraces, low-rise units)
5.4	When implementing a Residential Development Control Plan, consider providing guidelines on building heights, articulation, setbacks, maximum site coverage, etc. that assist in enforcing desired character and outcomes
5.5	Further integrate suitable business, retail, office and residential built form in accessible locations to reduce reliance on private transport
5.6	Consider implementing an urban art strategy to incentivise public art installation throughout the development, and with connections to broader Dubbo
5.7	Consider the provision of unique natural amenity, including potential orchards, feature tree species, and urban community farms
5.8	Consider designing open space suitable for a variety of community and cultural events

#### Other: Additional strategies

Item	Recommendation for future considerations
6.1	Consider pedestrian prioritisation to enhance physical and mental wellbeing across age groups, including enhanced safety and access for primary and secondary school routes.
6.2	Consider the implementation of urban design in relation to the NSW Guide to Walkable Public Space or the QLD State Government Walkable Neighbourhoods Amendment, which offer advice on pedestrian connectivity in residential subdivision developments, maximum block lengths, footpaths, and street trees
6.3	Consider setting Urban Greening targets for the Dubbo West Urban Growth Area that has the potential to be integrated across the broader Dubbo region, including minimum canopy cover targets upwards of 30%
6.4	Consider minimum permeable areas within private lots, relating to item 3.6
6.5	Consider a strong wayfinding strategy to enhance legibility and connectivity to key nodes within and surrounding the Dubbo West Urban Growth Area
6.6	Consider the implementation of a legible streetscape hierarchy that relates to key transport routes, placing importance on highly utilised active transport corridors
6.7	Consider the provision of electric and technologically integrated public transport options
6.8	Consider a collaborative planning approach, with unique engagement methods to enhance feedback and participation from a broad range of stakeholders

1

- 6.9 Consider relocating the high density residential zone to a central location, leveraging off the provision of a mixed use neighbourhood centre and increasing the environmental offset related to the Macquarie River
- 6.10 Ensure significant amounts of street trees and understorey vegetation are considered in the planning and design of the precinct to mitigate rising temperatures and provide habitat and ecological corridors
- 6.11 Consider the integration of infrastructure into roadway design including provision of water sensitive urban design (WSUD)

If you would like any further information, please feel free to give us a call on the below mobile number or reach out via email.

Yours sincerely,





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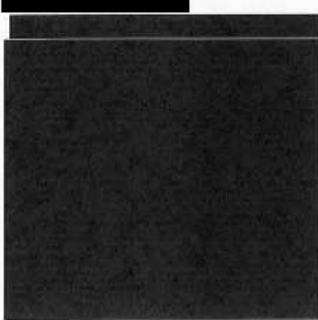
The following information has been submitted from the Dubbo Regional Council:

**First name:** [REDACTED]  
**Surname:** [REDACTED]  
**Residential address:** [REDACTED]  
**Contact number:** [REDACTED]  
**Email:** [REDACTED]

**Written submission:** Why not enlarge the public recreation area and put St. John's Football proposal out there. Plenty of access points would be available, plenty of space to develop. The public recreation area should include a cycle/walking path from Thompson Street to enable more passive use of the recreation area.

**File Upload:**

FROM:



DUBBO REGIONAL COUNCIL Submission: NORTH WEST URBAN RELEASE AREA PRECINCT  
PLAN. REF:CD22/4655

ATTENTION:  
 Chief Executive Officer  
 Dubbo Regional Council  
 PO Box 81  
 DUBBO  
 NSW 2830

14 December 2022

Dear Sir,

**PREAMBLE:**

In September 2022, I received notification from DRC that my land was situated in the North-West Dubbo Residential Urban Release Area. This area had been included in Council's Urban Areas Development Strategy since 1996. This strategy identified the potential for this area of Dubbo to add much needed housing stock to provide up to 6000 dwellings of housing for up to 16,000 people. This had been identified in Council's planning as a long overdue integral growth area for Dubbo being uniquely juxtaposed between the Dubbo CBD and the Dubbo Airport.

Dubbo Regional Council had also identified a need for provision of a road that would service the precinct and was applying for a grant under the NSW State Government Round 3 of the Accelerated Infrastructure Fund for the construction of stage 1 of River Street West Road, from the Newell Highway Bypass (River Street Bridge project) through to Bunglegumbie Road.

River Street West Road Stage 1 is the key enabler of development in this Precinct and will provide connections and links to employment areas to the Dubbo CBD, and the wider Dubbo urban west area and combined with River Street West Road Stage 2 will provide a

1

very important connection through this growth Precinct linking the Newell Highway to the Mitchell Highway.

My land is located less than 2 km to the City Central Business Centre and the Dubbo Airport and will provide a mixed use of housing and building choices.

I, as that landholder was invited by [REDACTED] Regional Council following consultation and an onsite inspection to write a formal letter supporting Council's grant application, as I saw that this road was essential and would facilitate the much-needed residential development opportunities in the North West Precinct of our growing regional city of Dubbo, and I fully supported the project. My email of support was done and forwarded to Council on the 29 September 2022.

SUBMISSION:

I forward this document in good faith and "Yindyamarra" the Wiradjuri people's word for "respect" and ask that it be treated accordingly and be taken as my formal submission.

In October I received correspondence from DRC dated 14 October 2022, re the release for public exhibition of the draft North-West Precinct Plan and inviting submissions. The public exhibition was later extended to 5.00pm, Friday 16 December 2022.

The draft NW Dubbo Precinct Plan outlined the future work program for residential growth areas in West Dubbo known as "Urban Release Areas" (URA's) being:

- o North West-475 ha
- o Central West-335 ha
- o South West-640 ha

The first step in this North West Urban Release Area (the NORTH WEST TOWN CENTRE) is in the North Western fringe of the Dubbo Urban area.

I am in general agreement with the Precinct Plan. In particular points:

- o No 2-Strategic Planning
- o No 3-Planning Framework
- o No 4-Vision

At our consultation meeting Mr Jennings advised me to make note of any variation/s and include them in my submission.

The only variation that I would like changed in the draft document is the proposed land use zone of the land marked RE1 (2.3ha) coloured in green on the map that is located on my land, swapped over to the adjoining Council land immediately to the north marked R1 (3.6ha approx) coloured pink on the map.

The reasons for the variation:

1. RE1 (2.3ha) currently marked green is located on top of a sharp high rise in the topography of fresh, high to very high strength basalt rock, which would be a problem and prove unsuitable for RE1 development.

2



2. The adjoining Council land currently shown as R1 coloured pink is located on more even and level land and does not have pockets of basalt outcrops.
3. The relocation would allow for a larger public recreation area from 2.3ha to 3.6ha approx.
4. It would be on leveller ground.
5. It will provide for better ease of access being serviced and abutting onto the proposed arterial River Street West Stage 1 Road through to Bunglegumbie Rd with ease of access to public transport. (This is very much how Macquarie Street ideally serves the very popular Wahroonga Park in South Dubbo).
6. This relocated recreation area would be more ideal positioned closer to Zone B4 coloured purple- "the North West Town Centre shopping precinct for the convenience of residents.
7. It would provide a more equidistant spacing between the other proposed public recreation areas and better distancing from the existing RE1 public reserve located at the corner of Bunglegumbie Rd and Spears Dr in Rosewood Grove.

Respectively submitted,



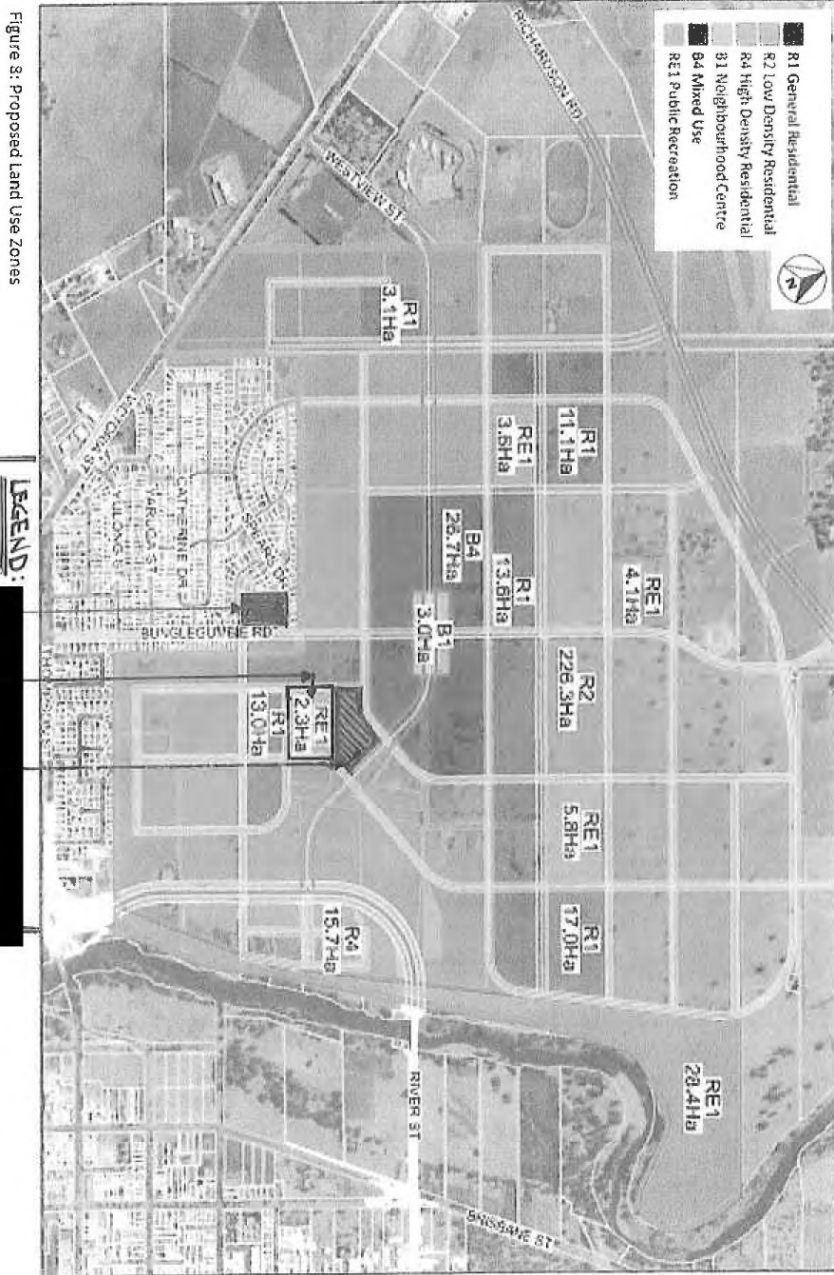


Figure 3: Proposed Land Use Zones

[Redacted]

28 October 2022

Dear Chief Executive Officer,

**RE: Submission for Draft North-West Precinct Plan – REF:CD22/4655**

We are writing to you as the landowners of 10R Blizzardfield Road Dubbo (Lot 14 DP 242992) in regard to the current draft North- West Precinct Plan (CD22/4655).

We are pleased to see Dubbo Regional Council is expanding the growth of our city, which in turn will see greater job opportunities and economic growth for our area. As owners of another property close to this precinct, we welcome the future planning of this proposed area, and the benefit of further services such as the "neighbourhood centre".

We are, however, concerned with the positioning of the extension of Richardson Road as the current proposal dissects our land and would greatly impact the landscape and use of the land. While we are not averse to seeing this precinct proceed, we ask that Council strongly considers the idea of repositioning the proposed road, in a way that it follows the north-western boundary of our property (running along the adjoining boundary of the airport) to minimise the impact of our land.

We appreciate the time Council has taken to meet with and inform us of the proposal and look forward to being considered with the outcomes of this proposal and any future developments that will impact our land.

With regards

[Redacted]

DUBBO REGIONAL COUNCIL  
ACTIONED TO GGP  
11 NOV 2022  
CONTAINER # CD22/4655

**Dubbo Environment Group Submission: Public Consultation North West Urban Precinct 16/12/2022**

The members of Dubbo Environment Group understand the need in NSW to address the housing shortage, and especially low-cost housing and public housing. We are very concerned, however, that once again, Dubbo Regional Council is ignoring the latest data about Climate Change consequences which will bring more floods and higher temperatures to the LGA, ignoring the urgency of considering carbon sequestration by implementing increased urban vegetation, and also ignoring the findings of their own NSW government's Flood Inquiry Report.

The inquiry said the "more extreme" climate will see more natural disasters occur in the state, including "more extreme bushfires and more dangerous floods".

The NSW government has a net zero emissions target, and as such, requires rural local governments to come on board with initiatives, not to continue in the same way, clearing trees, erecting houses which lack sustainable features requiring high levels of energy usage, and building on such a valuable resource as a floodplain.

The area zoned R4, High Density Residential, is of particular concern.

Here are the **NSW Flood Inquiry recommendations**:

**19 Disaster Adaptation Plans for All Towns**

- prioritise and incentivise new development in safe areas, noting this will often mean encouraging first home buyers to choose homes in appropriate density developments, including high-rise developments, through siting such new developments in locations with desirable attributes (near train stations, parkland, shopping centers, etc.) In this regard, Government should focus on redeveloping existing Government land in these locations

**20 Floodplains as Assets**

That, to establish the capacity and maximize the economic, social and environmental potential and consequently unlock the value of NSW floodplains, Government adopt the following guiding principles for floodplain management:

- treat floodplains as an asset, specialising in uses that are productive and minimise risk to life during major weather events. Such uses would include sporting and recreational activities, garden plots and community gardens, agriculture and forestry, renewable energy production, biodiversity offsets, parks and outdoor education activities. Government should progressively move floodplain ownership to Government leasehold with lessees using the land under appropriately specified conditions. The management of the process of conversion to leasehold would be a Special Project of the NSWRA but over time handing the floodplain asset over to management by another government agency. The NSWRA should prioritise rapid conversion to leasehold in cases where houses and businesses are in high-risk areas –this may be accomplished by land swaps or buy backs. In doing so Government achieves early wins for new uses. In other cases, the conversion should occur as a condition of development, of a type that is consistent with safe evacuation or safety in place in the case of flash flooding that recedes rapidly

- favour letting watercourses largely flow naturally rather than implementing engineering barriers such as flood levees and mitigation schemes to stop floods

### 27 Environment

That, to maximise protection for the environment in and around floodplains, Government, working with local communities especially Indigenous communities, the NSWRA, other agencies and local councils ensure Indigenous voices are well heard in land use planning and natural resource management by:

- supporting Indigenous people to engage in cultural stewardship practices to build the resilience of people and Country, including the Jagun Alliance "Healing our River Country for Community and Landscape Resilience" proposal.

### Our DEG summary :

From the DRC **North West Urban Precinct**, we vehemently disagree that any high- density residential zone should occur upon the Wambool floodplain, at R4. As recommended in the above report,

- Floodplain land privately owned should be purchased and leased by the government
- Floodplain should be valued as an asset and used for renewable energy projects, carbon sequestration and other community organizations
- Indigenous involvement is paramount to maximise the environmental and cultural potential of the area. We are aware that the Indigenous Heritage analysis undertaken by the NSW government for the new highway route was not endorsed by our local Tubba -Gah elders. Nor was approval sort.
- Low- cost housing should be close to shops and schools. This area is not close to schools. A new shopping center will be required, as for Delroy, for 15000 people. The housing should be built there. (eg as for Baird St where duplexes have been built near shops, park and school)

In addition:

1. Any housing in Dubbo is not energy efficient if it is two or multi-storey. Our Parkes electorate will be more severely affected by rising temperatures due to Climate Change than all but 1 other Federal electorate (ANU research). Hot air rises. DRC should be looking for housing alternatives which are not costly financially or by carbon emissions, which can provide shaded small gardens, comfort and privacy. We propose the Baird Street complex of duplexes as a better model.
2. The residents of the NW Urban precinct must have access to both passive and active recreation but there is insufficient space for this detailed in Figure 8: Proposed Land Use Zones of the draft Precinct Plan. Increased shade canopy cannot occur without large areas of open green space.
3. Environmentally, for future flood mitigation, carbon sequestration, natural biodiversity, river health, etc., the floodplain on both the Eastern and Western banks of the North precinct are best left remaining as public parklands, and returned to original riparian vegetation. The Police Paddock contains some valuable old growth rivers gums and is an ideal location for further tree-planting and open parkland, offsets for business and developers, and for some recognition to our Wiradjuri mob who have suffered the forced removal of Wiradjuri Park.

Please consider the following factors from the US research government agency, FEMA

#### **"Natural Floodplains and Flood Loss Reduction**

**Floodplains** provide numerous flood loss reduction benefits as a result of their unique natural functions. Rivers and streams shape floodplain topography and influence riparian habitats and riverine ecosystems. Likewise, the physical characteristics of the floodplain shape water flows and can provide flood loss reduction benefits to include the following:

**Excess water storage:** Except in narrow, steep valleys and areas of coastal bluffs, floodplains allow floodwaters to spread out and temporarily store excess water. This reduces flood peaks and velocities and the potential for erosion. One acre of floodplain flooded 1 foot deep holds approximately 330,000 gallons of water. Flood storage is particularly important in urban areas where even small floods, for example from a 5- or 10-year storm, can cause severe damage.

**Flow rate and erosion reduction:** In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main water body in the area

**Slowing runoff:** A natural floodplain has surface conditions favoring local ponding and flood detention, plus subsurface conditions favoring infiltration and storage. Slowing runoff across the floodplain allows additional time for the runoff to infiltrate and recharge available groundwater aquifers when there is unused storage capacity. The slowing of runoff provides the additional benefit of natural purification of water as local runoff or overbank floodwater infiltrates and percolates through the floodplain alluvium (flat land area adjacent to a stream).

**Flow regulation during non-flood periods:** During non-flood periods, groundwater discharge acts to naturally regulate the flow in a river or the level of a lake or pond. In other words, during periods of abundant water, the water can enter the groundwater system whenever there is available capacity rather than contribute to seasonal flood peaks. During low flow periods, the water flows from the higher groundwater system into lower surface waters, so that the frequency and duration of extremely low flows is reduced."

**Dubbo Environment Group, in conclusion**, requests that, with the enlightened understanding we all have regarding our physical and economic need to move forward progressively with strategies addressing Climate Change, with our personal experiences of recent severe drought and flooding, that DRC model to the community the absolute necessity of prioritizing environmental factors within their current and future planning.

Submission from: [REDACTED]

Public Consultation North West Urban Precinct

Please consider and respond to my following submission :

- Designate the 28.4 ha of undeveloped floodplain of the Macquarie River on the eastern side of the North West Urban Precinct as public parkland for environmental restoration.
- This should be the Regand Park of the Macquarie River North Precinct!
- The only Macquarie River access close to the homes of 15,000 people is this 28.4 hectares that at this time has no access for pedestrians or cyclists although it is approx 2km from the CBD.
- This 28.4 ha is being considered as sporting fields for the North Precinct Masterplan of the Macquarie River.
- How can this be consistent with the green web and the Open Space Masterplan 2018?
- How can having sporting fields on this 28.4 ha of environmentally sensitive floodplain enhance the ability of Dubbo to withstand the pressures of a changing climate (page 24 of Open Space Masterplan 2018)
- Where is the Council Report in response to Councillor Josh Black's motion to detail where there is land available in this local government area for sporting fields to serve the community for decades to come? This will ensure the needs of all sporting groups are met rather than just one small section of the sporting community. Further resources can be rationalised and shared for all sporting groups.
- The residents of the NW Urban precinct must have access to both passive and active recreation but there is insufficient space for this detailed in Figure 8: Proposed Land Use Zones of the draft Precinct Plan.
- The NW Urban Precinct will have more density with smaller lot sizes and this makes the need for passive open space within 10 minutes' walk from the occupants home crucial in terms of liveability for the residents and to comply with our Open Space

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#### Masterplan 2018

- 15,000 people should not be denied high quality public open space and public areas must be provided in the Precinct to facilitate public access to the Macquarie River environments in accordance with Council's adopted Strategic Open Space Master Plan (Strategic Principles point 5 on page 21 of draft NW Precinct Plan). It is not enough to have sporting fields without parkland on the Macquarie River and maintain that meets the objectives of the Open Space Masterplan 2018.



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**TO WHOM IT MAY CONCERN**

**RE: REPLY TO DRAFT NORTHWEST PRECINCT PLAN**

Thank you for the opportunity to comment on your Draft North-West Precinct Plan (**The Draft Plan**).



I own the neighbouring property north of the North-West Residential Urban Release Area (**Northwest Precinct**), **Wandara**, 21L Bunglegumbie Road - Lot 87 DP753233. Wandara is zoned RU2 – Rural Landscape and consists of 18.02 hectares of land, which includes a house and gardens, cattle yards, 2 bores plus tanks and a large dam. Wandara also includes a stranded “triangle” (**the triangle**) of land on the eastern side of Bunglegumbie Road which is approx. 4000 square metres in size.

Access to Wandara house is from the Bunglegumbie Road near the intersection of the Blizzardfield Road. Access to the back of the block (and cattle yards) is off the Blizzardfield Road near the airport boundary. Wandara shares a common boundary with the airport which includes an exclusion fence with a locked access gate (previously the emergency access). The Triangle is stranded on the eastern side of Bunglegumbie Road. See the property in outlined in red which has been excluded from The Draft Plan for unknown reasons.

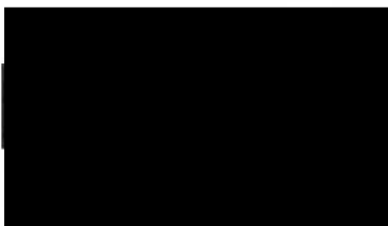
**In my response to The Draft Plan I would like to strongly suggest EXPANSION OF THE DRAFT PLAN TO INCLUDE REZONING OF WANDARA AS RESIDENTIAL and this is covered in Section 1.** This property has been questionably and unfairly excluded from the planning process, with no reason given. The odd shape of The Draft Plan in the aerial photo calls into question the boundary decision making process.

The serious implications of not including Wandara in The Draft Plan and this block remaining as agricultural land zoned RU2 are outlined in Section 2. If Wandara IS NOT REZONED, these considerations should be addressed in The Plan.

Section 3 contains general comments.

My conclusion is that my preference is for Wandara to be included in The Draft Plan, that is, I would support rezoning of Wandara as Residential. Once again, thank you for the opportunity to reply to The Draft Plan. Please contact me for further discussion at any time.

Yours sincerely,



### **SECTION 1 – RECOMMENDATION TO EXPAND DRAFT PLAN TO INCLUDE REZONING OF WANDARA AS RESIDENTIAL**

Wandara is immediately north and adjacent to the North-West Precinct, is within 10 minutes of the CBD and has synergy with the Draft Plan.

#### **Recommendations:**

- Expand The Draft Plan to include Wandara
- Rezone Wandara (red) as Residential to meet the broad aims of The Draft Plan
- Rezone the triangle (yellow) as Residential to meet the broad aims of The Draft Plan
- Careful planning is required so that the productive and development potential of Wandara is not unfairly limited by an arbitrary line on a map.



#### **1.1 Planning Framework**

I acknowledge and support that The Draft Plan is pro-development and future thinking; it builds on current trends for the growth of Dubbo as a regional hub. The Draft Plan references its interface with the Dubbo Urban Areas Development Strategy since 1996, the Dubbo Local Environment Plan 2022 (LEP), and the Dubbo Regional Airport Master Plan 2019.

#### **1.2 Demographics**

Section 5.1 says *Dubbo has 17,893 private dwellings, with an average number of people per dwelling of 2.5.*

The Draft Plan offers constructive and sensible ideas for the future growth and development of Dubbo, particularly due to the North-West Precinct's proximity to the Dubbo CBD and its natural features. The Draft Plan estimate ranges from 5000 to 6000 dwellings with a population ranging from estimated 12500 to 15000. These are significant figures which equates to an increase in the size of Dubbo of between 27% to 34%, and within less than a 5 minute drive of the CBD.

#### **1.3 Planning for Growth**

The exclusion of Wandara from the Draft Plan limits growth.

The inclusion of Wandara in the Draft Plan would have many benefits, including:

- "square up" the northern boundary
- allow for more residential development with lower marginal cost in the planning phase

- improve efficiencies in planning
- reduce cost per house block in the rollout of infrastructure to service the needs of this growing North-West Precinct
- keep housing growth well within the “10-minute city” limits.

As shown below, the drive from Wandara to the CBD of Dubbo is 5 minutes while the drive from South Lakes Housing Estate to the CBD is 10 minutes.



I urge the Council to expand The Draft Plan to include rezoning of Wandara as residential.

[Redacted signature]

#### 1.4 Benefiting revenue growth at Dubbo Regional Airport

Section 5.2 acknowledges *Master Planning activities for the Airport have been cognisant of the location and future role of the Precinct, whilst ensuring that the Airport continues to grow into the future.*

Considerable investment has already been undertaken at Dubbo City Regional Airport including the Royal Flying Doctor Service, the Rural Fire Service Training Facility and the Police Training Facility makes it an attractive location for expansion of aviation services at Dubbo.

Wandara has a desirable and strategic location for further development for residential uses associated with the Airport. A possible residential option for Dubbo is an area incorporating house and hangar with taxiway access from the backyard to the runway.

In my reply to the Airport Masterplan, I mentioned future rezoning of Wandara including the potential for expansion of residential aviation services as follows:

*A possibility which is in line with goal six and goal 7 (p. 33) is rezoning Wandara for homes and hangars with access to the taxiway. Private homes and hangars would complement the development of the taxiway for the cross strip and provide a genuine multi-purpose aerodrome. This could be an economic development opportunity for the City of Dubbo that could bring new affluent residents and further activity at Dubbo City Regional Airport.*

Examples where this type of residential development already exists are:

- Temora Airpark Estate which has attracted investment from billionaires
- Narromine Skypark

As The Draft Plan includes a range of zoning options including residential, mixed use and public recreation zones, **I urge Council to rezone Wandara as residential to meet the broad aims of The Draft Plan.**

#### 1.5 Supporting Connection and Movement

Wandara includes the triangle on the eastern side of Bunglegumbie Road measuring approximately 4000 square metres. Past re-routing of the Bunglegumbie Road severed the triangle creating a small unproductive parcel of land. Rezoning the triangle as residential will make it more compatible and useful with adjoining land on the eastern side of the Bunglegumbie road.

**I urge Council to rezone the triangle in The Draft Plan as residential.**

There are 2 proposed roads crossing Wandara; the Richardson Road extension, and the Spears Drive extension. These proposed roads will sever Wandara and decrease its productive capacity as an agricultural enterprise. However, by including Wandara in the Draft Plan, the Council could improve productive landuse by creating better access to the residential development potential of Wandara. Easy road access means that Wandara is more suitable for inclusion in the Plan rather than exclusion from the Plan.

**I urge the Council to expand The Draft Plan to include Wandara. I urge Council to modify the Draft Plan so that the future landuse of Wandara is residential.**



**SECTION 2 – IMPORTANT CONSIDERATIONS AND CONDITIONS SHOULD WANDARA NOT BE REZONED IN THE DRAFT PLAN – AGRICULTURAL LAND ON THE BOUNDARY OF RESIDENTIAL LAND**

Wandara is currently zoned RU2 and the property is used for farming and grazing in association with my farm at Eumungerie. I currently run steers from July to November to fatten on oats at Wandara and if not rezoned I will consider additional revenue generating activities including growing cereal or canola crops as recently demonstrated by neighbours. In Section 2 I will raise issues and concerns about The Draft Plan's impacts my farming and business activities on Wandara.

**Recommendations:**

- Provide “buyer beware” advice to prospective purchasers of adjacent properties in the North-West Precinct advising them that their amenity may be affected by legitimate and pre-existing farming activity, and that they should be informed about, and take into consideration, those activities in their purchasing decision. Note that this will include grazing and fattening cattle and dryland cropping of wheat and canola.
- The DRC planning process must adequately protect the right to farm.
- Be mindful of the reliance of adjacent farms on stock and domestic bores.
- Bushfire emergency plans must be adapted for the expansion of population in the North-West Precinct.
- Minimise risk of antisocial behaviour and learn from past successes and failures of town planning to continually improve outcomes for residents of Dubbo.

**2.1 Right to Farm and Normal Farming Operations**

NSW DPI Right to farm Policy states: *People who want to live in rural and agriculture areas need to understand that land is used for productive purposes, such as agriculture. The reality is that normal farming practices can have impacts on neighbours ranging from residual noise, light, dust and other impacts.*

Farming operations at Wandara may require:

- burning off for fire hazard reduction or as part of the cropping cycle.
- Crop spraying for weed management
- Dryland cultivation (sowing the crop with large machinery)
- Grazing of livestock
- Harvesting crops (again with large machinery)

If Wandara is not included in the rezoning, it will continue as productive agricultural land and as such there is to be no significant impact from this development on agricultural activity conducted at Wandara.

I urge the Council to **provide “buyer beware” advice to prospective purchasers of adjacent properties** in the North-West Precinct advising them that their amenity may be affected by legitimate and pre-existing farming activity, and that they should be informed about, and take into consideration, those activities in their purchasing decision. The DRC planning process must be transparent, fair, unbiased and **adequately protect the right to farm.**

[REDACTED]

## 2.2 Salinity, groundwater and water supply

Section 5.4 discusses salinity hazards of runoff and groundwater contamination. As mentioned, there is a *relatively high hydraulic conductivity of the alluvial sediments and the shallow riparian linked aquifer underlying the site.*

Managing water supply is critical to ongoing agriculture at Wandara which relies on two stock and domestic bores for cattle, as well as to maintain the garden and back-up house supply. Unfortunately, the supply in the groundwater aquifer was intermittently affected during drought, possibly due to competing use for irrigation.

As a neighbour, my concerns are:

- the negative impact of the hard surfaces of the new residential area on recharge of groundwater supply. The plan must **incorporate groundwater recharge zones** allowing many opportunities for the ground water to infiltrate and recharge the shallow riparian linked aquifer under the site, rather than be returned to the river through infrastructure as stormwater or runoff.
- the possible proliferation of private bores in the residential zone competing for valuable water supply.

I urge the council to be **mindful of the reliance of adjacent farms on stock and domestic bores.**

## 2.3 Bushfire and antisocial behaviour

Section 5.7 identifies *the entirety of the Precinct as Bushfire Prone Land.*

Experience at Wandara is that fires are started by antisocial behaviour of people. Observations of antisocial behaviour at Wandara include young people lighting fires, car theft, burnt out cars, vandalism, unlicensed motor bike riding on Blizzardfield Road alongside a paddock of cattle, dogs chasing cattle, trespass. This type of behaviour is likely to increase with the encroachment of the urbanised area to Blizzardfield Road.

**Bushfire emergency plans must be adapted for the expansion of population** in the North-West Precinct. The Draft Plan must **minimise risk of antisocial behaviour** and **learn from past successes and failures of town planning to continually improve outcomes for residents of Dubbo.**

## SECTION 3: GENERAL COMMENTS

The following are my general comments about The Draft Plan which relate to Wandara.

### **Recommendations:**

- Take ownership of the Blizzardfield Road
- Work with Crown Lands to seek funding for its formation and development

### **3.1 Blizzardfield Road**

Section 6.8 mentions: *Access to the land is currently limited to Bunglegumbie Road, Spears Drive, Westview Road, which is only partially sealed and Blizzardfield Road, which is unsealed.*



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Blizzardfield Road is Crown Road between the northern side of Northwest Residential Urban Release Area and Wandara. I have previously contacted DRC staff regarding the poor state of the road for ratepayers, including myself, to access their homes, farming paddocks and as the emergency access to the airport.

Matthew Lewis, Manager Infrastructure Delivery DRC wrote the following reply (email date 30/07/2020) to my email:

*During an emergency exercise at the airport earlier this year access points to the airport were reviewed and it was determined that the access point from Blizzardfield Road would be removed from the emergency plan. Emergency access signage on the airport gate and at the intersection of Blizzardfield Road and Bunglegumbie Road will be removed because of this change to the plan.*

*Council has a defined maintained rural road network, as you have noted below Blizzardfield Road does not form part of this network. When the maintained road network was defined Council only considered taking on the maintenance responsibility of roads that have been upgraded to a proper and acceptable standard at no cost to Council. Blizzardfield Road appears to be a result of traffic travelling over natural ground along the Crown Road corridor without a proper road ever being formed, Council has not accepted maintenance responsibility as a result.*


**I urge the Council to undertake urgent steps to resolve the problems with Blizzardfield Road so that it is trafficable for residents such as:**

- **Take ownership of the Blizzardfield Road**
- **Work with Crown Lands to seek funding for its formation and development.**



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 **CAUTION:** This email came from outside the organisation. Be cautious clicking links and do not open attachments unless they are expected.

To Whom it may concern,

I refer to the draft North-West Precinct Plan and related correspondence ref# CD22/4655

I am writing this submission to object to the proposed precinct plan for the following reasons:

The proposed development would dissect my family property in half decimating its value in many respects. The properties sale value would be severely reduced as would its livestock carrying capacity.

Livestock access to fresh water would be completely removed on half of the property. Addition of facilities to allow stock access to fresh water would be prohibitively expensive and problematic if the development were to go ahead as planned. Access to and movement of stock would also be exponentially more difficult, expensive and dangerous.

Increased noise pollution from traffic would dramatically increase at our home, going from light, local traffic at our boundary gate almost 500m from our home to heavy, Interstate highway traffic on our doorstep.

Allowing the proposed plan to proceed would undoubtedly detriment the future of our family in every aspect, financially decreasing the value of the property as well as reducing our potential income whilst increasing expenses, lifestyle would be impacted by the inability for us to freely and safely access areas of our property.

I believe that the development proposed would also risk local flora and fauna. We make a concerted effort to provide refuge for native flora and fauna promoting native vegetation, eliminating dominant weeds where possible and providing water, plants that attract native birdlife, and natural vegetation areas within our property. This would all be jeopardised by the proposed development.

With the development over the last few years within the North-West Precinct there has been a decided increase of criminal activities targeting small farms in the area. The proposed development would result in a sharp increase in these activities and further put my family, possessions, property and livelihood at risk.

If there was to be a development of this area, the North-West Precinct should have a focus on large lifestyle blocks rather than tiny residential blocks. If the area proposed for development were to be sub-divided into one to five acre blocks, local roads infrastructure and commercial resources could better cope with the population increase in the area and it would also promote Dubbo as a rural and lifestyle destination.

I am more than happy to meet with or discuss further with council representatives to achieve a better outcome for my family and Dubbo as a whole. Thank you for considering this submission, I look forward to hearing from you.

Thank you

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Sent from [Mail](#) for Windows

16 Dec 2022

  
Growth Planning | Dubbo Regional Council  
[Steven.Jennings@dubbo.nsw.gov.au](mailto:Steven.Jennings@dubbo.nsw.gov.au)

Dear 

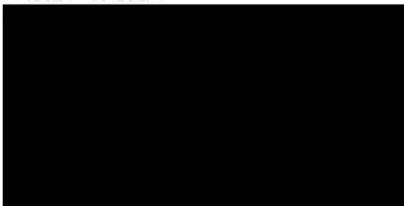
**Re: Draft North-West Dubbo Precinct Plan CD22/4655**

We are the owners of two properties located within the Draft North-West Dubbo Precinct Plan being 9L Bunglegumbie Road, Dubbo 2830 & 17L Blizzardfield Road, Dubbo 2830.

We strongly object to any of our land being zoned as B4 Mixed Use under the new Precinct Plan. We have spoken with several parties in the property industry regarding the current draft plan and all feedback has been that Mixed Use product will not be viable in the foreseeable future in this location. This will lead to the land being undevelopable and vacant for years to come.

It is logical that the land remains as R1 General Residential which will ensure it will be able to be developed in a timely manner with product that can meet the local market.

Yours Faithfully





**⚠ ? CAUTION:** This email came from outside the organisation. Be cautious clicking links and do not open attachments unless they are expected.

The following information has been submitted from the Dubbo Regional Council:

<b>First name:</b>	[REDACTED]
<b>Surname:</b>	[REDACTED]
<b>Residential address:</b>	[REDACTED]
<b>Contact number:</b>	
<b>Email:</b>	[REDACTED]
<b>Written submission:</b>	<p>The 28.4 ha of undeveloped floodplain should be designated as public parkland for environmental restoration.</p> <p>If the review of where sporting fields should go that is essential to the whole community for the next 20 years identifies west then land not on the floodplain should be designated for sporting fields</p> <p>Higher density in NW precinct means 15000 people need sufficient usable passive open space for health both mental and physical. This must have large tree canopy for usability and our changing climate. Sports fields can go anywhere and should be rationalised for use of all sporting groups.</p>
<b>File Upload:</b>	



Dubbo Regional Council  
PO Box 81  
Dubbo, NSW 2830

Monday 15th November 2022

**RE: North West Urban Release Area Precinct Plan – Public Submission**

To Whom It May Concern,

I am wanting to respond to the draft precinct plan for the North West Urban Release Area. Overall, Council should be acknowledged for making an attempt at a considerate urban plan based on modern planning principles however it is coming from a framework too appended to commercial and generic thinking and therefore, I feel, falls short of the mark. Without wanting to sound too pompous I would like to see a revision of the master plan to be conducted following better, and culturally richer, urban planning and design principles than those contained in the draft plan. It is not enough to create *spaces* for living and working but there must be a vision for creating *places* for human enjoyment and interaction. I do acknowledge that the plan is at the big picture stage but it is best to come in at this stage with a better vision so that all following stages are headed in the right direction.

Urban planning in Australia has largely failed in helping to create healthy, meaningful communities for the past 60 years and that is mainly because it has not concerned itself with human desires and needs but solely aiming to achieve efficiency of means and commercial value. What is most valuable and what can't have a monetary figure placed on it is human enjoyment in their surrounds and the pleasure gained from interaction with one another. I believe a much better development could be achieved but it will take courage and commitment on the part of the Council. Laying out a plan and leaving it to developers to fill in the blanks will not create a good result. Dubbo's currently constructed 'sub-suburbs' are more than example enough of that. Criticisms of these areas is the disconnection between neighbours, disconnection between people and the environment (numerous astro turf lawns in these areas demonstrate this) the lack of community facilities, quiet spaces, busy places, public spaces, etc. In the end these sub-suburbs lock out imagination, creativity and empathy for the wider world in their inhabitants. Let's instead create an alive urban environment that will engender happy, playful and thoughtful people.

Please see a number of comments below:

- The proposed land use zones should be diversified and spread throughout the subdivision. This will create a much more interesting, varied place to live, work and play where peoples needs are met within a short distance of their home.
- Along with spreading the uses amongst the new subdivision the layout needs to have a tighter network of streets to create a higher density of low to medium scale housing, institutional and commercial buildings.
- A mixture of building scales throughout the subdivision would create visual interest and an appropriate intensity of use. The mixture would consist predominantly of one and two storey buildings with a number of 3-5 storey buildings. To create interest and variety these differently scaled buildings could be arranged in groups, rows, clusters, and be dotted throughout the subdivision as detached, semi-detached and attached buildings.
- A high density residential zone consisting of apartment buildings adjacent to the river would be inappropriate and spoil the visual environment in the vicinity of the river corridor as well as have a physical impact on it. This area would be best used as public open space as per the rest of the river corridor. This would also provide an appropriate setting for the homestead Mount Olive, which is a heritage item.
- The subdivision pattern needs to be broken up and create less high-traffic streets. I'm not advocating for empty cul-de-sacs but more runs of streets which wouldn't be used by general through traffic (see principles in *A Pattern Language* by Christopher Alexander).
- Central parks, wildlife corridors, pocket parks should be interspersed throughout the

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development so as to be easily accessible by walking as well as to create visual interest and variety in the subdivision.

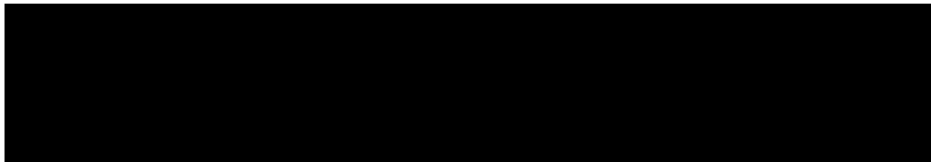
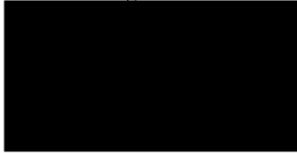
- The recreational public open space in the north east flood zone should be for environmental restoration and passive recreation purposes only. Any sports fields in the new precinct can be incorporated in the subdivision itself. The proposed 5.8 hectare public recreation park shown on the precinct plan could facilitate the proposed sports fields.
- A top priority should be given to create a walkable precinct. A good modern precedent includes Poundbury in Dorset. Historic precedents for walkable urban areas number in the thousands. Good examples close to home include Glebe, Newtown, Paddington and Woollahra in Sydney. All these suburbs achieve a high density yet at the same time manage an appropriate human scale with a strong connection between people's homes and the surrounding streets. It is not the historic style of these places that need be copied but more so the scale, density, variety and the walkability of these suburbs. For some reason Council's and developers in Australia have not been able to figure out an appropriate scale in either creating lifeless low density developments or overwhelming high density developments. There is a better way and it has already been figured out for the past few thousand years.
- Key principles of Poundbury that are worth adopting, include: 'Architecture of place - creating beauty and reflecting local character and identity; Integrated affordable housing - throughout the development and indistinguishable from private housing; Mixed use - homes, public amenities, retail and other business uses together with open areas, all designed as an overall community; Walkable community - giving priority to people rather than to cars.'
- Reinforcing my view on increasing the density of the proposed subdivision is the population figures of the older inner Sydney suburbs. Paddington achieves 80 people per hectare. Woollahra 60, Glebe 65 and Newtown 120. The high projection for the North West urban release area is for only 40 people per hectare. This indicates a higher population could be achieved through creating a denser street layout yet still maintaining an appropriate human scale of development like these older suburbs.
- Repetition of form, scale and layout is banal and that variety, eccentricity and elements out of the ordinary or partially hidden invite inquisitiveness, delight and surprise. These are essential for creating happiness in humans that is derived from their built environment.
- Solely 'housing' people is not good enough. We are more than mere economic units. Public spaces and facilities need to be integrated into the subdivision.
- The plan as it currently stands will, I predict, create a banal precinct. It mimics typical suburban developments with a central business core rimmed with empty residential streets. Sadly, creating suburbs with a 'mini-major' shopping centre plonked down at the subdivision's entry is as far as a neighbourhood goes these days. A dense, small scale, mixture of houses, public spaces and independent shops is what creates the heart of a community.
- The low street density and layout I fear will help create another 'sub-suburb' like those that are already being constructed around Dubbo including Southlakes, Delroy Park, etc, etc. These are not communities but instead are car storage areas with attached human dormitories. There is minimal interaction between people and all that's left is for people to 'shop at the mall' and consume. Let's rise above this occurrence and create places that will optimise human interaction.
- Newington (being the former Sydney Olympic Athlete's Village) is close but also wide of the mark in terms of good urban design. It has a good urban density and scale with ample tree cover yet suffers from being a monoculture of residential streets with a neighbourhood/commercial centre solely concentrated in one part the suburb. Older residential areas of our towns and cities instead had corner shops and public spaces dotted throughout them which enlivens them, reduces car dependency and brings people together in the street.
- Affordable housing can be built into the planning of and implementation of the subdivision. Many examples exist from around the world of Council led development with good outcomes including rented council housing and shared ownership. A good recent example includes Lowfield Green by Yospace which is part of the housing delivery scheme by the City of York Council in the UK. Let's emulate great initiatives like this.

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I hope much consideration of the above comments will take place and will further shape the planning and development of this proposed urban area. Please see overleaf a number of images contrasting between the sort of developments that do and don't create community (i.e., through proximity, scale, density, variety, etc)

If you have any questions please do not hesitate to contact me.

Yours faithfully,



Good Examples of Urbanity



Poor Examples of Urbanity







**⚠ ? CAUTION:** This email came from outside the organisation. Be cautious clicking links and do not open attachments unless they are expected.

The following information has been submitted from the Dubbo Regional Council:

<b>First name:</b>	[REDACTED]
<b>Surname:</b>	[REDACTED]
<b>Residential address:</b>	[REDACTED]
<b>Contact number:</b>	[REDACTED]
<b>Email:</b>	
<b>Written submission:</b>	Considering the recent floods and need to build a higher bridge over this area for flood mitigation .. I don't think it is a good idea that the area right next to the river and most likely to go underwater has been zoned R4 High Density Residential.
<b>File Upload:</b>	

Submission from: [REDACTED]

**Thank you for this opportunity to submit my personal opinion to the NORTH-WEST URBAN RELEASE AREA PRECINCT PLAN FILE CD22/4655**

I do realise that we cannot keep Dubbo the beautiful rural city that it has been in the past and that expansion is necessary. With expansion and the attraction of developers who prioritise quick bucks before the livability and environmental concerns of its citizens, however, I would ask that careful consideration be given to ordinary citizens and visitors like myself, who are sensitive to the aesthetic factors of a city, to the comfort, privacy and safety of living here, and to concerns about Climate Change.

**Concerns:**

1. I would prefer the 28.4 ha of undeveloped floodplain of the Macquarie River on the eastern side of the North West Urban Precinct be designated as public parkland for environmental restoration. This will be the only public passive green space available to the high-density residents on R4 zoning and require a footbridge to access.

This 28.4 ha is being considered as sporting fields for the North Precinct Masterplan of the Macquarie River. How can this be consistent with the green web and the Open Space Masterplan 2018, page 24?

2. The residents of the NW Urban precinct must have access to both passive and active recreation but there is insufficient space for this detailed in Figure 8: Proposed Land Use Zones of the draft Precinct Plan. Sporting fields and open parkland spaces need to be designated for the future thousands who will live here.
3. I am concerned that in zone R4, people will be in high rise, densely packed homes, along a valuable floodplain, visible from the eastern bank. Along that horizon, the busy highway will rise 4-5m above ground-level. It will not enhance the peaceful, shady, appearance of our city and certainly won't enhance the river. The small lots will not contain large trees and possibly any gardens.

Dubbo has had experience previously in West Dubbo and in Apollo Estate of the serious social impacts caused by crowding lower-socio economic residents into one small area. Research has shown that negative impacts are greatly reduced when this housing is dispersed within the wider community.

My belief is that lower-cost housing should be located closer to schools, parks and shops.

Apartments and multi-storied buildings are not environmentally sustainable in Dubbo's heat. They require extra energy and thus are more costly for the residents, as well as poorly

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considered options when addressing a net zero emissions policy. These buildings face mostly east-west which is another factor raising the need for expensive air-conditioning.

Lower-cost housing is often the option of the disabled, aged, and other welfare-dependent citizens. Stairways are not easily negotiated by these people or by their carers.

The raised new highway route is effectively a levee bank. The private owners living there now, know they will have to drive onto the highway to leave the R4 zone, turn left, and come back the same way. They cannot drive across to their own land on the other side. Effectively this means that the high density of people in zone R4 are trapped in there from the western suburbs. It psychologically raises the issue once again, of a segregated society. With floods filling the old Wiradjuri park, closing Serisier bridge and banking eastwards from the raised levee bank highway, how safety conscious has this planning been for possible flood-evacuation needs?

4. Little attention seems to have been given to environmental concerns. For the future of our planet and all Australians, strategies need to be evident in current town planning to mitigate the effects of higher temperatures, droughts and floods, as well as to the loss of native fauna and flora. The draw-down of emissions could be part of the plan by designating large areas of public parkland for tree-planting and native vegetation. Attributing value to the existing floodplain as a facility for repairing the health of the river, avoiding erosion and soil run-off, providing a carbon-credit industry and increasing biodiversity is not apparent. Sports-fields, car parks, sheds, canteens, irrigation, grandstands, have no positive contribution to a floodplain and can always go inland, where they are more accessible. Our streets need median strips with large trees; our parks need trees; our house-yards need trees – all protected with an updated DRC Tree Preservation Policy with teeth.

The Chief Executive Officer  
Dubbo Regional Council  
PO Box 81  
DUBBO NSW 2830  
Attn: Steven Jennings

Dear [REDACTED],

**RE: PUBLIC EXHIBITION OF THE DRAFT NORTH-WEST PRECINCT PLAN CD22/4655**

We refer to Dubbo Regional Council's invitation for land holders to provide comment of the Draft North-West precinct plan as per Dubbo Regional Council's letter dated 14th of October 2022. The land owned by Maas Group Holdings is 168A Bunglegumbie Rd known as Lot 6 on DP250606.

Our main points of concern with the Draft North-West Precinct plan are as follows;

- Constructability of Masterplan
- Consideration of planning constraints throughout precinct
- Allocation of land use zonings throughout precinct

Constructability of Masterplan

The proposed masterplan appears to be in concept phase, therefore the road network does not reflect the proposed lots sizes reflected in the strategic plan. For example, the offset distance of the proposed road from existing development is 90m on the western boundary that would not facilitate the proposed minimum lot size of 450m<sup>2</sup> for R2 zoned in this location. This is also the case with the 55m offset of the proposed road on the Southern boundary. Similarly, proposed roads are drawn over the top of, and parallel to, the eastern lot boundary that would result in partial construction of this road with no guarantee that adjacent development would develop remainder of this road within a similar timeframe. This would also be the case with several the lots to the North of our site that are bounded by the unmade road to along their Eastern boundary. The closure of this unmade road to facilitate development would also provide some timing delays to delivery of development in this area. Figure 1 below shows a markup of the proposed masterplan layout overlaid on existing development and current lot configurations.

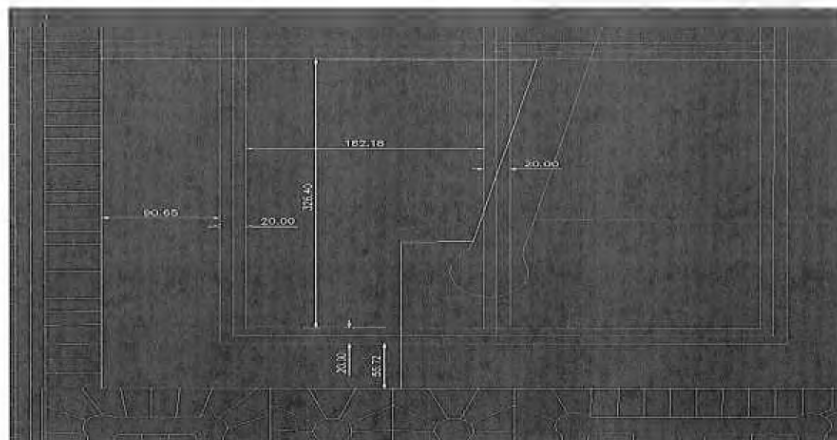
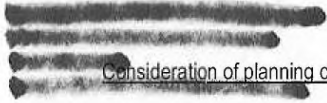


Figure 1. Overlay of proposed Council masterplan

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Consideration of planning constraints in throughout precinct



The proposed subdivision layout plan indicates, further consideration of environmental constraints would be required including the following;

- Remnant vegetation
- Existing heritage items
- Traffic noise from the future Newell Highway redirection
- Traffic and access aspects
- Stormwater runoff
- Flooding

Several tracts of remnant vegetation are located across the precinct, however none of these areas are proposed as RE1 recreation zones. This would otherwise enable the retention of existing remnant vegetation and established trees and avoid the need to pay offset costs during future development.

It is also noted that an area of High Density Residential R4 zoned land is proposed between the new Newell Highway alignment and the bank of the Macquarie River. This area is currently occupied by locally listed heritage item 'Mt Olive', one of the first vineyards in the region. The intended housing typology of shop top housing and residential flat buildings as shown in Council's strategy for the R4 zone is likely to result in a clash of interests and limit the ability to preserve Mt Olive in it's significant context of a vineyard setting.

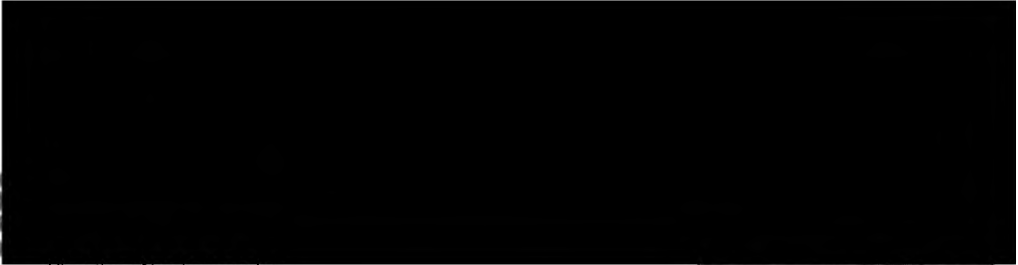
Accessing this area to the East of the new Newell Highway alignment is likely to require a signalised intersection. As this has not currently been considered as part of the new Dubbo Bridge project the performance of the new alignment may jeopardise the efficiency of heavy vehicle movements and performance of the route during flood evacuations.

Development of this area in proximity to this new road would have road traffic noise considerations. For example, the environmental assessment completed by RMS shows dwellings within 200m of the new Newell Highway alignment and Dubbo Bridge require architectural treatments to mitigate road traffic noise impacts.

The drainage of the North-West Precinct would be to the East in the direction of the Macquarie River with water quality managed through detention basins prior to discharge. The likely location of the basins would be in this area so water quality could be improved prior to discharge. Council studies also show that this area would also be affected by flood waters, therefore consideration of hydrological flows would need to be considered in this precinct in context of high-density type dwellings that are likely to include basement carparking arrangements. Safe evacuation of this area would need to be considered in conjunction with the above-mentioned access issues to maintain safety.



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Allocation of land use zoning


Various planning documents agree that housing diversity is key to affordability and meeting the changing housing needs of regional populations. R2 low density zoning is the only zone allocated to Lot 6 DP250606. This zoning realistically permits only two housing typologies including single dwelling houses on variable lot size and dual occupancy style of housing products. Options for secondary dwellings are not widely adopted by new homeowners.


The recommendations from the recent Regional Housing Taskforce report state that smaller housing products are key to addressing shifting population needs of regional NSW. Given this, we request that different types of residential zoning are allocated to lot 6 on DP250606 enabling the delivery of a greater range of housing options. As this holding is located closest to existing infrastructure and development, we feel that our site is strategically positioned to deliver the needs of population growth in the short to medium term of future population growth.

It is possible that actual population growth in the short term may exceed predictions of noted in previous estimates contained in the Local Strategic Planning Statement and other census-based predictions based on commencement of the Inland Rail Project within the region. Transient construction worker population generated by this project is likely to place an increase in demand in local rental market, meaning that affordable housing products for key workers and long-term residents should be considered and provided for.

It is noted that in the draft masterplan that majority of the land zoned other than R2 such as R1, R4, B1 and B4 fall within the ownership of government authorities. Given the distances of the planned urban core from existing services and infrastructure we are concerned that some of this land may not be developed based on the previously mentioned environmental constraints or feasibility issues

Overall, it is clear that the draft precinct plan has considered growth of the region, however we would request that Council considers providing a mixture of R1 and R2 zonings to lot 6 on 250606 to ensure that the short to medium term a range of housing products can be delivered to meet market conditions and make sure land available and feasible for development is capitalised on in the first instance to meet the needs of the Dubbo Region.

We would welcome the opportunity to discuss this in further detail with Dubbo Regional Council prior to the lodgement of our development application for the subdivision of Lot 6 on DP250606. Should you wish to arrange a meeting please contact us at  or myself on the details provided below.



# Draft Precinct Plan

## North-West Dubbo Urban Release Area



Updated March 2023

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## 1. The North-West Precinct

The North-West Urban Release Area Precinct consists of 375 Hectares on the North-Western fringe of the Dubbo urban area, as indicated in Figure 1. The Precinct is situated approximately 2 km from the Dubbo Central Business District and the Dubbo Regional Airport and is situated 4 km from the Dubbo Health and Education Precinct. The Precinct will also benefit from the future extension of the Newell Highway with a third crossing of the Macquarie River planned to be delivered in the eastern section of the Precinct.

The majority of the subject lands are classified as *Urban Release Area (URA)* under the provisions of the Dubbo Local Environmental Plan 2022. This and other lands in the area, place a focus on strategic planning to ensure neighbourhoods are created to support future growth and to ensure the City can benefit from the strategic location and opportunities this Precinct will provide in the future.

Approximately 334.6 Ha of the Precinct is currently zoned R2 Low Density Residential under the Dubbo Local Environmental Plan 2022. Approximately 40.4 Ha of the Precinct is currently zoned R5 Large Lot Residential.



Figure 1: North-West URA Precinct

## 2. Strategic Planning

This Plan seeks to identify the key strategic issues to be considered in the development of the area and seeks to define future strategic direction and planning guidance.

The broad aims of this Plan are to:

- Identify the opportunities and constraints of the land and the anticipated needs of the community.
- Broadly indicate the likely future development potential of the Precinct.
- Enable the characteristics of the study area to determine the most appropriate location and form for future development.
- Provide a broad context of the consideration, by Council, of a future land zoning regime in the area.
- Establish a vision and set of development objectives which future development will be required to meet.

## 3. Planning Framework

The North-West Town Centre has been identified as a key urban growth area for Dubbo since 1996 in the Dubbo Urban Areas Development Strategy. This Strategy forms the central basis for land use zoning and planning guidance for Dubbo.

At the core of the Residential Areas Development Strategy is the emphasis of further residential development in West Dubbo which would ensure the Dubbo Central Business District is situated at the centre of the Dubbo Urban Area. The Strategy also provides for further infill development to be undertaken in the South-East area of the City.

The Strategy provides information that the future role of the Precinct will be dominated by its suburban residential function and its strategic location to the Dubbo Central Business District, Dubbo Regional Airport and the range of employment opportunities for future residents.

The objectives for land use in the overall Western Precinct are as follows:

- Close Bunglegumbie Treatment Plant;
- Promote and support suburban residential expansion off Bunglegumbie Road east of Bourke Hill and in the Minore/Joira Road area;
- Identify strategies for improving the appeal of West Dubbo as a residential location; and
- Obtain a suitable alignment for a safe public road access from Mitchell Highway to Bourke Hill (South side) other than Jannali Road to facilitate long term residential development options north of the Main Western Line.

The North-West Town Centre or Urban Release Area presents a significant opportunity to provide a range of residential housing options within a close proximity to the Dubbo Central Business District and a range of employment and other facilities. It is also considered that the North-West Town Centre provides a significant opportunity to deliver a range of housing options for the future growth and development of the City and the Region.

#### 4. Vision

The North-West Residential Urban Release Area is a key residential growth area for Dubbo. The role and status of the Urban Release Area will drive residential development opportunities, provide increased housing opportunities and ensure the City can provide housing for our increasing and vibrant urban population into the future.

There will be an increased need for further housing diversity and housing choice in this area of the City and across Dubbo more generally. This will enable a variety of housing options at different price points in the Dubbo housing market.

The subject area includes the provision of land which could be used for the purposes of a neighbourhood shopping centre. Any neighbourhood shopping centre would only be of a scale which would service residential development in the Precinct and limited servicing of adjacent development in the immediate locality.

#### 5. Key issues and constraints

##### 5.1 Demographics

Dubbo is one of the State's largest inland cities with an estimated resident population of 43,516 people in 2021 (ABS, 2021). The City of Dubbo services a catchment population in excess of 120,000 people.

Dubbo has a high proportion of young and elderly people, with 24% of the population aged between 0 and 19 years and 17.2% of the population aged 65 and over. 48.4% of the population are male and 50.6% of the population are female.

Dubbo has 17,893 private dwellings, with an average number of people per dwelling of 2.5.

Couples with children include 40.7% of households, however, childless couples and single parents account for 37.8% and 19.6% of dwellings respectively, which highlights the changing nature of demography in the City and the need for a variety of housing products into the future.

The NSW Department of Planning and Environment population projections for Dubbo have estimated the population to be 54,275 by 2041. The population growth scenarios for the North-West Precinct include low, medium and high projections as below:

- Low – 5,000 dwellings, population 12,500
- Medium – 5,500 dwellings, population 13,750
- High – 6,000 dwellings, population 15,000.

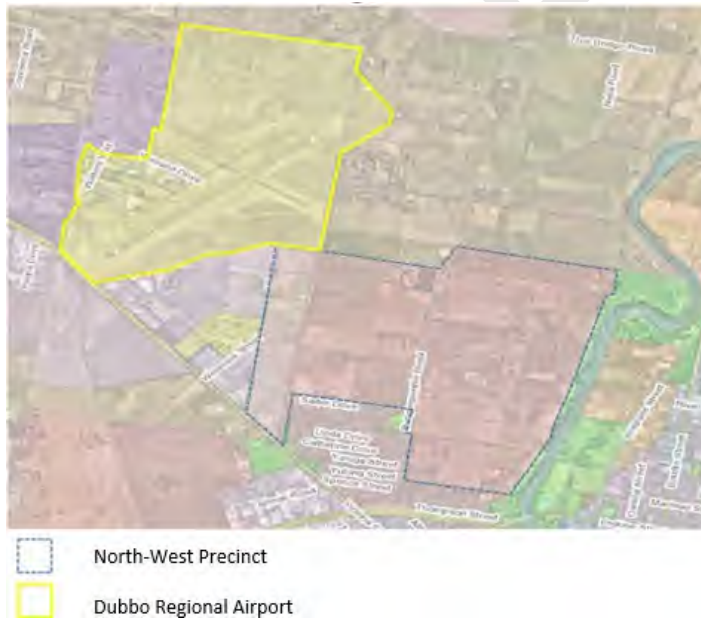
## 5.2 Dubbo Regional Airport

The Precinct is located directly adjacent to the Dubbo Regional Airport, 4R Cooreena Road (Mitchell Highway).

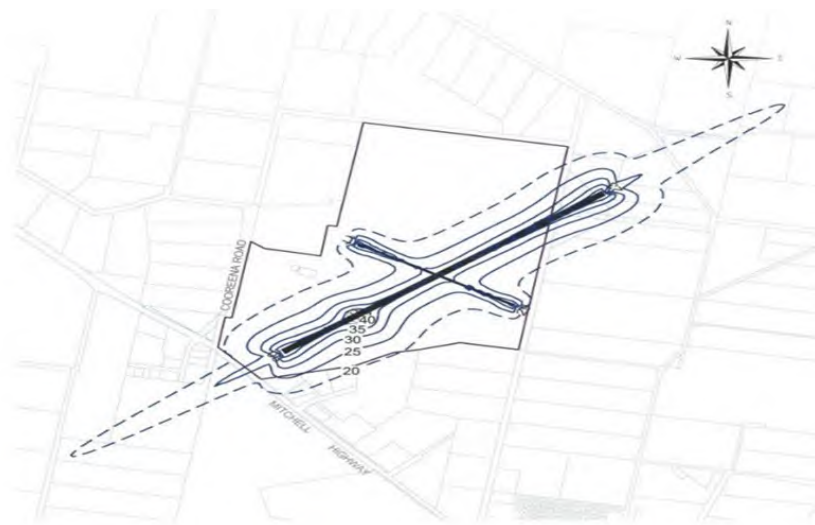
Master Planning activities for the Airport have been cognisant of the location and future role of the Precinct, whilst ensuring that the Airport continues to grow into the future. Master Plans for the Airport have included assessment of any impacts from aircraft noise on residential development, in addition to safeguarding airspace for approach and departure of both the Main Runway and Cross Runway.

The aircraft noise mapping provided an assessment of the future noise profile of the Airport based on an ultimate runway length of 2,350 metres and use by larger aircraft types. Figure 2 shows the proximity of the North-West Urban Release Area to the Airport. Figure 3 shows the 20 ANEF noise contour overlayed on the Airport site. It should be noted that any residential development beyond the 20 ANEF contour does not require any future amelioration measures. It is therefore considered that the location of Dubbo Regional Airport in relation to the Precinct is not a significant constraint to future development.

In addition, this Precinct Plan also includes commentary around building heights, to ensure development does not impact the Obstacle Limitation Surface for the Airport.



**Figure 2:** Proximity of the North-West Urban Release Area to the Airport



**Figure 3:** ANEF (2036) Contour Mapping over the Airport site – outside of the North-West Precinct

### 5.3 Flora and Fauna

The North-West Precinct is not identified as containing areas of biodiversity under the provisions of the Dubbo Regional Local Environmental Plan 2022 and is predominately cleared. The land contains a small area of planted vegetation known as Bunglegumbie woods and has a number of large remnant scattered paddock trees. Bunglegumbie woods was planted at the time the site was used for Dubbo’s Sewerage Treatment Plant, as a mechanism for effluent water use.

The scale of the North-West Precinct is quite large and contains a number of variously sized remnant patches of native vegetation. These patches are mapped in the Central West/Lachlan vegetation mapping and include the following Plant Community Types (PCT’s);

PCT 45	Plains Grass grassland in the NSW South Western Slopes Bioregion
PCT 70	White Cypress Pine woodland on sandy loam in Central West NSW
PCT 76	Western Grey Box tall grassy woodland on alluvium in the NSW South Western Slopes Bioregion
PCT 78	River Red Gum riparian tall woodland in the Brigalow Belt South Bioregion
PCT 81	Western Grey Box – Cypress Pine shrub/grass tall woodland in the Brigalow Belt South Bioregion
PCT 88	Pilliga Box – White Cypress Pine – Buloke shrubby woodland in the Brigalow Belt South Bioregion
PCT 248	Mixed Box Eucalyptus woodland on alluvium Central West NSW
PCT 267	White Box – White Cypress Pine – Western Grey Box woodland in the NSW South Western Slopes Bioregion
PCT 511	Queensland Blue Grass, Redleg Grass, Rats Tail Grass in the Brigalow Belt South Bioregion

Of the PCTs 76, 81, 267, 511 and possibly 248 are, or may be, components of listed Endangered Ecological Communities or may contain threatened plant species. Unless otherwise excluded from assessment under the Biodiversity Offset Scheme (BOS), any vegetation clearing proposed in the North-West URA must be assessed, and impacts avoided or minimised through redesign, and then any unavoidable impacts must be mitigated.

A detailed flora and fauna study will be required with development to determine the significance of vegetation and maximise the protection of biodiversity values across the site.

The area is also adjacent to the Macquarie River which is identified as ‘biodiversity’ under the provisions of Dubbo Regional Local Environmental Plan 2022 (as shown in Figure 4). Mature River Red Gums line the Macquarie River and have been mapped as PCT 78.



■ 'Biodiversity' mapped under DLEP 2022    ■ North-West Precinct

**Figure 4:** Biodiversity mapped in the Dubbo Local Environmental Plan 2022

#### 5.4 Salinity and Groundwater

The majority of the Precinct is contained within the West Dubbo Hydrogeological Landscape (HGL), while the eastern section of the Precinct along with the Macquarie River corridor are contained within the Dubbo Macquarie Alluvium hydrogeological landscape.

Hydrogeological Landscapes are a conceptual framework allowing to better understand dryland salinity risks across a landscape and were generated for Council by the NSW Department of Environment Climate Change and Water in 2010.

The West Dubbo HGL has a Medium level of salinity hazard with Moderate Land impact, Salt load export impact and Impact on water quality. At the same time the West Dubbo landscape is currently an important source of fresh water from runoff. This fresh water is important as a dilution source for urban contaminants moving downstream of Dubbo but also generates a salt load via this runoff which is then redistributed through the catchment.

The Macquarie Alluvium HGL is also a Medium salinity hazard landscape with Low Land impact and impact on water quality and Medium Salt load export impacts. The Macquarie Alluvium is a landscape which provides important base level flows to the Macquarie River and also receives and stores mobilised salts through surface runoff. The combination of these two HGL's in the North-West URA ensures there is a medium level of risk in future developments across this landscape from dryland salinity and that, similarly, future development poses a medium level of salinity risk to groundwater and surface water sources.

The Precinct is mapped as having high vulnerability to groundwater contamination, due to the relatively high hydraulic conductivity of the alluvial sediments and the shallow riparian linked aquifer underlying the site. This assessment relates to non-saline contamination, contamination from pollutants, PFAS etc. Top-down contamination is possible on a site where the surface soil layer has a high hydraulic conductivity. This is further justification for accurate and appropriately detailed contaminated land assessments, and salinity and groundwater assessments supporting any future development proposal.

Groundwater flow on the eastern portion of the site is expected to flow in a northerly direction (like the river flow direction). Deeper groundwater, on a regional scale, would likely flow to the north-west (as the river does on a regional scale).

### 5.5 Aboriginal and European Heritage

The Precinct contains one locally significant heritage item under the Dubbo Regional Local Environmental Plan 2022. The item is a stone cottage and associated outbuildings called 'Mount Olive' and is situated on Lot 31, DP 1219695 and Lot 32, DP 1219695, 6R Bunglegumbe Road, as shown in Figure 5. 'Mount Olive' was one of two significant vineyards established in Dubbo soon after the town's establishment, set up by German vigneron Frederick and Salome Kurtz.

The heritage item is not expected to significantly constrain development in the area. However, future development will be required to be designed to reduce impacts on the significance of the Heritage Item.



**Figure 5.** Dubbo Regional Local Environmental Plan 2022 Item no. 78– 'Mount Olive'

All Aboriginal sites and objects are protected under the National Parks and Wildlife Act, 1974. Areas of the Precinct have been subject to early assessment with development of the Newell Highway/River Street Bridge project and include disturbance to a large area of the eastern section of the Precinct.

Further work in the Precinct will include a detailed Archaeological report and Indigenous Cultural Heritage Assessment Report as a key requirement for future development.

### 5.6 Flooding

The North-West Precinct is situated adjacent to the Macquarie River and has approximately 2 km of river frontage along its eastern boundary. This area is partially affected by flooding of the Macquarie River, with the 1:100 year (1%) flood mapping shown in Figure 6.



**Figure 6.** Dubbo Flood Planning Area

Further assessment of flooding impacts on the eastern section of the Precinct as shown in Figure 6 will be required to be undertaken prior to development occurring, taking into considering NSW Flood Inquiry recommendations.

### 5.7 Bushfire Prone Land

The Dubbo draft Bushfire Prone Land Map identifies the entirety of the Precinct as Bushfire Prone Land. This predominately includes Vegetation Category 3 as grasslands.

Bushfire considerations will be required at the planning stages of any proposed subdivision and development in the Precinct.



#### 5.8 Contamination

The North-West Precinct contains a number of sites listed on Council's potentially contaminated land register, including the former Dubbo City Council Animal Shelter, former night soil depot and the former Bunglegumbie Sewage Treatment Plant which was built in 1928 and demolished in 2010.

Whilst the former Bunglegumbie Sewage Treatment Plant (STP) has been completely demolished, no remediation of the site has occurred. At the time of demolition, it was Council's broad policy to proceed with the demolition of the STP and that contamination/remediation issues could be addressed in conjunction with future proposals to redevelop the land.

Potential contamination poses a possible development constraint which will require full remediation prior to any residential development of the site.

As well as these known potentially contaminated sites, agricultural uses have potential to contaminate land. Given the widespread agricultural uses of the North-West Precinct there will be requirements for contaminated land assessment in relation to all proposed development across the area, including beyond the former Dubbo City Council Animal Shelter, night soil site and Sewerage Treatment Plant area.

#### 5.9 Geology and Soils

The Precinct contains red to brown earthy soils and is located on Quaternary alluvium deposits derived from various rock types within the Macquarie River.

Geotechnical investigations covering the majority of Council owned lands (except the area within Devil's Hole bend) conducted by Barnson Pty Ltd in 1995 indicated that there are no geotechnical constraints to further development of the site. This study identified that the western side of Council-owned lands featured an underlying geological formation of extremely weathered orange sandstone of low strength. This study also identified isolated pockets of fresh, high to very high strength basalt across the site, predominately on rises, with the remainder comprises silty clay residuals beneath red to brown clay top soils, which are firm-stiff with organic matter, and exhibit medium plasticity.

Any future development must consider potential impact on the geology and soils of the Precinct.

#### 5.10 Slope and Terrain

The Precinct generally slopes to the east towards the Macquarie River. The slope of the land has implications for a variety of environmental factors including location and form of drainage patterns, as well as existence and type of vegetation growth.

The highest point of the North-West Precinct is in the South-West sector of the site, at 307.5 metres above sea level (AHD). The lowest point is 260 metres AHD located along the eastern border adjoining the Macquarie River.

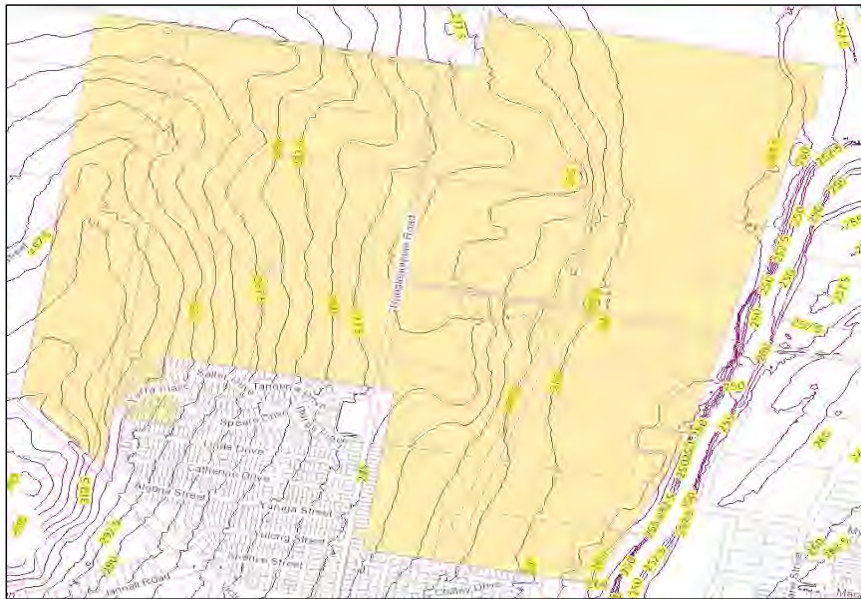


Figure 7: North-West Precinct with contours overlaid

## 6. Land Use Opportunities

The Plan envisages the development of housing across a number of formats to meet the growing housing needs of the Dubbo Region. A number of housing sizes and types would also allow housing to be accommodated at a number of price points in the Dubbo housing market.

The North-West Precinct will provide:

- well-connected neighbourhoods with an efficient land subdivision layout
- active spaces with a vibrant local character and public spaces that enable social interaction;
- well defined access and movement networks to encourage various modes transport; and
- land for a range of uses, including shops, community centres and other facilities to allow residents to meet most of their daily needs within walking or cycling distance of their homes.

It is anticipated that the Precinct will provide a range of land use zones to enable future development, including (but not limited to), R1 General Residential; R2 Low Density Residential; B1 Neighbourhood Centre; and RE1 Public Recreation.

A site responsive Indicative Layout Plan has now been prepared (Figure 8), using the site's topography, including a 'topographical wetness index', to create an integrated network of open space areas and green corridors that underpin the Precinct's walkability and connectivity. The topographical wetness index shows low points in the landscape where water is likely to accumulate on the basis of local slope and contributing upslope catchment area. It identifies where overland flows are and where soil moisture and soil properties are more likely to support corridors for 'natural' overland flow. Further site based investigations will be required to determine extent of moisture and soil properties to support natural overland flow.

Green corridors and open space areas have been proposed in these areas to coincide with the topographical wetness index, to maximise preservation of the natural environment, as these areas will more readily support planting and tree canopy (due to presence of ground water). In turn, these open spaces areas offer a Precinct full of natural amenities, further benefitting a diverse range of housing types to thrive in the Precinct.

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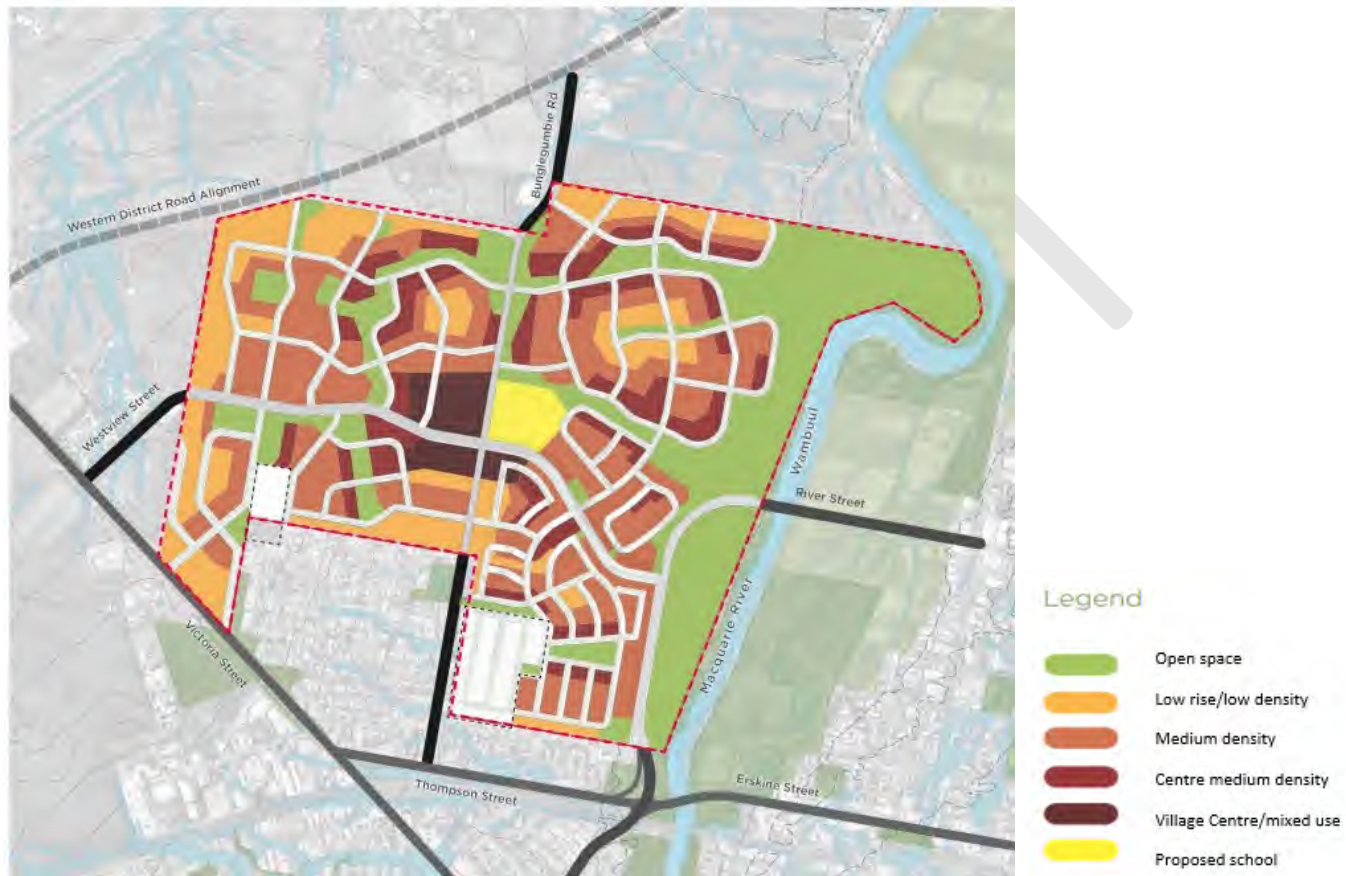


Figure 8: North-West URA Indicative Layout Plan with a greater range of housing options, open space areas and amenity, responding to the site's natural elements

The Indicative layout plan shown in Figure 8 aims to further guide overall development in the North-West URA and better accommodate open space and general connectivity in the URA. The plan allows for a range of lot sizes and housing typologies that can be potentially accommodated in the Precinct. This includes a mix of low rise/low density, low rise/medium density, and more dense medium density to 'Village Centre' housing including shop-top housing, low rise high density flat buildings and other forms of residential accommodation such as seniors living.

The Precinct also includes a potential school site, subject to further discussions with School Infrastructure NSW.

The Precinct will enable more dense streetscapes with smaller lot size options. This range can effectively enable permissible housing types, including dwelling houses, semi-detached dwellings, as well as attached and detached dual occupancies. Essentially, the Precinct will offer varied lot sizes for different housing needs in the community. Home working, including home business and home industry activities are actively encouraged where permitted and suitable.

A Precinct-wide Development Control Plan will be prepared for the Precinct to guide future subdivision design and infrastructure provision for the North-West URA Precinct.

### 6.1 Land Subdivision

Effective and efficient land subdivision is situated at the centre of the creation of well-connected and legible neighbourhoods in the Precinct. Land subdivision in the Precinct will provide variations in lot size and dimension which will assist the Precinct being able to deliver a variety of housing styles, variation and price points. The design and layout of the Precinct will effectively set the nature of the future urban form.

Well-planned neighbourhoods in the Precinct will:

- Guide the urban character and design of the area;
- Provide an effective footprint for public spaces that allows for social interaction;
- Use safer by design principles and enable greater surveillance in the public domain
- Defined access and movement networks to deliver active transport; and
- Identify land for a range of uses including shops, community centres, parks, and enables a community to meet their daily needs within walking or cycling distance of home.

It is critical in the Precinct that land subdivisions are designed to provide an appropriate level of connectivity to focus points and to encourage general ease of access throughout the subdivision.

Land subdivisions in the North-West Precinct must demonstrate an appropriate level of connectivity through the use of a connectivity index throughout the Precinct. A measure of the connectivity of a subdivision is the 'Internal Street Connectivity Index', or 'ICI'. The ICI is calculated by the number of street links (where links are a section of road between two intersections- or from an intersection to a cul-de-sac, including road segments leading from a highway network or adjacent development) divided by the number of street nodes (nodes occur at street intersections and/or at cul-de-sac heads within a subdivision area).

The higher the ICI, the more connected the roadway network – refer to Figure 9 for reference. Any subdivision should comply with the minimum internal connectivity index score of 1.4

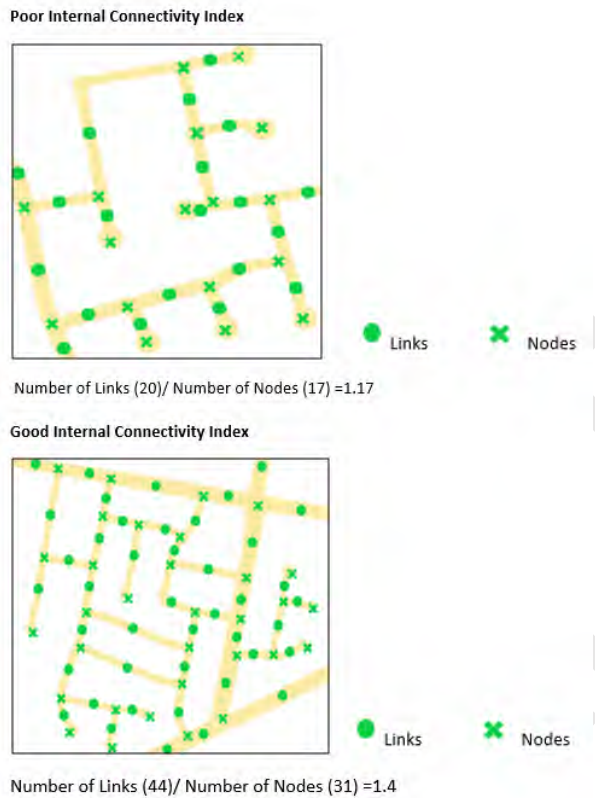


Figure 9: Poor vs Good Internal Connectivity Index

**Strategic principles**

1. Natural attributes and topography of the North-West Urban Release Area should be integrated within the overall subdivision layout, preserving the natural environment wherever possible.
2. The overall layout should add variety and interest to streetscapes whilst ensuring neighbourhoods are integrated within the Precinct.
3. Residential subdivision should establish a clear urban structure and allotments shall be provided with a range of lot sizes and frontages to allow variation in the size and style of residential housing.
4. Residential subdivisions must promote active neighbourhoods and various forms of transport options to public and community facilities.
5. Residential development shall not back on to open space areas and should be separated by a road or other key access point.
6. Cul-de-sac's will not be accepted as an appropriate form of land subdivision in this Precinct.
7. Subdivision infrastructure shall be designed to incorporate provision for smart technology.

## 6.2 Low Rise, Low Density

Low density residential areas of the Precinct will provide opportunities for dwelling houses, including more traditional detached dwellings, as well as dual occupancy development and secondary dwellings, which are provided in a landscaped setting and close to services. A range of housing types in this area will help to meet the housing needs of the community. Land in this area will also benefit from facilities and services that will meet the day-to-day needs of residents.

These areas in the Precinct could have a range of lot sizes, including a portion slightly more compact than the surrounding established offerings. The strategic residential growth principles aim to ensure a variety of housing stock can be provided at a number of price points in the Dubbo housing market. This type of development is proposed to take up approximately 32.9ha of land in the Precinct.

### Strategic Principles

1. Residential development shall be well-designed and present well to the streetscape.
2. Secondary dwellings are actively encouraged on low density residential land.
3. Dual occupancy development is suited and encouraged as an efficient and effective urban design outcome, including for corner lots which allow each dwelling to have a separate frontage and address to a different street.
4. Seniors housing is encouraged to be provided in locations and formats that provide for integration with residential neighbourhoods and areas of public open space.



**Figure 10:** Examples of a streetscape containing well-designed small lot single dwellings, including detached dwellings - houses can be set back further from the street



**Figure 11:** Example of a dual occupancy - two dwellings side by side

### 6.3 Medium Density

Medium density housing areas will contain more compact dwelling typologies, including small lot and dual occupancy housing. They are typically located closer to the natural amenity of the Green Loop and the Town Village. These areas would adjoin some non-residential uses that provide facilities or services to residents, including 'neighbourhood shops,' 'community facilities,' and 'respite day care centres.' These development types should provide opportunities for housing in close proximity to amenities, whilst providing interesting and varied streetscapes.

In addition to traditional dwelling houses and terrace style housing, housing in these areas will also include smaller format houses, multi-dwelling type housing, as well as some 'manor home' style developments with height controls to maintain a medium density streetscape. This type of development is proposed to take up approximately 61.8ha of land area in the Precinct.

#### Strategic Principles

1. A variety of housing types designed with modern elements must actively address the streetscape. Small format and small lot housing shall be designed in a manner that does not proliferate frontages with driveways.
2. Medium density residential development is encouraged to provide a range of housing types and supply adequate quantities of housing. More compact development is encouraged at key locations in the Precinct that ensures residents will have a high level of access to public transport, facilities, services and amenity.
3. Seniors housing is encouraged in locations and formats that are integrated with residential neighbourhoods, areas of public open space and other facilities.
4. Small format and integrated housing is to be considered where it can adequately mix with residential neighbourhoods and actively encourage social inclusion.
5. Complimentary land use activities are encouraged in these areas, including services for the daily needs of residents, such as cafes, corner shops, medical centres and the like.



**Figure 12:** 'Terrace' type low rise medium density housing with parking at rear



**Figure 13:** Example of medium density housing with reduced setbacks and a range of design elements



#### 6.4 Centre Medium Density

Medium density housing in/near areas of open space. This area will allow for well-designed and context appropriate multiple-dwelling options and leverage their location adjacent to open space and mixed-use areas to support a diverse range of residents and housing stock.

These areas are proposed to cover approximately 26.35ha land. Higher density residential development, including residential flat buildings, are encouraged at key locations to ensure residents will have a high level of access to public transport, facilities, services and amenity. These areas will also adjoin facilities or services to residents, including community facilities, child care centres, cafes, restaurants, corner shops, medical centres and the like.

#### Strategic Principles

1. Denser residential development is encouraged at key locations to ensure residents will have a high level of access to public transport, facilities, services and amenity.
2. Complimentary land use activities are encouraged that service the daily needs of the population, including restaurants, cafes, corner shop, medical centres and the like can be undertaken.
3. Development encourages site-responsive design and variety of housing options.
4. A variety of access provisions are to be provided to any neighbourhood centre development including facilities for walking and cycling, public transport provision and suitable parking areas.
5. Suitable residential flat building development designed with controlled height limits, in accordance with principles outlined in State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development.



**Figure 14:** Examples of medium density housing with activated streetscapes and greater walkability

### 6.5 Neighbourhood Village Centre

The North-West Precinct has the capacity and capability for the development of a new Neighbourhood or Village Centre to service the future population in the Precinct. The future population of the area will have the ability to justify a number of uses including commercial and mixed use residential development in the long term. The North-West Precinct will enable a range of small-scale commercial development, including convenience retail premises, business premises, medical centres and community uses within easy walking distance.

Commercial development in the neighbour centre area will aim to meet the everyday needs of residents in the area, centrally located to provide easy access to residents. Shop-top housing is encouraged, and other mixed use development may be considered appropriate.

#### **Growth Principles**

1. Neighbourhood centre development will be of a local scale and not impact the residential amenity of development.
2. Neighbourhood centre development will be required to include a maximum floor space limitation to limit the size and configuration of any commercial development to a neighbourhood scale.
3. Neighbourhood centre development will be required to provide an economic impact assessment which provides an assessment of such a proposal in relation to the Dubbo Central District, the Orana Mall Marketplace and other neighbourhood centres.
4. A variety of access provisions are to be provided to any village centre development including facilities for walking, cycling onsite public transport provision and suitable parking for private cars.



**Figure 15:** Examples of active access and a range of movement options being incorporated in the neighbourhood design, including walking and cycling

### 6.6 Village Centre/ Mixed Use Housing

This area of the Precinct will support multiple housing options and integration with ground floor mixed use developments, enabling a range of land uses, allowing residents to enjoy immediate access to the retail, commercial and community facilities that are within the heart of the North-West Precinct. There should be increased housing diversity in this area, including a mix of residential uses with the ability to incorporate small scale commercial activities that will not impact the primacy or role of the Dubbo Central Business District.

This area is proposed to be 10.5ha in site area and include complimentary land use activities that service the daily needs of the population such as restaurants, cafes, corner shops, medical centres and the like to complement a higher density of residential development.

#### Growth Principles

1. Mixed use development will be of a local scale and not impact the residential amenity of development. Mixed use development will be required to provide an economic impact assessment which provides an assessment of such a proposal in relation to the Dubbo Central Business District, the Orana Mall Marketplace and other neighbourhood centres.
2. Where applicable and practicable, the provision of shop top housing is encouraged as a mechanism to further activate residential and commercial lands and add further variability in development types.
3. Higher density residential development is encouraged at key locations to ensure residents will have a high level of access to public transport, facilities, services and amenity.
4. A variety of access provisions are to be provided to any neighbourhood centre development including facilities for walking and cycling, public transport provision and suitable parking areas.
5. Small format and integrated housing is encouraged where it can adequately mix with residential neighbourhoods and actively encourage social inclusion.



**Figure 16:** 3-5 storey residential flat buildings with potential ground floor commercial



**Figure 17:** Examples of an actively engaging development, with mixed uses on the ground floor

### 6.7 Public Open Space Areas

Council's Open Space Master Plan sets the framework, strategic directions and actions to deliver open spaces in Dubbo. The Master Plan identifies Dubbo as a key destination for open space use in the region and identifies cycle, pedestrian and recreation trail network gaps (the 'green web' network) as well as the street tree network requirements. The plan outlines recommendations for expanding the green web to support current and future populations. The Plan also aims to build resilience by protecting existing natural biodiversity in the region and also provides design principles to encourage sustainable urban environments.

The open space areas in the Precinct must provide adequate public open spaces that is of high quality and in line with principles outlined in Council's Open Space Master Plan. These areas will feature naturalised stormwater management and treatment systems, active open space, passive recreational zones, and a plant palette that ties into the site's unique location and history. Currently the Indicative Layout plan contains a minimum of 85ha open space areas and green corridors, as shown on Figure 18 below.



**Figure 18:** Open space areas and green corridors

#### Strategic Principles

1. Public access and movement shall be maintained across and throughout areas of public open space for ease of use by the community for recreation purposes. Any pedestrian and cycleway shall maintain legibility and ease of access to promote safe walking and cycling.
2. Any embellishment of current or future lands for the purposes of public open space over and above the requirements of Council's Infrastructure Contributions Framework shall be at the cost of the developer.
3. Public access and movement shall be maintained across and throughout areas of public open space.
4. The pedestrian paths and cycleway shall maintain legibility and ease of access to promote safe walking and cycling.

5. A developer contributions framework for the Precinct is prepared that incentivises the integration of smart technology and actively plans for and provides areas and opportunities for passive recreation.
6. A green tree cover strategy for the Precinct is prepared that manages and encourages urban greening and integration with open space opportunities.
7. The Dubbo Macquarie River Master Plan is enacted for the Precinct.
8. High quality public open space and public areas must be provided in the Precinct to facilitate public access to the Macquarie River environments in accordance with Council's adopted Strategic Open Space Master Plan.
9. Environmental restoration assessment is required to be undertaken to ensure the Macquarie River environment will not be impacted by development in this area.



**Figure 19:** Open spaces and green corridors in the Precinct should be engaging, well designed and sustainably managed

#### 6.8 Connection and Movement

Access to the land is currently limited to Bunglegumbie Road, Spears Drive, Westview Road, which is only partially sealed and Blizzardfield Road, which is unsealed.

Precinct planning has identified the need for a strategic road network. Bunglegumbie Road will continue to perform a strategic function taking future traffic north/south with connection to Thompson Street in the South and Troy Bridge Road in the north. However, there is also the strategic need for a key east/west connection, which will connect the Newell Highway Bypass (to be constructed) with the Mitchell Highway (Westview Street) in the west.

The future River Street West connection in the Precinct will ensure the Precinct will have two major points of access over time, which includes Bunglegumbie Road and the Newell Highway Bypass.

The Plan has a focus on River Street West providing a focal point for the Precinct with the potential development of a neighbourhood shopping area. This neighbourhood shopping area, will also be supported by an area of land zoned for Mixed Use development. This area of the Precinct will be

predominately residential in nature with the ability to have small scale commercial activities that don't impact the primacy or role of the Dubbo Central Business District.

In addition, general connection and movement in the Precinct should provide a well-connected pedestrian and cycle path network that provides access around the Precinct, to areas of open space, Precinct focal points and the employment areas of the Dubbo Central Business District and other attractors.

There will be an increased need for public transport, extended pedestrian and cycle paths throughout the area to connect to the Macquarie River Precinct, the Dubbo Central Business District and the Tracker Riley Cycleway.

#### **Strategic Principles**

1. The Precinct has a variety of destinations within walking or cycling distance and the density of residential development supports the provision of required infrastructure.
2. A movement network is created and maintained that provides for an interconnected cycling/walking path network and a coordinated network of streets with bicycle lanes that allows the safe interaction and movement for all road users.
3. Major public transport access is provided throughout the land including connections to the Dubbo Central Business District (CBD).
4. A hierarchy of interconnected streets is established that gives safe, convenient and clear access points within and beyond individual subdivisions in the subject area.
5. The design of access and movement systems in the area ensures environmental impacts are avoided or minimised.
6. The access and movement system shall ensure the design of future subdivisions provides for energy efficient lot layouts and building orientation.
7. The use of smart technology is adopted and embraced for connection and movement systems in the Precinct.
8. An access and transport analysis is required to be undertaken to determine access and movement provisions into this area and its relationship with the Newell Highway.
9. Dubbo is maintained as a '10 Minute City'.

#### 6.9 Infrastructure

##### **Sewer**

Dubbo's existing sewerage system is capable of servicing initial residential development undertaken in the Precinct with relatively minor augmentation. However, to realise overall development of the Precinct, development of a trunk sewerage main will be required to service the ultimate development densities in West Dubbo over time.

##### **Water Supply**

Dubbo's existing service reservoirs are strategically located on high ground so as to supply water to all areas of growth out to, and beyond, 2036. The Northwest Sector is served by the Bourke Hill reservoir. In terms of reservoir storage capacity, it will be necessary within the 25 year planning horizon under consideration to construct extra reservoirs in West Dubbo. A new reservoir is proposed to be built at Bourke Hill.

### **Stormwater**

In broad terms, stormwater drainage provision can be adequately accommodated with the Precinct draining effectively towards the Macquarie River and the Newell Highway Bypass project providing stormwater infrastructure to accommodate development of the Precinct. However, issues in respect of stormwater quantity and quality will be required to be further considered by Council in future development of the Precinct. This includes the need for a centralised stormwater detention basin area.

### **Strategic Principles**

1. An Infrastructure Servicing and Development Strategy is required to be prepared and developed for the Precinct.

Council will work with landowners in the Precinct towards the development of an overall storm water management strategy to ensure these issues are adequately considered in the development process.

## **7. Monitoring and Review**

This Plan will be reviewed by Council from time to time as a result of any proposed change in land use zoning and/or development density in this Precinct or any change in the provision of access and movement infrastructure that may impact development of the area as envisaged by this Plan.

It should be noted that any Planning Proposal considered by Council will be required to show consistency with the Growth Principles as included in the Plan and the Indicative Layout Plan and development density across the area.

If an individual landowner wishes to seek variation to the provisions as contained in this Plan, a formal request to vary the Plan must be provided to Council. This formal request shall include details of the variation, the reasons for and a planning report explaining the proposed variations/s in the context of the overall aims of the Plan. Council will reserve the right to place any requests for variation to this Plan on public display to seek the views of the public and/or seeks the views of State Government Public Agencies in the process.

**CCL23/78      Draft Development Control Plan - Clearmont Rise - Central  
West Urban Release Area**

**Attachment 1:** Draft Development Control Plan 2023 - Clearmont  
Rise .....257





**Draft  
Clearmont Rise  
Development Control Plan  
2023**

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**Introduction**

**1.1 Name and application of this Plan**

This Development Control Plan is known as Clearmont Rise Development Control Plan 2023.

**1.2 Land to which this Plan applies**

This Plan applies to land within parts of Lot 22 DP 1038924, 13L Narromine Road, and Lot 7 DP 223428, Jannali Road, Dubbo being within the Central West Dubbo Urban Release Area as outlined in red. It can also be extended to apply to future development on Lots 51 and 52 DP 1028071, 12L Narromine Road and 25A Jannali Road, Dubbo adjoining the land.



Figure 1 Area to which this plan applies bordered in red

### 1.3 The Vision and Desired Future Character

The vision and desired future character for Clearmont Rise provides for the development of detached dwellings and well located dual occupancies within a clear structure of new roads and well connected open space. Clearmont Rise will provide smaller lots to maximise diverse housing opportunities located adjacent to a new District Park and existing TAFE. This will mean that the precinct will become a cohesive community that meets the needs and aspirations of future residents. It will become an integrated, thriving and vibrant place, capitalising on connecting to nature and open spaces and respecting the natural qualities of the surrounding environment.

To ensure that the land within this DCP contributes to the visions and desired future character, future development will include:

- (a) Delivery of key roads as included in the Dubbo Transport Strategy,
- (b) Provision of new open space areas and green linear corridors to maximise pedestrian and cycle access as well as incorporate infrastructure, where appropriate, including stormwater drainage,
- (c) Buffers or controls for future development at the interfaces to other land uses and noise producing activities on adjoining land,
- (d) To preserve existing trees and introduce tree planting in streets, open spaces and linear parks to help mitigate urban heat,
- (e) Promote quality urban design outcomes within the context of environmental, social and economic sustainability.

### 1.4 Statutory context

This Development Control Plan (DCP) has been prepared by Council in accordance with Section 3.44 of the Environmental Planning and Assessment Act, 1979 (the Act), Part 2 of the Environmental Planning and Assessment Regulation, 2021 (the Regulation) and Clause 6.3 of Dubbo Regional LEP 2022.

The Plan was adopted by Council and commenced on XXXXXXX.

The DCP is required to be read in conjunction with the Dubbo Regional LEP 2022 (LEP) and other relevant provisions of the Dubbo DCP 2013, but it will prevail in the event of any inconsistency.

### **1.5 Relationship to other plans and documents**

Under the Act, Council is required to take into consideration the relevant provisions of this Plan in determining an application for development on land to which this Plan applies.

In addition to the provisions of the Dubbo LEP, this Section must be read in conjunction with:

- applicable Development Contributions Plans,
- any Planning Agreement made between the landowners and Council as relevant to the assessment of a development application, and;
- the relevant sections of the Dubbo Development Control Plan 2013.

### **1.6 Supporting Studies**

The following supporting studies and documents have been used in the preparation of this DCP:

- *Urban Design and Master Plan prepared by Sitios*
- *Traffic Impact Assessment prepared by Amber Traffic and Transport*
- *Open Space and Community Infrastructure Assessment prepared by CRED*
- *Ecological Assessment prepared by Lodge Enviro*
- *Bushfire Assessment prepared by Building Code and Bushfire Hazard Solutions*
- *Water Cycle management, subdivision design and service prepared by MAKER ENG*
- *Acoustic Assessment prepared by Acoustic Logic*
- *Landscape for public domain areas – Streets and Parks prepared by Ground Ink*
- *Geotechnical and Contamination prepared by Geotesta*
- *Archaeological Report prepared by Apex Archaeology*
- *Aboriginal Cultural Heritage Assessment Report prepared by Apex Archaeology*
- *Preliminary Market Potential for retail and supporting non retail floorspace prepared by Location IQ*
- *Utilities Service Report, Clearmont Rise, 13L Narromine Road & Lot 7 Jannali Road Dubbo prepared by MAKER ENG*
- *Dubbo Regional Council Open Space Masterplan 2018*

**1.7 How to use and navigate this DCP**

This DCP is divided into three separate parts that address the considerations for development applications for development within one or more of the following areas:

- A. Staging and Implementing the Urban Structure** – This section progressively seeks to create an urban landscape that includes the embellishment of land to preserve and manage natural systems, create active and passive open spaces, and implement an accessible road and open space network.
- B. Subdividing Street Blocks** – This section guides subdivision of the street blocks created by the road system, creating lots consistent with the end use.
- C. Delivering Built Form** – This section guides the final building form on the lots including setbacks, built form principles, landscaping and lot sustainability initiatives.

Each part identifies the key planning issues that Council will consider when assessing development applications for that stage of the development. Each planning issue identified is structured to provide a clear understanding of Council’s expectations for the proposed development as shown in the table below:

<b>Objectives:</b>	Describe the rationale for the planning provision and what it is trying to achieve.
<b>Performance Measures:</b>	Qualitative measures against which a development’s ability to achieve the objectives will be assessed. These measures provide flexibility for developers to achieve those objectives through a suite of design responses.
<b>Development Controls:</b>	Numeric based measures that, if adopted, demonstrate compliance with the relevant objectives.

## 2.0 Section A – Staging and Implementing the Urban Structure

The urban structure for an area is implemented by delivering the urban landscape that will support the future community. Development on this site will include initial earthworks as well as subdivision to dedicate and/or embellish environmental corridors, parks as well as create roads and pedestrian/cycleway connections and stormwater corridors.

### 2.1 Staging

An important consideration for the release is the staging of release which is shown on **Figure 2**. Each Stage should implement the works required to build on the urban structure and extend important infrastructure to future stages.

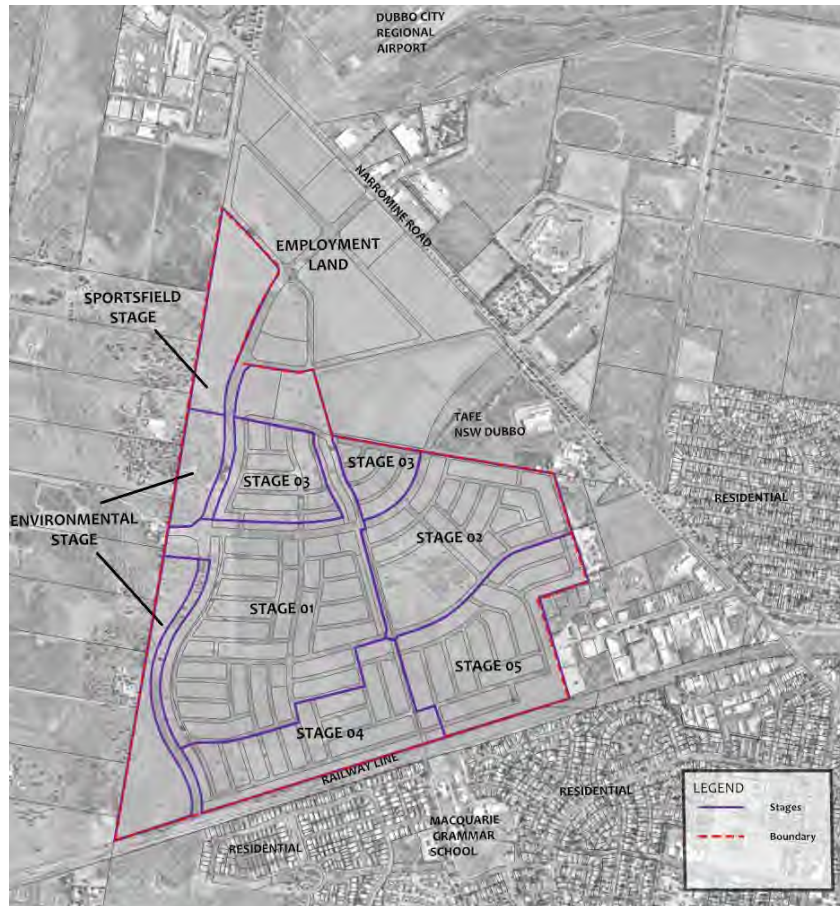


Figure 2 Staging Plan

It is anticipated that Stage 1 will address the extension of key utility services to the site, access to the area by extension of the North-South arterial road from the employment land to the north to the East West sub arterial road. Stage 1 also includes local roads, provision of a linear park through the land including drainage infrastructure and three local parks, with each park being at least 0.5ha in area.

After Stage 1, the roll out of stages is not dependent on infrastructure sequencing. However, the likely delivery will be in accordance with the Staging Plan as follows:

- Stage 2 – will deliver local roads, the extension of the east West Sub Arterial to the TAFE boundary and a district park that preserves existing trees.
- Stage 3 – will deliver local roads and infrastructure and residential development.
- Stage 4 – will deliver local roads, a linear park along the southern boundary, the relocation of the electricity easement to land adjacent to the railway line, and a local park.
- Stage 5 – will deliver local roads and a linear park along the southern and eastern boundaries.
- Stage - Sports Field Park – will deliver the sports fields for the release, and be delivered after Stages 1-3 and before Stage 5, or as otherwise agreed to by Council.
- Stage - Environmental – this land primarily zoned R5 Large Lot Residential and a small part R2 Low Density Residential and is constrained containing areas of biodiversity with extremely limited development potential for subdivision. Any future applications for residential in this stage will need to demonstrate that environmental values are appropriately addressed.

Variations to the staging order can occur if demonstrated that the delivery will not adversely impact the efficiency of the release.

## **2.2 Implementing the Urban Structure**

Development of each stage will be generally consistent and deliver the urban infrastructure as shown in the urban structure at **Figure 3**.



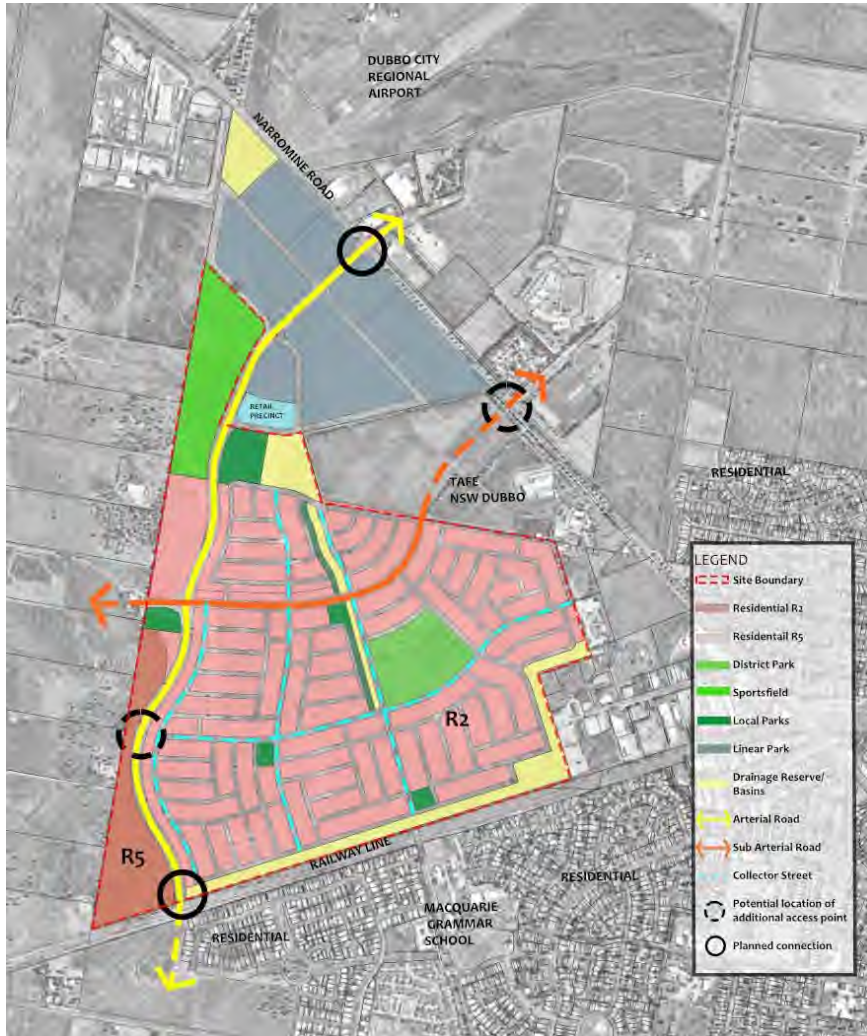


Figure 3 Structure Plan

The matters that are required to be addressed are outlined in the following sub sections.

- Initial earthworks.
- Delivering public domain Areas, including passive and active (sporting) spaces and environmental corridors.
- Delivering infrastructure to promote access and movement, including roads, pedestrian/cycle way linkages and utility services.

### 2.3 Initial Earthworks

#### Objectives

- a) To create an appropriate landform across the development which allows for a high quality and accessible living environment; tied seamlessly into local and district open space areas within the development and adjoining natural areas.

#### Performance Measures

These objectives may be achieved where:

- a) Earthworks allow for the preservation of existing mature trees, where practicable, particularly in open space, and treed environments within and adjoining the development.

### 2.4 Preserving Natural Elements and Stormwater Drainage Systems

#### Objectives

- a) To provide major and minor drainage systems which:
  - Adequately protect people and the natural and built environments to an acceptable level of risk and in a cost-effective manner in terms of initial costs and maintenance, and;
  - Contribute positively to environmental enhancement of catchment areas.
- b) To manage any water leaving the site (during construction and operation) with stormwater treatment measures.
- c) To provide for the legal discharge of stormwater.
- d) To enable stormwater discharge from adjacent properties and its management within this development.

#### Performance Measures

These objectives may be achieved where:

- a) The stormwater management regime includes a treatment train incorporating piped drainage, open channels and basins within open spaces to achieve a minimum percentage reduction of stormwater pollutants and ensure peaks flows do not increase as a result of development.
- b) Open channels to convey stormwater are to be located within minimum 20m wide drainage reserves. Where located next to linear parks, the parks will also have a width of no less than 20m that also accommodate cycleway/pedestrian paths and landscaping.
- c) The continuous base flows within the open channel system are managed with a low flow pipe system.
- d) Post development peak flows (up to and including the 1% AEP storm event) are limited to 'pre-development' levels.

- e) The stormwater drainage system has the capacity to convey stormwater flows resulting from the relevant design storm under normal operating conditions, taking partial minor system blockage into account.
- f) Development must not alter the site's stormwater drainage characteristics in a manner that may cause nuisance or damage to downstream property.
- g) The stormwater management plan is to manage frequent base flows discharging at the outlet of the development to ensure it doesn't further exacerbate existing drainage issues downstream of the development.
- h) The land is situated adjacent to the Dubbo Regional Airport. Any stormwater infrastructure shall be designed and placed in a manner to ensure the safe operations of the Airport are not impacted.

**Development Controls**

- 1) Stormwater is to be piped from the development's southern catchment to existing stormwater pipe systems located in Thompson Street, approximately opposite Menzies Avenue, Dubbo.
- 2) The northern basin is to accept and manage flows from the entire catchment identified by the blue polygon in **Figure 4**, including stormwater discharge from neighboring properties. Stormwater discharge under Narromine Road is to meet pre-existing conditions.
- 3) The open channels and basins are generally consistent with that represented in the Indicative Water Management Plan at **Figure 4**. Open channels and basins must not replace the usability of Open Space areas.

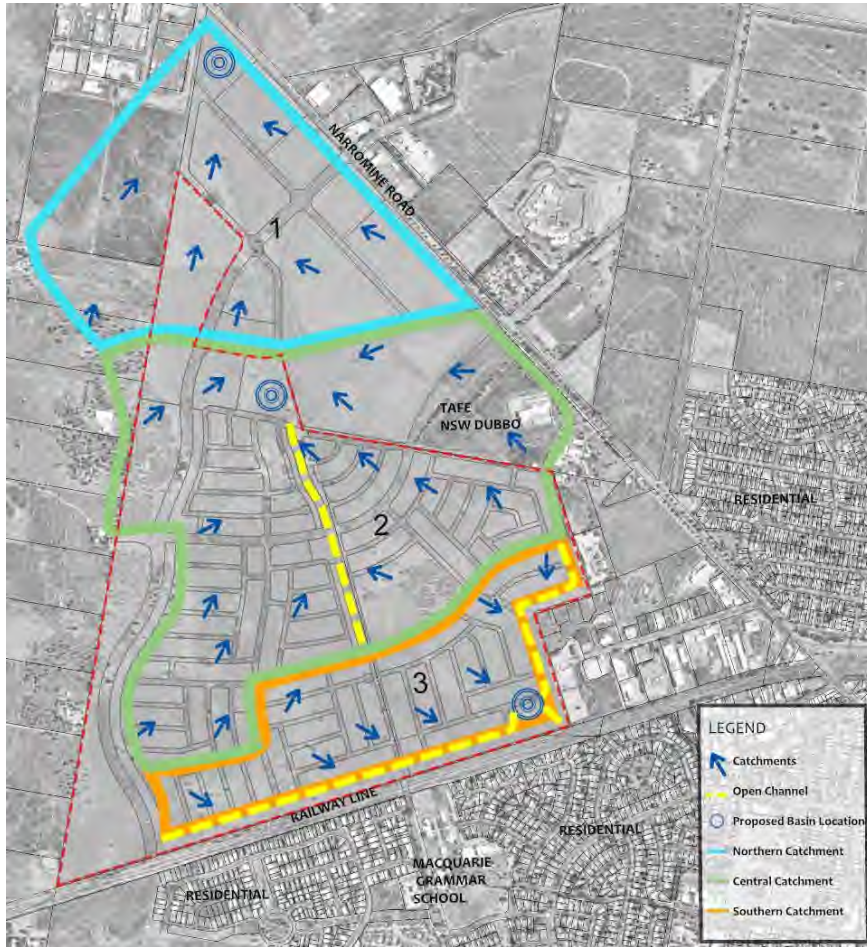


Figure 4 Indicative Water Management Plan (including Industrial Land to the north)

- 4) The final size of basins ensures peak flows do not increase as a result of the development.
- 5) A Water Cycle Management Strategy is to be prepared and provided to Council prior to Stage 1 and is to achieve the reduction of stormwater discharge and pollutants by including the following elements:
  - Rainwater tanks on each lot.
  - Gross pollutant removal prior to discharging to basins.
  - Bio-retention areas.
  - Detention basins.

- 6) The stormwater management regime should achieve the following reductions:
  - Total Suspended Solids (TSS) – 85% reduction.
  - Total Phosphorus (TP) – 65% reduction.
  - Total Nitrogen (TN) – 45% reduction.
  - Litter - 90% Reduction.
- 7) The design and construction of the stormwater drainage system is to be in accordance with the following documents:
  - Australian Rainfall and Runoff: A Guide to Flood Estimation, © Commonwealth of Australia (Geoscience Australia), 2019 and
  - Dubbo Regional Council’s adopted AUS-SPEC #1 NSW 1999 Development Specification Series – Design and Construction.
  - Austroad Guidelines - Guide to Road Design Part 5A: Drainage – Road Surface, Networks, Basins and Subsurface.
- 8) A Sediment and Erosion Control Plan must be prepared for any earthworks, and implemented in accordance with ‘Blue Book – Managing Urban Stormwater: Soils and Construction’.
- 9) An allowance to plant within the water retention basins is required for increased canopy coverage and reducing heat island effects.
- 10) The provision of stormwater infrastructure on the land shall be compliant with the National Airports Safeguarding Framework guidelines.

## 2.5 Open Space Network

### Objectives

- a) Provide for a hierarchy of open spaces and connections that will contribute to the overall character of the development. Access and views to nature within and beyond the site will enhance the quality of the urban environment.
- b) To create parks that provide a wide variety of public amenities supporting passive, informal and formal active uses.
- c) To provide for the recreational needs of the community including active recreation and local open spaces within easy access to residents.
- d) To conserve natural features and vegetation on land identified for open spaces and environmental corridors.
- e) Planting within open spaces to balance open areas for recreation and areas for increased tree canopy.

### Performance Measures

These objectives may be achieved where:

- a) Open space areas, linear corridors and green links are provided in each stage consistent with the Open Space Network Map at **Figure 5**.

- b) Linear parks including drainage corridors are to include active transport links and other embellishments such as seating and landscaping to increase the use and enjoyment of residents.
- c) Open spaces are to be bordered by streets. Buildings on the adjoining streets provide passive surveillance of parks or sports field areas.
- d) Existing vegetation is to be retained within parks as a priority.
- e) Planting species to be appropriate for the area and include largely low mass planting and canopy trees with clear trunks to maintain passive surveillance of open space areas.



Figure 5 Open Space Network Map

**Development Controls**

- 1) District open space for sporting fields and local open spaces are to be embellished in accordance with Council’s requirements and the CRED Report.
- 2) Linear parks with drainage infrastructure are to achieve the minimum width of 40m including a 20m wide linear park and 20m wide drainage area. The linear park will provide areas for seating nodes and active transport links.
- 3) Tree species such as Acacia salicina, Eucalyptus blakelyi and similar native trees and shrubs will be used to create habitat for local wildlife and provide important environmental and ecological connectivity through the development site. Avoid using invasive native scrub species such as Callitris glaucophylla. Endemic species as approved by Council’s Community, Culture and Places Division.
- 4) Any embellishment must adhere to relevant Council requirements and standards as set out by Council’s Community, Culture and Places Division. Embellished minimum areas are described in the Table below:

<b>Open Space</b>	<b>Description</b>
District Open Space	8 hectares of district level parkland located east of North-South Arterial Road. To be embellished with playground facilities, picnic areas and walking trails.
Local Parks	Generally, located within 400m walking distance of residents and with a minimum area of 0.5ha. Suitable for playgrounds, passive recreation, seating and shade.
Linear Parks	Intended to function as the green spine through the development and as a transition along the railway line and industrial properties. This open space area will include storm water open channels, the relocated electrical line adjacent to the railway line and cycle and pedestrian paths with appropriate landscaping.
Sporting fields	Meets district level sporting needs. May be either irrigated turf or hard surfaces, or a combination of both, in consultation with Council. To be embellished with playing fields and courts.

**2.6 Services and Utilities**

**Objectives**

- a) To ensure residential areas are serviced with essential public service utilities including water, sewer and electricity in a cost-effective and timely manner.
- b) The servicing strategy for sewer must not rely on discharging to the existing

Thompson Street collection well. A trunk main will need to be considered around the back of the Airport, as identified in the West Dubbo Servicing Strategy.

- c) Water and Sewer servicing shall consider the broader servicing strategy of West Dubbo and how it will impact downstream infrastructure.

**Performance Measures**

- a) Design and provision of utility services including sewerage, water, electricity, street lighting and communication services are cost-effective over their lifecycle and incorporate provisions to minimise adverse environmental impact in the short and long term.

**Development Controls**

- 1) The design and provision of utility services conforms to the requirements of relevant service authorities to each allotment at the full cost of the developer. Services are to be located next to each other in accordance with Council's Policy for trenching allocation in footways (Standard Drawing 5268). All existing overhead power on Narromine Road to be placed underground along the frontage of the development.
- 2) All developmental intersections on the western distributor and the Mitchell Highway are to include Category V3 lighting.
- 3) Servicing for water will need to consider the Dubbo Regional Council Integrated Water Cycle Management Plan (IWCM), reservoir feed zones and whether there is sufficient capacity within the existing West Dubbo Rifle Range reservoir to service this subdivision.

**2.7 Streets, Movement and Accessibility**

**Objectives**

- a) To incorporate a legible road hierarchy for the residential development recognizing the broader strategic road proposals through and external to the site.
- b) To provide a high degree of connectivity within the development area and to adjoining areas for pedestrian, cyclist and bus users to reduce reliance on private vehicles.
- c) Traffic assessments must consider key pieces of infrastructure in the broader traffic network, as identified in the Dubbo Transportation Strategy that will relieve traffic congestion on the Mitchell Highway and Newell Highway. Any traffic assessment will also need to consider the impacts and the timing of such infrastructure as the development progresses.
- d) Where relevant, development must adhere to the *Development near Rail Corridors and Busy Roads– Interim Guideline*.

**Performance Measures**

These objectives may be achieved where:



- a) The hierarchy of streets is to give effect to Council's strategic road proposals and provide access to the residential lots reflecting the function and traffic load on each.
- b) Main entry points to the estate to be thoughtfully designed to provide a sense of entry through landscaping treatments. Scale and design of the entry features reflect the significance of the entry point.
- c) The street network is to be a grid system to promote pedestrian and cycle movements, modified only where necessary to respond to environmental constraints or opportunities. Cul-de-sac streets are to be minimised and are to serve no more than 10 lots.
- d) The street network considers the needs of pedestrians and cyclists by ensuring routes provide good connectivity and are suitable for these modes. Active transport links, pedestrian paths and cycleways to be included generally in accordance with **Figure 6**.
- e) Streets provide a logical hierarchy to maximise accessibility to all parts of the community and provide an appropriate response to address key interfaces.
- f) Footpaths and cycle ways are to be provided on at least one verge, are well-lit and located where there is casual surveillance.
- g) Safe street crossings are provided for all street users with safe sight distances and adequate pavement markings, warning signs and safety rails (where appropriate for cyclists).
- h) Any traffic assessment is to clearly indicate traffic volumes on key arterial and sub-arterial roads, as well as key intersections.
- i) Road hierarchy, cross sections and corridors within the development are to be implemented in accordance with the Dubbo Transportation Strategy 2020 and in consultation with Council's Infrastructure division.
- j) The arterial north/south road is to ultimately accommodate 4 lanes on the arterial road in the future. The road to serve this residential release, subject to traffic assessment, is to include Stage 1 pavement as shown in Appendix A to the intersections that connect into release as well as shared cycle ways, utilities and tree planting on the residential side of the development.
- k) An intersection is to be included on the north/south arterial road (western distributor/bypass) toward the southern end of the residential zone, ensuring traffic can take advantage of the southern link to Minore Road. The location of the intersection is to be mid distance between Minore Road and the east/west sub-arterial road, roughly located at the existing crest point on the north/south arterial road. This provides good connectivity for Clearmont Rise to Minore Road, as well as the undeveloped land west of the north/south arterial road. The location of the intersection is to consider the safety of turns, topography and designed to avoid traffic rat runs through the release. Clear road linkages are also to be made to the undeveloped land west of the north/south arterial road. The internal collector and local roads network are to be adjusted to align with this new intersection location.

- l) Intersection treatments on the northern distributor (arterial road) to enable PBS Level 3 (desirable length of 60m/minimum 42m) access and be designed to accommodate a posted speed of 80km/hr.

**Development Controls**

- 1) The roads within the site are to be generally consistent with **Figure 7** and the corresponding street section.
- 2) The road hierarchy is to make provision for the future road and pedestrian connections to Lots 51 and 52 DP 1028071 12L Narromine Road and 25A Jannali Road, Dubbo adjoining to the east.
- 3) Street Sections are provided for the Arterial Road- North South Arterial Road, East-west Sub-Arterial, Collector Streets and Local Streets consistent with Section 2.6.
- 4) Street blocks are to be generally a maximum of 300 metres long and 80 metres deep. Block lengths in excess of 300 metres are considered where pedestrian connectivity, storm water management and traffic safety objectives are achieved.
- 5) Verge widths may vary to accommodate water cycle management measures, paths and landscaping. Shared paths should be set back 800mm from the property boundary and footpaths should be setback 800mm to the property boundary.
- 6) A bus route consistent with **Figure 8**, with bus stops within 400m walking distance of most residents are to be provided.
- 7) The north/south arterial road is to be designed to allow for b-triple road train (36.5m) access along the north/south arterial road and within the industrial area, including all intersections.
- 8) Tree planting must be in accordance with Council's Tree Planting Standards (as adopted). Landscaping plans including street tree planting to be approved by Council.
- 9) Trees to have clearance of minimum 5m from street lights and 3m from storm water entry pits.
- 10) 1 street tree is to be provided per allotment. On corner allotments, 1 street tree is to be provided on each street frontage.



Figure 6 Indicative Pedestrian and Cycle Network



Figure 7 Indicative Road Hierarchy

The road profiles are described further in **Appendix A**.

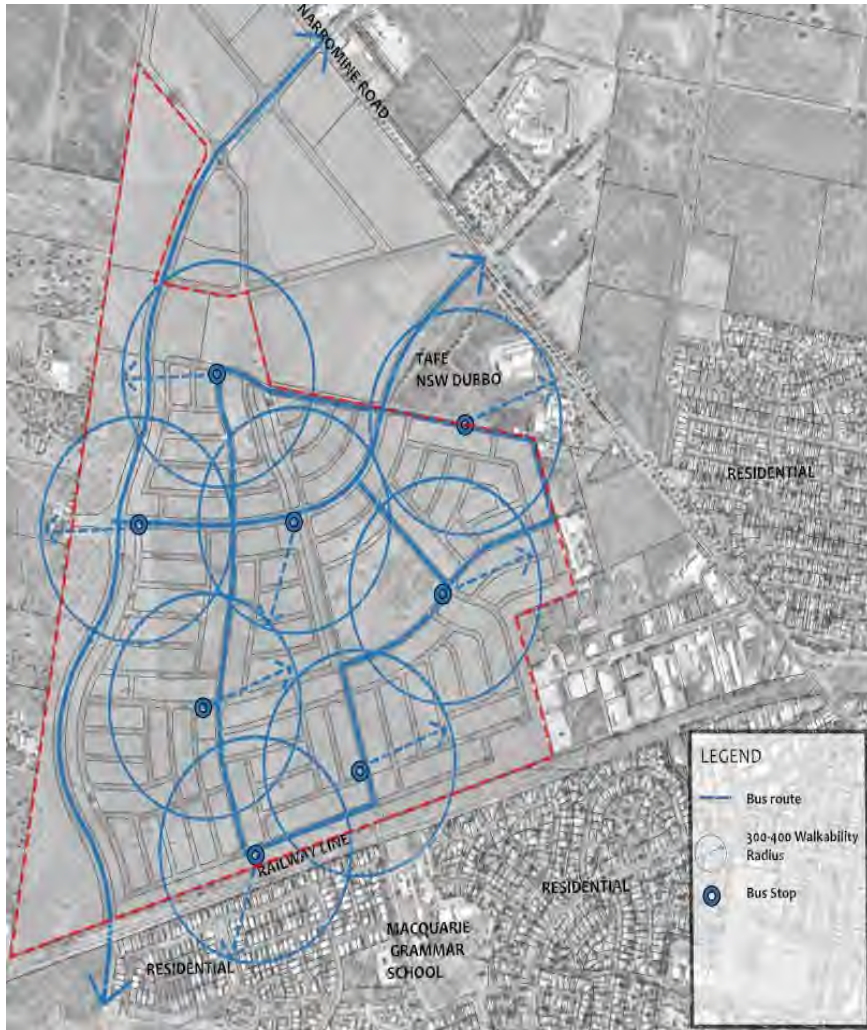


Figure 8 Indicative Bus Network

### 3.0 Section B – Subdividing Street Blocks

Subdividing street blocks focuses on creating individual lots produced after delivering the roads that form the urban structure as outlined in the section above.

Development applications for residential subdivisions within each street block will seek to implement appropriate lot sizes and shapes to accommodate the future built form anticipated by the LEP as well as identify any environmental matter to be placed on title to ensure the future dwelling has acceptable amenity.

#### 3.1 Minimum Lot Sizes

##### Objectives

- a) To ensure the efficient use of zoned land and required infrastructure is achieved.
- b) To ensure appropriate restrictions are included to address acoustic and drainage where required.
- c) To provide a range of lot sizes to suit a variety of household types and forms of development.

##### Performance Measures

- a) Lots are designed to optimise outlook and proximity to public and community facilities, parks and public transport with increased residential activity.
- b) Lots are created to enable the permissible development including opportunities for dual occupancies. Larger lots should be provided on street corners to allow development to address both street frontages.
- c) Lots should front streets and overlook open spaces to provide passive surveillance of those areas.
- d) Stormwater should be gravity drained to Council's stormwater system which may require inter-allotment drainage.
- e) Lots in locations near noise sources should include restrictions requiring acoustic fencing or acoustic treatments to facades of dwellings.
- f) Battle-axe lots shall only be provided in limited circumstances where the topography and development orientation results in regular subdivision not being able to be achieved. Battle axe handles will have a width of 4.3m. If used the application must show location of mail boxes and bin collection areas.

##### Development Controls

- 1) Lots have a minimum frontage of 15 metres where the minimum lot size area is 600m<sup>2</sup> or larger.
- 2) Corner lots are larger to allow residential accommodation to positively address both street frontages.

- 3) Dwellings located within noise affected areas in **Figure 9** shall meet the recommended design levels of 35 dB(A)  $L_{eq}(9 \text{ hour})$  for sleeping areas (between 10pm and 7am) and 40 dB(A)  $L_{eq}(15 \text{ hour})$  for living areas. This can be achieved by:
- Within Noise Affected Areas 1, 2 and 3 – a solid 2.1m high barrier may be constructed to the extent visualised within **Figure 9** below. The following table provides the required constructions within Noise Affected Areas 1, 2 and 3 with or without the 2.1m high barrier for deemed-to-satisfy constructions for the requirements of 3.1.4 of this DCP.

Table 2–Deemed-to-Satisfy Constructions for Noise Affected Areas

Noise Affected Area (Figure 9)	Barrier Height (Figure 9)	Level	Deemed-to-Satisfy Constructions
Noise Affected Area 1, 2 and 3	2.1m High, Solid and Imperforate Fencing	Ground Floor	No Acoustic Requirement
		First Floor or above	Appendix A
	No Barrier	All levels	Appendix A

- 4) Where barriers are to be installed to satisfy acoustic requirements for dwellings within lots, they are to be:
- Constructed at least 2.1m high.
  - Be constructed of a solid and imperforate material, such as 75mm thick autoclaved aerated concrete (e.g. Hebel), lapped and capped timber fencing, sheetmetal, or other material which provides a minimum acoustic performance of  $R_w35$ .
  - Alternatively, any lot maintained within the Noise Affected Areas may conduct a supplementary detailed acoustic assessment at DA stage, which demonstrates that internal noise requirements will be satisfied with an alternative construction.

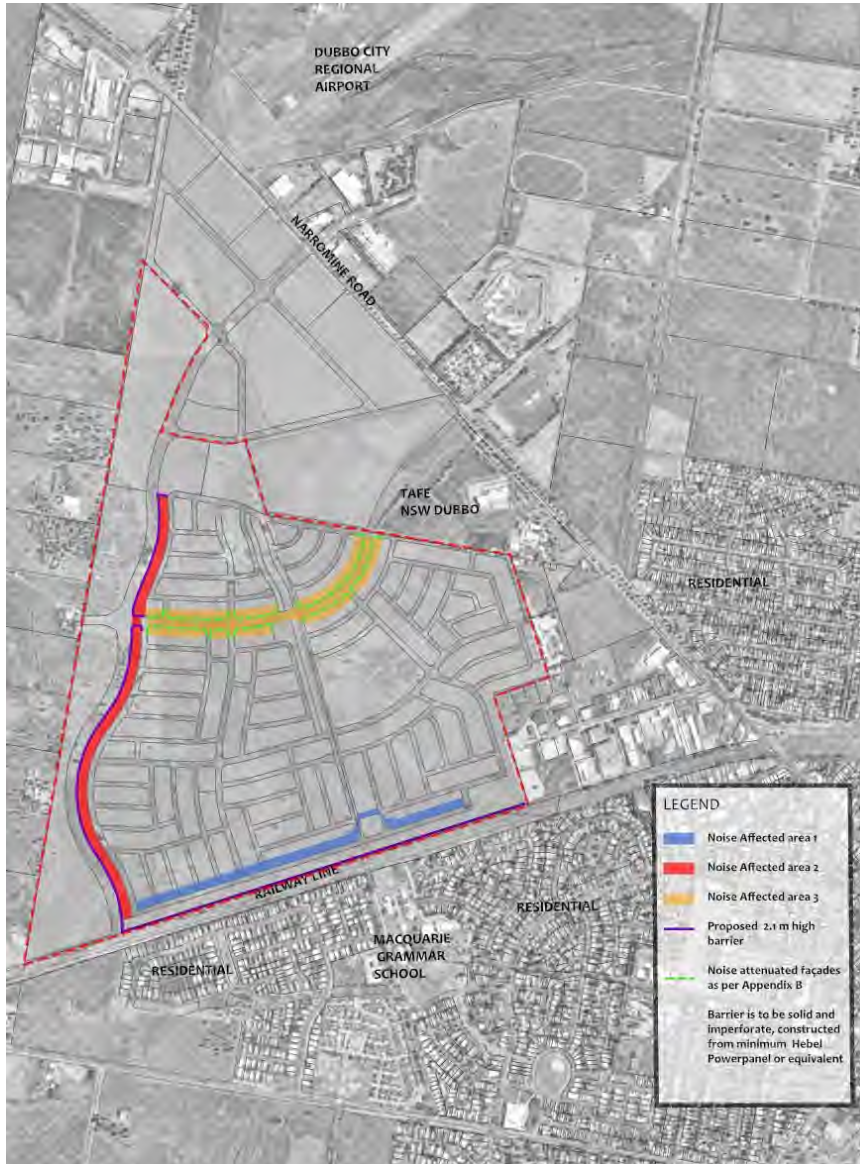


Figure 9 Lots in Noise Affected Areas



## 4.0 Section C – Built Form Siting and Design

The development within the DCP site will predominantly be detached dwellings with opportunities for dual occupancies. Built form and development will address the controls for the siting and design of dwellings.

### 4.1 Building Siting

#### Objectives

- a) Residential housing is sited to contribute to the desired streetscape appearance and neighbourhood character.
- b) To ensure habitable rooms of dwellings and private open space within the development and in adjacent development can receive adequate sunlight, ventilation and amenity.
- c) To ensure that there is no conflict with existing services such as power, water, sewer and stormwater.

#### Performance Measures

- a) Dwellings must comply with the development standards outlined in Dwelling Controls Table.
- b) Development applications for built form are to demonstrate how the dwelling design and site planning responds to passive energy conservation principles including solar access, prevailing weather and cross ventilation.
- c) Dwellings are to be sited to face the street, with visible front entries and habitable rooms fronting the street, particularly at ground level.
- d) Dwellings are to achieve at least 3 hours of sunlight to a main living area between 9am and 5pm, in mid-winter (21st June).

#### Development Controls

- 1) Dwellings must comply with the development standards outlined in Dwelling Controls Table 1. Siting outcomes to refer to **Figure 10** for design guidelines.
- 2) Where dual occupancy is located on corner blocks, the development is designed to face each street frontage.
- 3) Driveways are to be located clear of obstacles such as power poles, trees, and stormwater pits.
- 4) Garages and carports for single dwellings to primary frontages are to be setback a minimum of 5.5 m from the street property boundary and in line with or behind the alignment of the façade of the dwelling.
- 5) Garages and carports for a single dwelling on secondary frontages of corner allotments may extend beyond the alignment of the secondary façade of the dwelling but shall achieve a minimum 5.5m setback from the secondary property boundary.

- 6) The garage or carport of a dual occupancy dwelling that faces a secondary frontage will be setback 5.5m.

Lot Range	600sqm-899sqm*	900sqm -1,500+sqm	Dual Occupancy	Battle-Axe
Minimum lot width	15.0m	25m	15m	N/A
Landscaped Area (Min)	15%	35%	20%	20%
Principal Private Open Space (Min)	25sqm with a minimum dimension of 5m	25sqm with a minimum dimension of 5m	25sqm with a minimum dimension of 5m	25sqm with a minimum dimension of 5m
50% of the area of the required PPOS (of both the proposed development and adjoining properties) should receive at least 3 hours of sunlight between 9am and 3pm at the winter solstice (21 June)				
<b>Dwelling Setbacks</b>				
Front Setback	4.5m to building façade line 3m to articulation zone**	6m to building façade line 4.5m to articulation zone**	4.5m to building façade line 3m to articulation zone**	4.5m to building façade line 3m to articulation zone**
Secondary Front Setback	3m	3m		
Side Setback (Min)	0.9m – 1.2m	1.5m	0.9m	0.9m
Side Setback 2nd storey (Min)	1.5m	2m		
Rear Setback (Min)	3m	3m	3m	3m
<b>Garage and Outbuilding Setbacks</b>				
Front Setback (Min)	5.5m to facade of garage	7m to facade of garage	5.5m to facade of garage	5.5m to facade of garage
Secondary Front Setback	5.5m to facade of garage	5.5m to facade of garage	5.5m to facade of garage	N/A

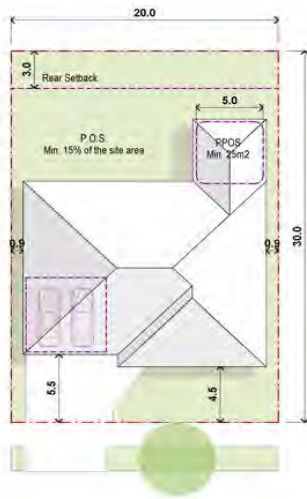
Percentage of dwelling frontage(max)	The garage must not dominate the street space. The width of a garage shall not be greater than 50% of the total width of the lot.
Car parking requirement	<p>Maximum garage width 3m (single) and 6m (double)</p> <p>1 bedroom dwellings will provide at least 1 car space</p> <p>2 bedroom dwellings will provide at a minimum 2 parking spaces, with at least 1 behind the building line</p> <p>3 bedroom or more dwellings will provide at least 2 car spaces</p>

\* Lots greater than 600sqm should have greater side setbacks.

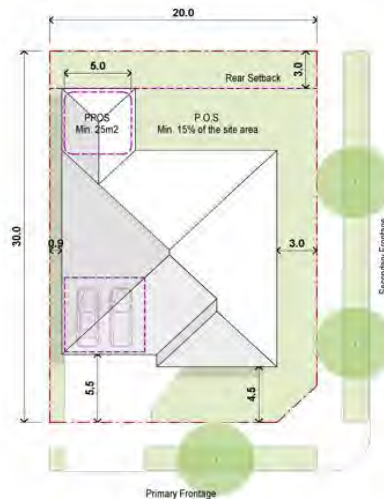
\*\* Open verandah's, bay windows, balconies and pergolas, if appropriately designed, are permitted within the articulation zone.

Table 1 Dwelling Controls

**Dwelling Houses**



Typical 600sqm



Corner lot 600sqm  
A

Dual Occupancies

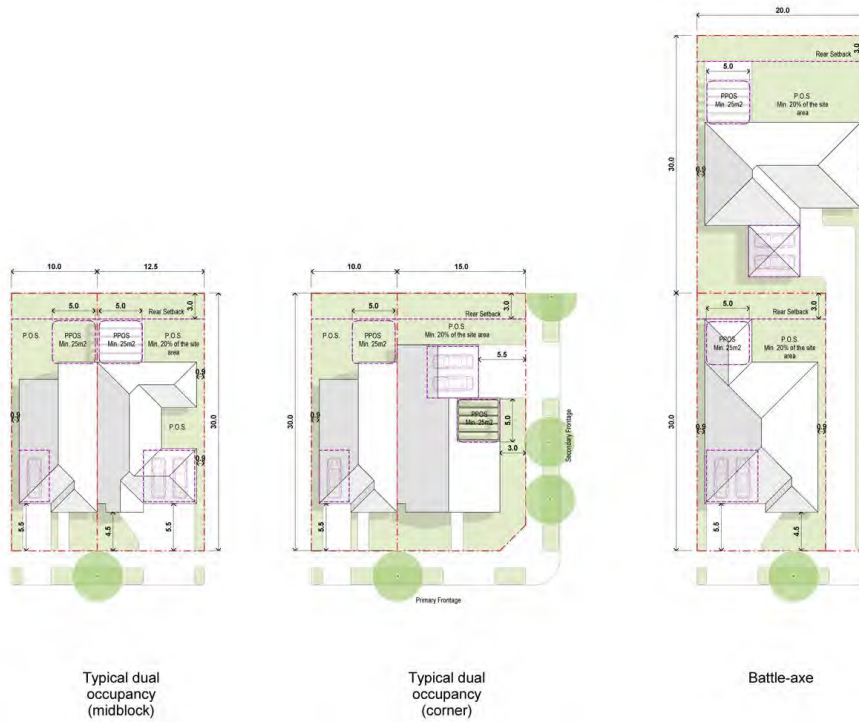


Figure 10 Indicative Layout Options consistent with the Development Controls in Table 1

4.2 Built Form and Streetscape Character

Objectives

- a) Residential housing is in keeping with the desired future streetscape and neighbourhood character and values architectural interest and compatible fencing outcomes.
- b) To ensure landscaping is appropriate in nature and scale for the site and the local environment.
- c) To provide street tree planting that creates a pleasant environment and contributes to street character.

Performance Measures

- a) Built form should display a variety of materials, colours and shading structures, with garages integrated into the overall architectural form and design.
- b) Avoid repetition, ‘mirror image’ designs, and monotony within the streetscape.
- c) The frontage of buildings and their entries are readily apparent from the street.

- d) Encourage the use of materials in the construction of new dwellings that is compatible with adjoining dwellings and the streetscape in terms of material, colour and form.
- e) Fencing is consistent with the existing character of the area.
- f) Fencing on corner allotments does not impede motorists' visibility at the intersection.
- g) Verandahs and balconies are encouraged.
- h) Landscaping is provided at a scale and density which is appropriate for the development.

**Development Controls****Design**

- 1) The primary street façade of a dwelling must incorporate at least two of the following design elements as part of the articulation zone:
  - Entry feature of porch
  - Awnings or other features over windows
  - Verandahs, pergolas or similar features above ground level door entries
- 2) Dwellings on corner lots:
  - Must address both the primary and secondary road frontage
  - Walls facing the secondary frontage (corner lots) shall have an active frontage (i.e. at least one window)
  - Avoid repetition and monotonous designs within the streetscape
- 3) Front elevation of any two (2) storey dwelling shall be composed of a combination of single and two storey elements. These elements may include a verandah, porch, bay window or single storey attachment.
- 4) External wall heights are not to exceed 8 metres above finished or natural ground level (whichever one is lower) to the underside of eaves at any point.
- 5) All dwellings have eaves in proportion with the roof pitch. Eaves of a minimum of 450mm are encouraged. Eaves less than 450mm will be assessed on merit.
- 6) Rooftop solar collectors, satellite dishes and antennae should be located and/or finished to ensure they have limited visual impact from the street.
- 7) Windows located on the roof should not dominate the roof.
- 8) Bright, strong colours, black/dark will not be supported. Services which penetrate the roof and flashing should be painted or finished in a material that is consistent with the roof colour.
- 9) Where dual occupancy or multi-dwelling housing is situated on corner blocks (where one is not a laneway), the development is designed to face each street frontage.
- 10) Dual occupancy development shall not be designed as 'mirror image'.

- 11) Two storey dwellings and outbuildings will consider overshadowing and visual privacy to the existing or likely private open space areas of adjoining residential lots. Shadow diagrams are to be submitted to demonstrate the impact of overshadowing on adjoining and adjacent allotments for any residential development above single storey.

**Materials**

- 12) Walls are to utilise rendered or bagged masonry, face brick or weatherboard materials (timber or fibre cement). Alternative materials that meet the objectives will be considered on merit.
- 13) Roof coverings are to utilise corrugated steel, flat or low profile tile materials.
- 14) Roof colours and materials are to be thermally reflective and be of lighter shades (other than reflective shades of white). Roofs that absorb heat are not supported. Roof materials to minimise glare, particularly for those near the Dubbo Regional Airport.

**Fencing**

- 15) Any front fencing is to be of quality construction. Front fences have a maximum height of 1.2 m if solid or less than 50% transparent and 1.5m if greater than 50% transparent.
- 16) Fencing is either splayed, set-back, reduced in height or transparent to maintain visibility for motorists.
- 17) Where there is no front fencing then suitable dense hedging or other landscaping is to be provided to create clear boundary delineation.
- 18) Front and side fencing forward of the Primary Building Line is to be a maximum 1.2m in height and is to be finished on both sides to the same level of quality. Where there is no fence forward of the building line, it is required that side fencing returns into the building at the Primary Building Line.
- 19) Side and rear fencing on a Standard Lot is to have a maximum height of 1.8m behind the front building line.
- 20) Chain or solid metal fencing is not permitted for front fencing or in front of the building line. Defining pillars and/or well detailed posts are encouraged.
- 21) Permitted front fencing materials are to be:
- Timber or metal slat fencing (vertical or horizontal) with stained or painted finish.
  - Wrought iron feature fencing.
  - Timber post and rail fencing with stained or painted finish.
- 22) For corner lots, the secondary street frontage fencing is to be a maximum height of 1.2m for the first 30% of the lot length from that frontage. The remaining secondary fencing is to be a maximum height of 1.8m. Fencing on corner allotments must not impede motorists' visibility at the intersection.
- 23) Chain link fencing is not permitted.

### **Landscaping**

- 24) A landscape plan is required to be provided for assessment with the lodgment of Development Applications to ensure the species selected screen and soften the development, are suitable for the local climate (gardens with watering requirements).
- 25) Landscaping is to be planted in a manner to ensure the amenity of adjoining and adjacent properties is not impacted.
- 26) Trees are to be planted in accordance with Council's Street Tree Planting Standards to minimise future risk of damage to public and private infrastructure.
- 27) Cross-sections should show root zones of trees.
- 28) Tree species are to be predominately endemic to the Dubbo area, or otherwise approved by the Community, Culture and Places Division, and take into account the size of the tree with relation to the scale of the landscape that they are being planted. This would enable an assessment of the suitability of the landscape for the subdivision and minimise future conflicts.
- 29) Construction of pedestrian paths/cycle ways, water management basins and drainage structures should avoid remnant trees as a priority and provide a clear managed edge for bushfire hazard protection.

### **4.3 Access, Parking, Garages and Driveways**

#### **Objectives**

- a) To provide adequate and convenient parking for residents, visitors and service vehicles.
- b) Driveways to have the smallest configuration as practical and be as per Australian Standards.

#### **Performance Measures**

- a) Garages are to be setback behind the front most element of the house and fully integrated into the front façade.

#### **Development Controls**

- 1) Dwelling houses and dual occupancy development provides the following vehicle parking:
  - One bedroom dwellings will provide at least one car space.
  - Two bedroom dwellings will provide at a minimum two parking spaces, with at least one behind the building line.
  - Three bedroom or more dwellings will provide at least two car spaces.
- 2) Where garages form part of the front of a dwelling, the garage doors should not exceed more than 50% of the total width of the dwelling frontage.
- 3) Garage doors facing the street are not to exceed a width of 6 metres in total.

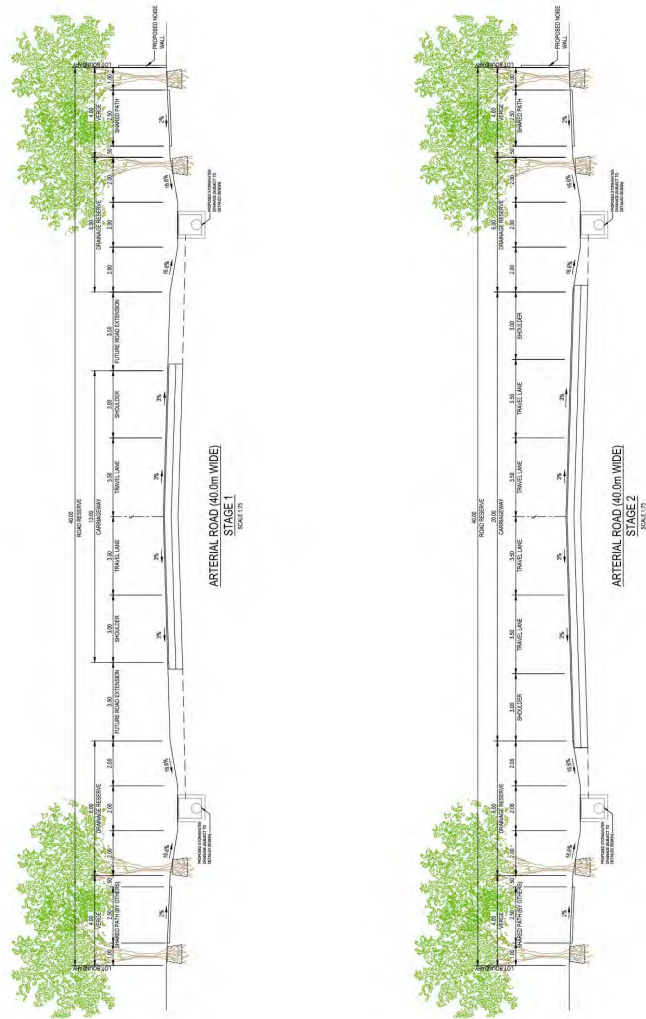
- 4) Driveways are to be located clear of obstacles such as power poles, and stormwater pits.
- 5) Freestanding garages or sheds will be single storey and located so as to not compromise the minimum landscape area or usability of private open space or overshadow adjoining private open space areas.



**Appendix A – Road Sections and descriptions**

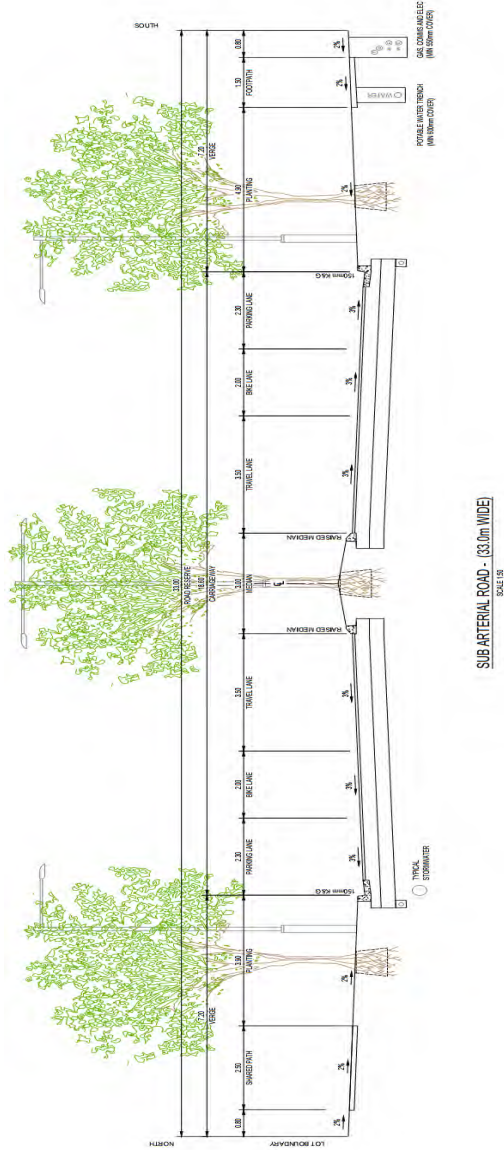
**North South Arterial Road**

This road will be developed as part of the industrial subdivision to the north. It has an 40m wide reserve, with Stage 1 (within IN2 land north of the site) having a 20m carriageway width and Stage 2 within the DCP boundaries having a 13m carriageway and designed to be expanded to 20m when planning for the ultimate reservation of other road sections take place as shown on this page:



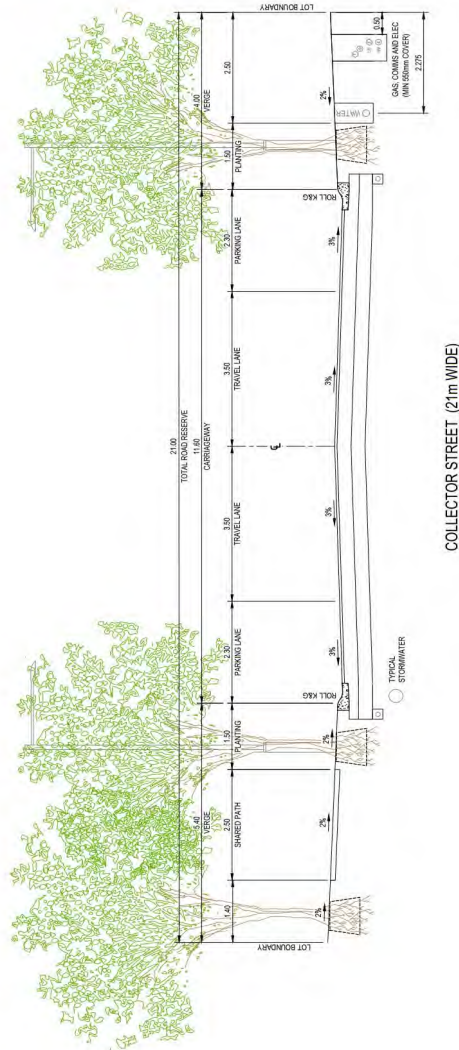
**East West Sub arterial Road**

This road has a 33m reserve width, and 7.8m carriageway 3.5m travel lane, 2.0m bike lane and 2.3m parking lane on either side of a landscape median (2.5m wide). There is a 7.5m wide verge incorporating a 1.5m footpath on one side and a 2.5m shared path on the other side.



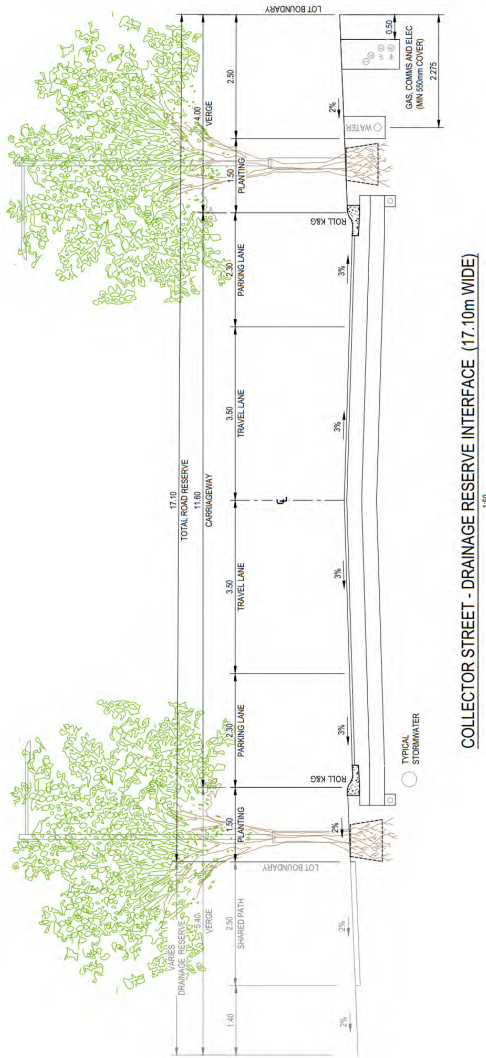
**Collector Street (typical)**

This road has a 21m reserve width, and 11.6m carriageway incorporating 3.5m travel lanes and 2.3m parking lane on either side. There is a 4m landscaped verge on one side and a 5.4m verge on the other accommodating a 2.5m share path with 2% crossfall.



**Collector Street (drainage road interface)**

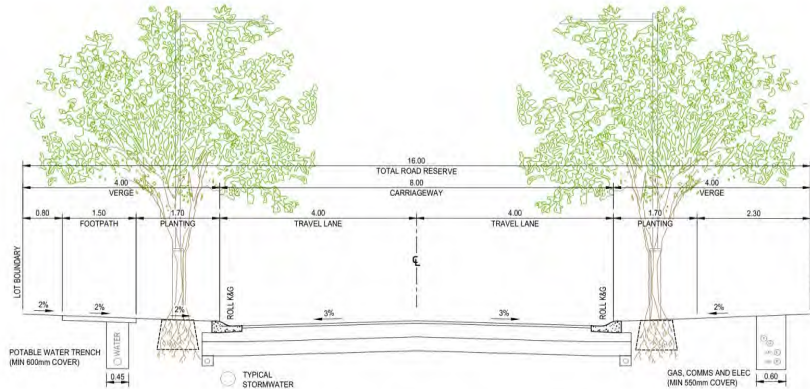
This road has a 17.1m reserve width, and 8m carriageway incorporating 3.5m travel lanes and 2.3m parking lane on either side. There is a 4m landscaped verge on one side and a 1.5m verge on the other adjacent to the open space or drainage reserve. A 2.5m share path with 2% crossfall is located within the reserve.



COLLECTOR STREET - DRAINAGE RESERVE INTERFACE (17.10m WIDE)

**Local Street (typical)**

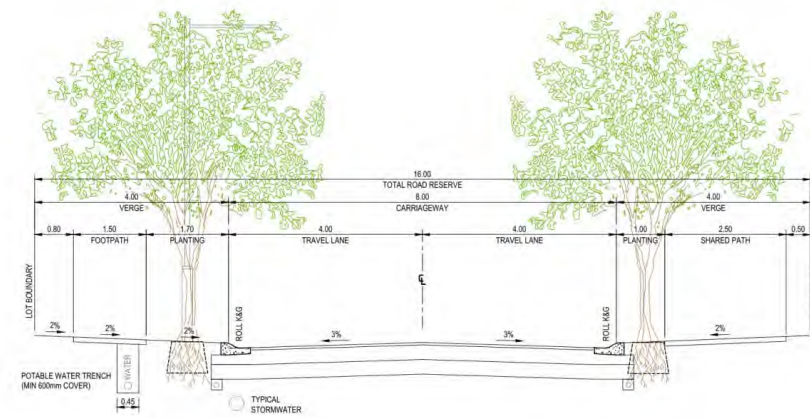
This road has a 16m reserve width, and 8m carriageway incorporating with a 4m verge incorporating a 1.5m footpath with 2% cross fall on one side.



**LOCAL STREET (16m WIDE)**  
1:50







**Local Street with Share Path**

This road type is provided on the road adjacent to the rail line and adjacent to the TAFE land and rural land. It is the same as the local road typical except for the incorporation of the share path on to the outside verge of the road.



**LOCAL STREET WITH SHARED PATH (16m WIDE)**  
1:50

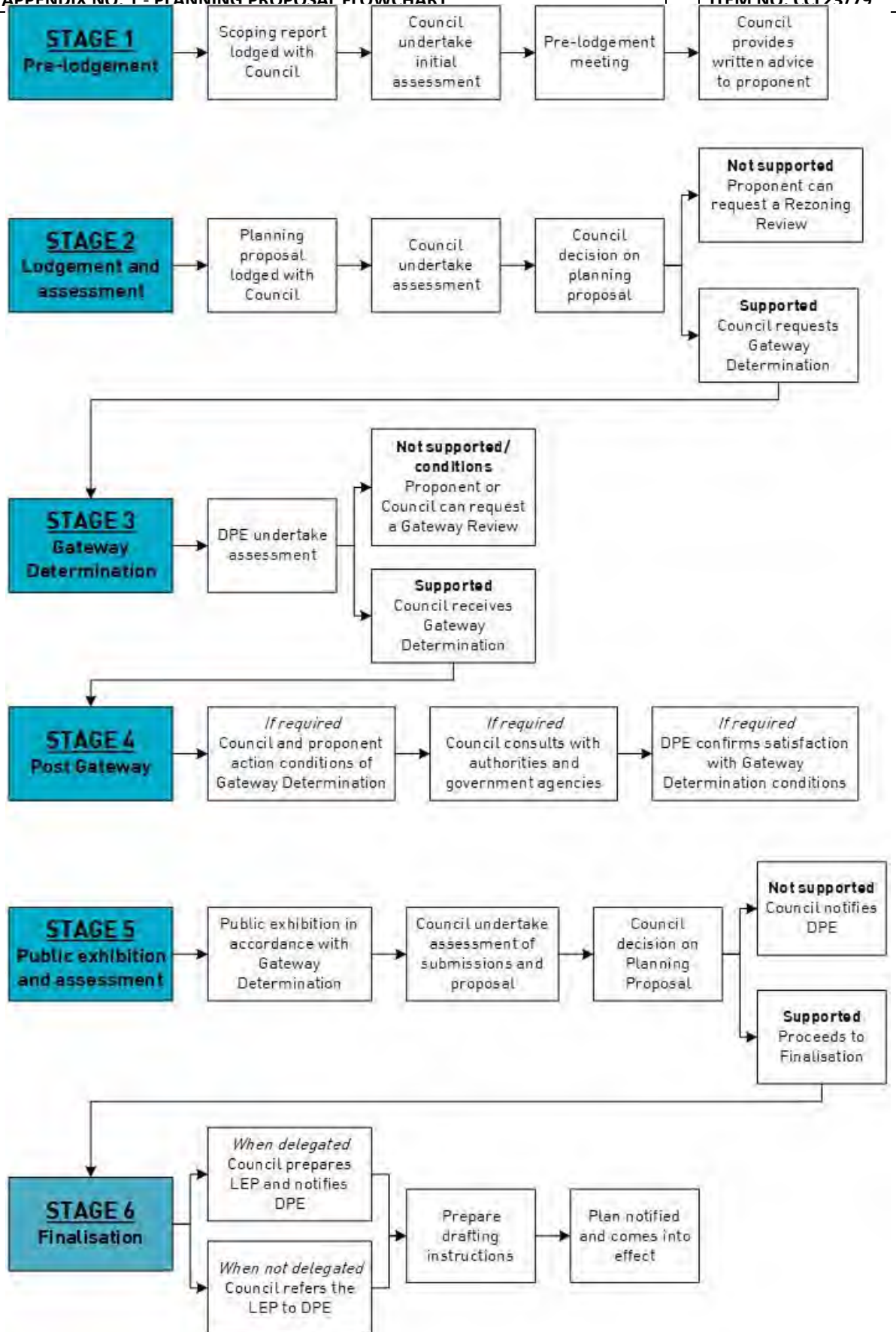
**Appendix B – Recommended Deemed to Satisfy Constructions for Rail and Traffic Noise  
(Category 3 Construction)**

Category No.	Building Element	Standard Constructions	sample
3	<b>Windows/Sliding Doors</b>	Openable with minimum 6.38mm laminated glass and full perimeter acoustic seals	
	<b>Frontage Facade</b>	<b>Brick Veneer Construction:</b> 110mm brick, 90mm timber stud or 92mm metal stud, minimum 50mm clearance between masonry and stud frame, 10mm standard plasterboard internally.	
		<b>Double Brick Cavity Construction:</b> 2 leaves of 110mm brickwork separated by 50mm gap	
	<b>Roof</b>	Pitched concrete or terracotta tile or sheet metal roof with sarking, 1 layer of 13mm sound-rated plasterboard fixed to ceiling joists, R2 insulation batts in roof cavity.	
	<b>Entry Door</b>	45mm solid core timber door fitted with full perimeter acoustic seals	
	<b>Floor</b>	Concrete slab floor on ground	

Note: Facades of dwellings within noise affected areas 2 and 3 will require mechanical ventilation if there are no openable windows to those rooms in adjoining (side or rear) facades.

**CCL23/79      Planning Proposal R22-006 - 13L Narromine Road Dubbo -  
Proposed Amendments to Land Use Zones**

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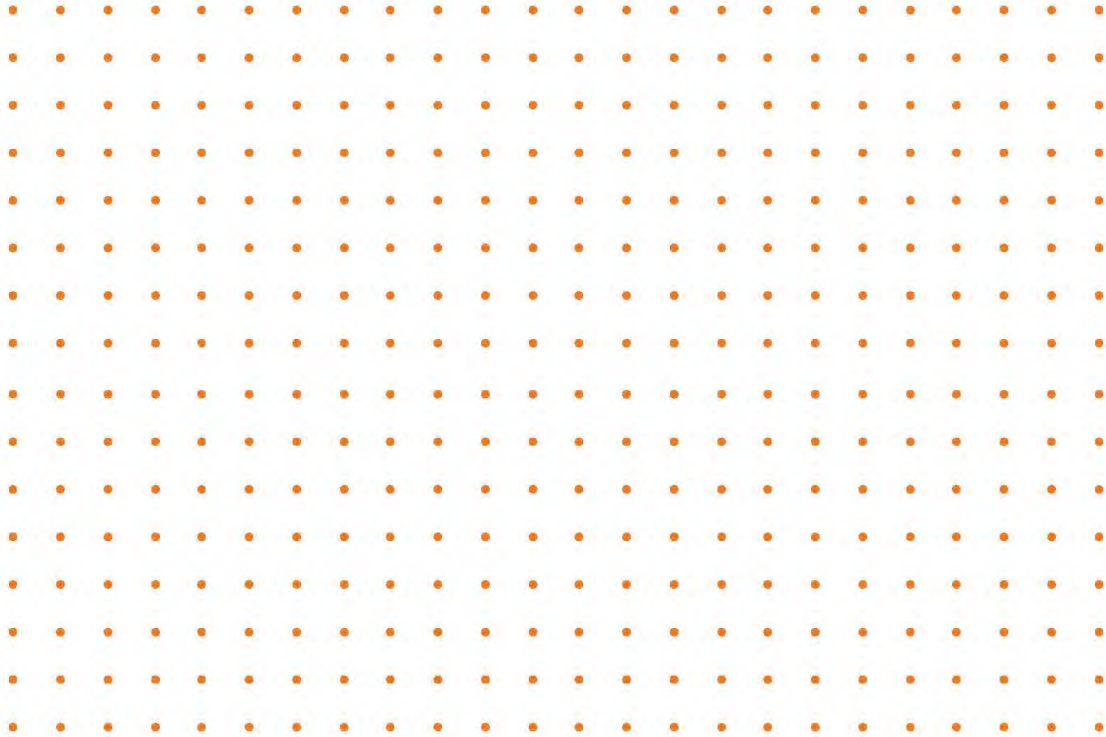






## PLANNING PROPOSAL

Amendments to Dubbo Regional LEP 2022 –  
Employment Lands Precinct at 13L Narromine Road  
Dubbo



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Planning Proposal  
Employment Land Precinct - Planning Proposal

# Planning Proposal

Amendments to Dubbo Regional LEP 2022 – Employment Lands  
Precinct at 13L Narromine Road Dubbo

**Prepared for**

The Bathla Group

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September 2022



## Planning Proposal

Employment Land Precinct - Planning Proposal

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Date of final issue: 6 September 2022

File Path: C:\Users\PipHyde\GLN Planning Dropbox\Pip Hyde\Public\Projects\Active\11666 13L Narromine Road Dubbo\Planning Proposals\Planning Proposal IN1 to B5 and B2\PP-Industrial to E1 Local shops and E3 Productivity Support (Draft PH).docx

Project Manager: Peter Lawrence

Client: The Bathla Group

Project Number: 11666

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**Document History and Status**

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V2 Final	Council	1-e	6/9/22		P.Lawrence

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- Appendix B: Aboriginal Heritage Assessment
- Appendix C: Traffic and Transport Assessment
- Appendix D: Water Cycle Management Report
- Appendix E: Economic Analysis
- Appendix F: Utilities Services Report
- Appendix G: Maps



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## Executive Summary

This Planning Proposal seeks to amend Dubbo Regional Local Environmental Plan 2022 (LEP) to change the existing zoning of Proposed Lot 221 in the subdivision of Lot 22 DP 1038924 at the northern end of 13L Narromine Road, Dubbo from IN2 Light Industrial to part B2 Local Centre and part B5 Business Development. It is noted that these zone names are expected to change to E1 Local Centre and E3 Productivity Support, respectively, as part of the Employment Zone Reforms recently exhibited by the Department of Planning and Environment (DPE).

The existing industrial land within Proposed Lot 221 has an area of approximately 66ha. It adjoins the TAFE site to the east and future sports field site to the south both zoned RU2 Rural Landscapes. Land immediately west is zoned IN2 Light Industrial.

The rezoning will give effect to Council's *Employment Lands Strategy* and *Local Strategic Planning Statement* to rezone the land for Business Development and additionally incorporates a proposal for a Local Centre to service the local area including the adjoining residential release.

Aside from addressing the strategic framework to support the Planning Proposal, this report has also been informed by a number of technical studies that address the physical and urban capability of the land as well as demand for the facility in its proposed location as follows:

- Urban Design and Master Plan prepared by Sitios
- Traffic Impact Assessment prepared by Amber Traffic and Transport
- Ecological Assessment prepared by Lodge Enviro
- Bushfire Assessment prepared by Building Code and Bushfire Hazard Solutions
- Water Cycle management, subdivision design and services prepared by Makers Engineering
- Geotechnical and Contamination prepared by Geotesta
- Aboriginal Archaeology Investigation prepared by Apex Archaeology
- Preliminary Market Potential for retail and supporting non retail floorspace prepared by Location IQ

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## Introduction

### Background

This Planning Proposal seeks to amend Dubbo Regional Local Environmental Plan 2022 (**LEP**) to apply a B2 Local Centre Zone and B5 Business Development Zone within Proposed Lot 221 in the subdivision of Lot 22 DP 1038924 at the northern part of 13L Narromine Road, Dubbo. The land is currently zoned IN2 Light Industrial and has an area of approximately 66ha. This Planning Proposal has been prepared by GLN Planning for the Bathla Group (**Bathla**) as a proponent initiated Planning Proposal for submission to Dubbo Regional Council.

The rezoning will give effect to Council's Employment Lands Strategy to rezone the land for Business Development and to incorporate a proposal for a Local Centre to service the local area including the adjoining residential release being developed by Bathla. While this Planning Proposal references the existing B2 Local Centre and B5 Business Development zones, it is noted that these zone names are expected to change to E1 Local Centre and E3 Productivity Support, respectively, as part of the Employment Zone Reforms recently exhibited by the Department of Planning and Environment (DPE).

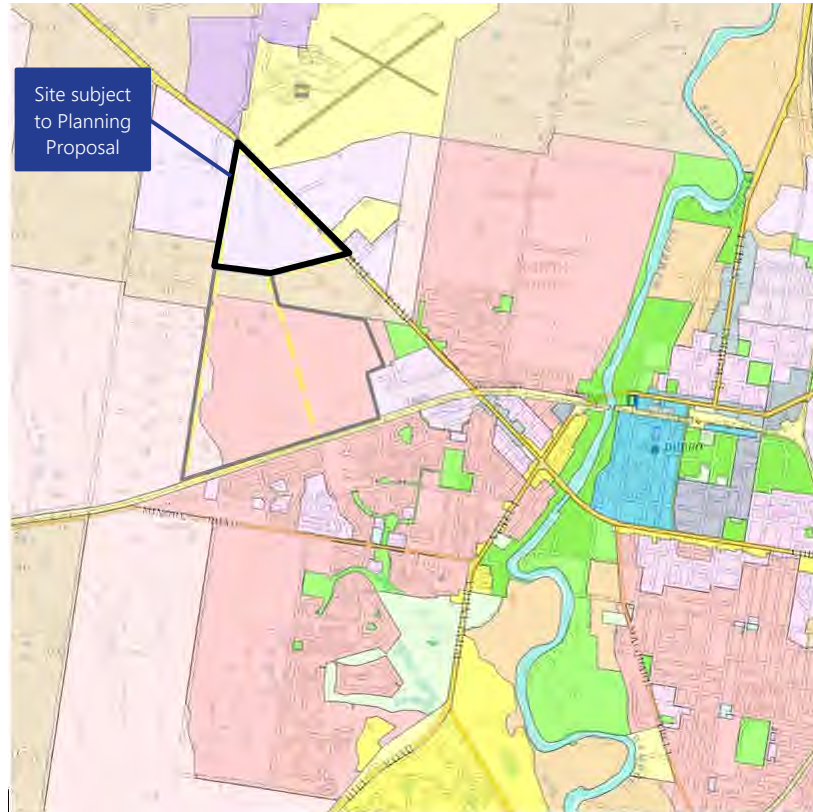
Bathla has secured an interest in approximately 272ha of land off Narromine and Jannali Roads in Dubbo. The parcel includes land currently zoned IN2 Light Industrial, RU2 Rural Landscape, R5 Large Lot Residential and R2 Low Density Residential under the LEP. The ultimate delivery of the various parts of the land will be subject to a Structure Plan which anticipates Planning Proposals and Development Applications which give effect to Council's Planning Strategies as well as support best practice planning for the future residential release. The Planning Proposals and applications to be lodged with Dubbo Regional Council for this land include:

- This Planning Proposal to rezone Proposed Lot 22 from IN2 Light Industrial to B2 Local Centre and B5 Business Development Zones (As outlined in this Planning Proposal)
- A Planning Proposal to rezone an area of R2 Low Density Residential to permit smaller and more diverse housing in a small precinct well located to the district park, shops, TAFE and potential future school site
- A Planning Proposal for minor adjustment between the R2 Low Density Residential and R5 Large Lot Residential Zone to align with the future arterial road boundary
- A Development Application for subdivision of the land zoned IN2 Light Industrial (ie Proposed Lot 22) into superlots that could also serve a future Business Development and Local Centre Zoning including provision of roads and drainage
- A Development Application for the Stage 1 residential subdivision of the R2 Low Density Residential Zone including parts of the arterial and sub arterial works and local park
- Development Applications for subsequent stages including sports fields, local parks and extensions of roads as required.

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**Site Description and Context**

The site comprises all the land in Proposed Lot 221 in the subdivision of Lot 22 DP 1038924 at the northern part of 13L Narromine Road, Dubbo. The land is located approximately 3 kilometres from the centre of Dubbo and is part of a larger area zoned IN2 Light Industry along Narromine Road. It adjoins the TAFE site to the east and future sports field site to the south, both of which are zoned RU2 Rural Landscapes. Dubbo Airport is located to the northwest. See **Figure 1**.



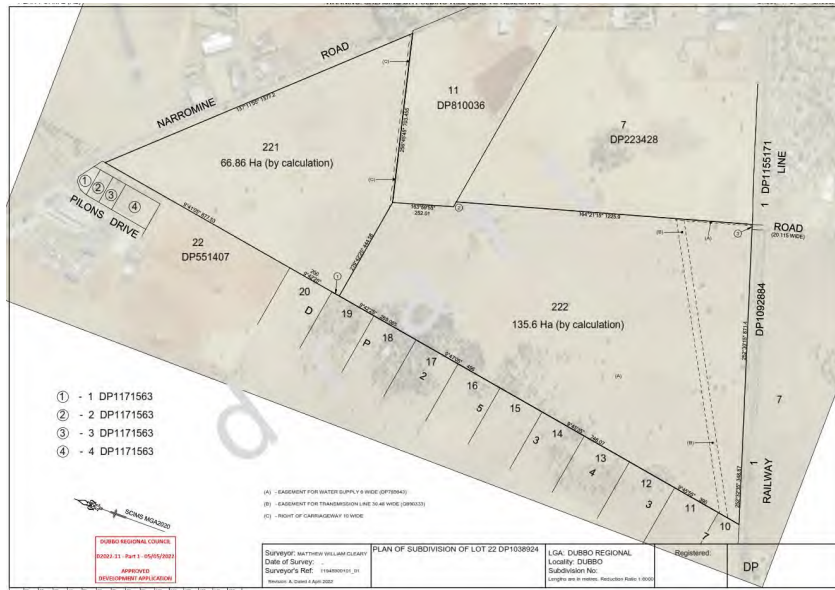
Source – ePlanning Spatial Viewer

**Figure 1 Site Location and Zoning (PP site shown black and rest of Bathla land grey)**

Proposed Lot 221 was approved as part of Development Consent D2022-11 granted on 5 May 2022 to separate the triangular shaped existing industrial land of some 66ha from the remainder of 13L Narromine Road and adjoining Bathla parcel. The bulk of this 180ha release will be progressively delivered as part of the adjoining Stage 4 South West District forming part of the West Dubbo Urban Release Area. See **Figure 2** for the approved subdivision.



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Source – ePlanning Spatial Viewer

**Figure 2 Approved Subdivision Plan showing the triangular Proposed Lot 221**

Topographically the land is relatively flat with drainage from the southeast corner being conveyed toward the north west corner at Narromine Road. The site comprises grassland and there are no existing trees on site.

The biodiversity values of the grassland are discussed later in **Part 3** of this report.

**Background to the Planning Proposal Submission**

Bathla has secured a significant parcel which will create a new urban area including both residential development and employment land uses. Council's Transport Strategy has earmarked future strategic roads that will traverse from a new crossing at the rail line through the site as a means to have traffic to bypass the Dubbo Centre. The extension of this road through the industrial land to Narromine Road is likely to be the predominant route to Narromine Road. These strategic roads require connections through a large number of other parcels in Dubbo meaning the full completion of these roads may be some decades away.

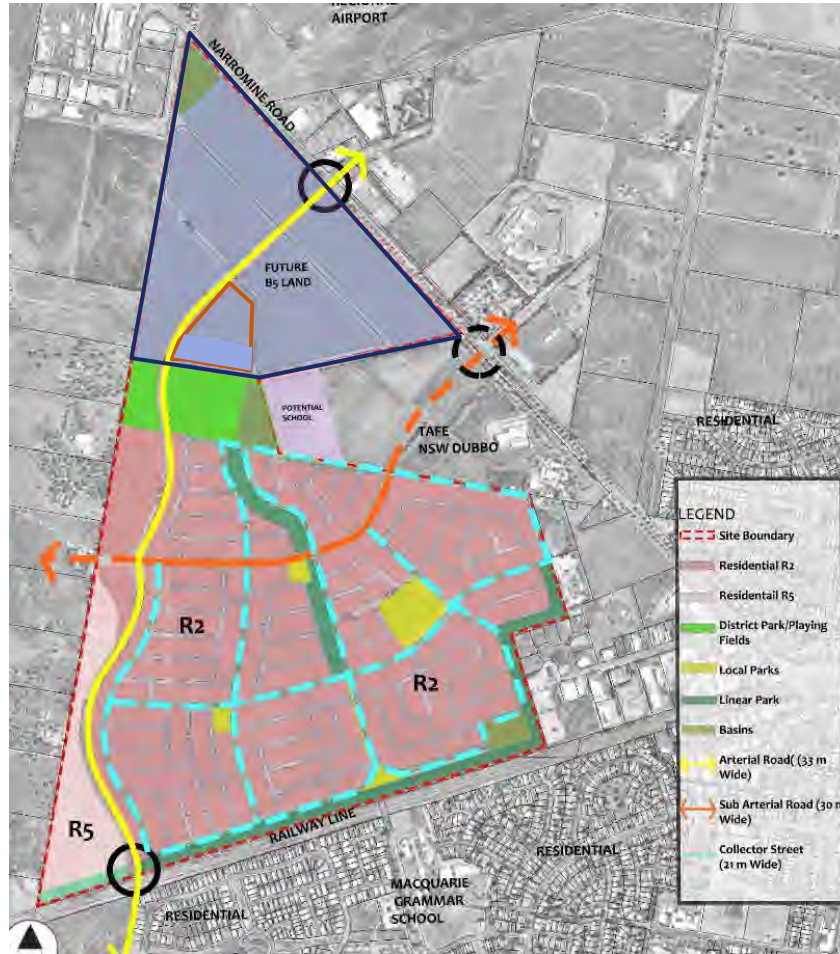
Council's Employment Lands Strategy and Local Strategic Planning Statement look at the opportunity for land that now comprises Proposed Lot 221 be considered for a Business Development Zone to provide land for bulky goods and other complementary uses. The Planning Proposal will progress this initiative.

The Structure Plan at **Figure 3** also provides for the urban release of land to the south of the existing IN2 Light Industrial Zone including a new district sports field adjacent to the TAFE site (which also

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has potential for a future school site) and precinct for smaller lots housing. Good planning for a more connected and resilient release would typically also seek to provide local shops and group these with other key infrastructure and densities to support the use.



Source – Sitios

**Figure 3 Structure Plan (Proposed Lot 221 shown black with Local Centre Site brown)**

The Location IQ identifies the land adjacent to the sports fields and adjacent to the arterial road as a suitable site for the retail shops, particularly given the timeframe for the completion of other roads connection that will provide alternative points of access from the release.

The Planning Proposal intends to secure these outcomes.

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## Planning Proposal Requirements and Process

The DPE's *Local Environmental Plan Making Guideline* (2021) outlines the steps in progressing a Planning Proposal through to finalisation as summarised in **Table 1**.

**Table 1 Steps in progressing a Planning Proposal**

No	Step	Explanation
1	Pre-lodgement	Early analysis of the development potential of the relevant land including key environmental or site constraints, review of the strategic planning framework, obtaining advice and consultation with authorities and government agencies and identification of study requirements to underpin a planning proposal.
2	Planning Proposal	Where the planning proposal has been initiated by a proponent, council is to review and assess the planning proposal and decide whether to support and submit it to the Department for a Gateway determination.
3	Gateway Determination	Department assesses the strategic and site-specific merit of a planning proposal and issues a Gateway determination specifying if the planning proposal should proceed and whether consultation with authorities and government agencies is required
4	Post Gateway	Actioning Gateway determination conditions PPA reviews the Gateway determination and actions any required conditions prior to public exhibition.
5	Public Exhibition and Assessment	Consultation with the community, key authorities and government agencies (as required). Review of the planning proposal to address conditions of Gateway determination and submissions.
6	Finalisation	Final assessment of the planning proposal and if supported, preparation of the draft LEP, review and finalisation. Once finalised, the LEP may be made, notified and come into effect.

A formal Pre- Lodgement Meeting on 11 August 2022 identified additional work to be addressed as part of the economic analysis by Location IQ and combining the reports for the B2 and B5 assessments into the one report. This work has been carried out and supports this planning Proposal.

This Planning Proposal has been prepared having regard in key planning strategies and documents.

A planning proposal must include the following components (Section 3.33(2) of the Environmental Planning and Assessment Act):

- Part 1 – Objectives and intended outcomes – a statement of the objectives of the proposed LEP
- Part 2 – Explanation of provisions – an explanation of the provisions that are to be included in the proposed LEP
- Part 3 – Justification of strategic and site-specific merit – justification of strategic and potential site-specific merit, outcomes, and the process for implementation
- Part 4 – Maps – maps, where relevant, to identify the effect of the planning proposal and the area to which it applies

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- Part 5 – Community consultation – details of the community consultation that is to be undertaken on the planning proposal
- Part 6 – Project timeline – project timeline to detail the anticipated timeframe for the LEP making process in accordance with the benchmarks in this guideline

The following sections address this structure.

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## Part 1 – Objectives of the Planning Proposal

This section provides a clear and concise description of the planning proposal written in plain English as follows:

### Objective

The objective of this Planning Proposal is to amend Dubbo Regional Local Environmental Plan 2022 for land comprising Proposed Lot 221 in the subdivision of Lot 22 DP 1038924 at the northern part of 13L Narromine Road, Dubbo. The Planning Proposal will rezone the land from IN2 Light Industry to part B5 Business Support (approximately 64ha) and part B2 Local Centre (approximately 2ha).

Note; The Department of Planning and Environment has recently exhibited foreshadowed changes to the references for the existing B2 Local Centre and B5 Business Development zones to E1 Local Centre and E3 Productivity Support, respectively, as part of the Employment Zone Reforms

### Intended outcomes

- To zone land to B5 to meet the long term demand for a mix of business, warehouse and specialised retail premises that require a large floor area to meet the projected undersupply of this floorspace to service Dubbo's future residential development in the west.
- To zone land to B2 to enable convenience local shops located close to the adjacent to sports field and potential new school site that will service the future residential release areas and surrounding industrial areas.

## Part 2 – Explanation of Provisions

This section provides a detailed statement of how the objectives or intended outcomes will be achieved by amending an existing LEP.

### Intended Provisions

The objectives can be achieved by amending the Land Zoning Map (Tile LZN\_001A) for Dubbo Regional LEP 2022 to show the land part B5 Business Development and part B2 Local Centre as shown in the map extracts below (Figure 4).

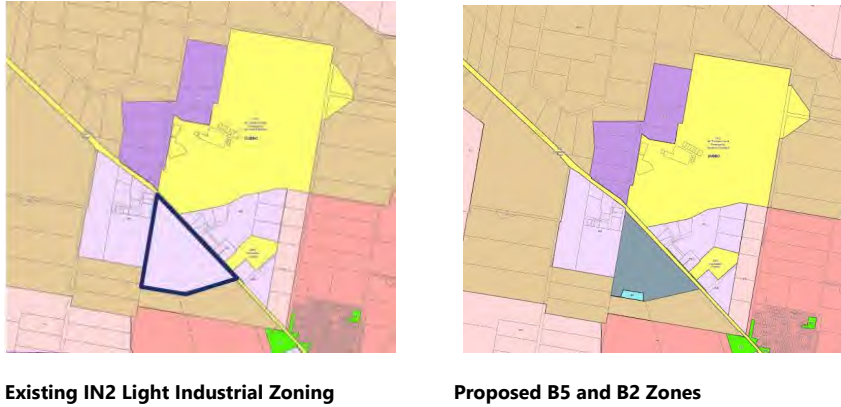


Figure 4 Existing and proposed land use zoning

Zone	
B1	Neighbourhood Centre
B2	Local Centre
B3	Commercial Core
B4	Mixed Use
B5	Business Development
B6	Enterprise Corridor
B7	Business Park
EN	National Parks and Nature Reserves
EC	Environmental Conservation
EM	Environmental Management
GI	General Industrial
IN2	Light Industrial
IN3	Heavy Industrial
R1	General Residential
R2	Low Density Residential
R3	Large Lot Residential
RE1	Public Recreation
RE2	Private Recreation
PR1	Primary Production
RL1	Rural Landscape
RL2	Forestry
RL3	Primary Production Small Lots
RI	Village
SI	Infrastructure
SP	Tourist
WT1	Natural Waterways
WT2	Recreational Waterways

No other provisions of the LEP require amendment.

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## Part 3 – Justification

This section provides a detailed assessment of the proposal's strategic and site-specific merit to determine whether the planning proposal should be supported.

The following sections discuss the considerations in the Department's Local Environmental Plan Making Guidelines for determining strategic merit.

### Section A – need for the planning proposal

#### Is the planning proposal a result of an endorsed LSPS, strategic study or report?

Yes, the Planning Proposal is consistent with the Dubbo Regional Council Employment Lands Strategy and LSPS.

The Dubbo Regional Council Employment Lands Strategy 2018 identifies the site of the Planning Proposal within the "Airport Precinct". In respect to this area and in particular the Planning Proposal Site the Study provides the following recommendation (extracted from page 60):

*Dubbo's employment lands have largely focused towards Dubbo's east being where the majority of residential development has occurred over the last 20 years. However, with a projected undersupply of commercial floorspace and the future of Dubbo's residential development moving to the west, a commercial land supply should be considered in West Dubbo to meet demand over the long term.*

*The B5 zone allows a variety of permissible uses which would support and service the West Dubbo population catchment, nearby industrial zones and Dubbo City Regional Airport. The B5 Business Development zone is flexible in allowing a mixture of large format commercial uses including bulky goods, warehouse and distribution centres as well as a range of light industrial uses including industrial training facilities, freight transport and passenger, transport and truck depots. This provides a good mixture of uses given its location to a major highway and the airport which is the subject of major government related emergency services facilities.*

*Analysis in Part 2 of this report has shown that to meet the required industrial land supply demand in 2031, 53 to 80 hectares of industrial zoned land should be available for development. As there is currently 724 hectares of vacant/undeveloped industrial zoned land within the former Dubbo City Council area, there is an ample supply of industrial zoned land available to cater for future demand.*

*It is desirable for bulky goods uses to be consolidated and clustered together into defined areas. The land as shown below, is therefore considered suitable as it provides one large parcel rather than creating several smaller pieces of land. This rezoning would also have minimal impact on the supply of industrial zoned land or jobs, particularly noting that the current Dubbo Local Environmental Plan 2011 permits several light industrial uses within the B5 Business Development zone.*

*Prior to the rezoning of this land, an Economic Impact Assessment should be undertaken to ensure its impact on the employment land hierarchy is not significantly impacted.*

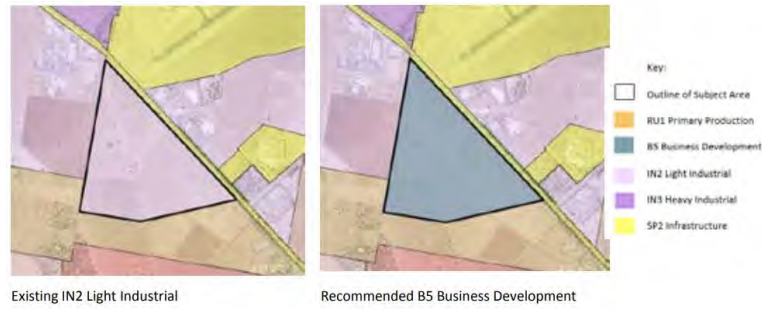
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An Economic Assessment has been prepared by Location IQ and is discussed later in this Section.

The Dubbo Local Strategic Planning Statement (LSPS) was adopted by Council on 22 June 2020, providing a 20-year vision for land use planning for Dubbo and Wellington. The LSPS adopts the findings by the Employment Lands Strategy in Planning Priority 8 – *Ensure supply of employment generating land*, where Action 8.1 seeks to *Implement and progress the recommendations as contained within the Employment Lands Strategy 2019*.

While that part of the Planning Proposal that seeks to implement a B5 Business Development Zone is supported by the Employment Lands Strategy and LSPS, the proposal is to incorporate a B2 Local Centre Zone that was not specifically referenced in these documents. This is despite this part of the release being remote from other local centres and that the Development Control Plan required for urban release areas are to address measures to accommodate and control appropriate neighbourhood commercial and retail uses, and encourage higher density living around transport, open space and service nodes,

The land to the south of the Planning Proposal site is a substantial urban release and is primarily zoned as R2 Low Residential. It is noted from Precinct Map 3: Neighbourhood Centres on page 39 of the Employment Lands Strategy that the land is not well located to other local shop offerings, even after the planned future road connections to the south and east are delivered. The release is of a size that can support a local shopping centre. An important part of release area planning is to ensure the future community is well connected with access to a range of infrastructure including open space, community facilities and retail offering. Urban releases that actively plan for these outcomes are more resilient and less car dependent.

The location of the local shops within this employment lands precinct benefits from close access to the section of arterial road through the site and entry to the residential areas, while overlooking the future open space. The allocations of land for a local centre within the employment precinct and its adjacency to the Open Space at the northern end of the adjoining residential release, integrates compatible uses and minimises land use conflicts. Additionally, it does not undermine the employment function associated with the Employment Precinct and appropriately acknowledges the role this section of road will play as the sole entry to the residential subdivision in the short to medium term until completion of the connecting road infrastructure.



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**Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?**

The changes included in this Planning Proposal are the most appropriate and best means of achieving the objectives and intended outcomes. The proposed amendments require changes to the Land Zoning Map to provide the necessary permissible uses that will enable a successful local centre and new commercial floor space under the business development zoning.

**Section B – relationship to the strategic planning process****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)?**

Yes, the Planning Proposal is consistent with the Draft Central West and Orana Regional Plan 2041.

Objective 12 the Draft Central West and Orana Regional Plan 2041 addresses Prosperity, productivity and innovation; Leverage existing industries and employment areas and support new and innovative economic enterprises

The objectives encourage councils to review their employment lands to identify opportunities, rationalise existing zones and develop appropriate planning controls as part of ongoing strategic and statutory work.

As noted in Council's Employment Lands Strategy:

*to meet the required industrial land supply demand in 2031, 53 to 80 hectares of industrial zoned land should be available for development. As there is currently 724 hectares of vacant/undeveloped industrial zoned land within the former Dubbo City Council area, there is an ample supply of industrial zoned land available to cater for future demand (p60).*

The oversupply of industrial land in this existing employment precinct prompted Council to review this site based on:

*with a projected undersupply of commercial floorspace and the future of Dubbo's residential development moving to the west, a commercial land supply should be considered in West Dubbo to meet demand over the long term.*

Council selected the Planning Proposal site in its Employment Strategy noting that:

*This rezoning would also have minimal impact on the supply of industrial zoned land or jobs, particularly noting that the current Dubbo Local Environmental Plan 2011 permits several light industrial uses within the B5 Business Development zone. p60)*

Strategy 12.1 of the Draft Central West and Orana Regional Plan 2041 encourages Council's to use strategic planning and local plans to identify local and subregional specialisations and respond to future changes in industry to allow a transition to new opportunities. The Location IQ report submitted with this Planning Proposal provides an economic assessment support the land use changes as proposed.

The incorporation of the B2 Local Centre Zoning into this area is consistent with collocating physical and social infrastructure that will support future residential releases and community resilience.

## Planning Proposal

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**Is the planning proposal consistent with a council LSPS that has been endorsed by the Planning Secretary or GSC, or another endorsed local strategy or strategic plan?**

Yes, see discussion in Section 5.1.1.

**Is the planning proposal consistent with any other applicable State and regional studies or strategies?**

The Planning Proposal is broadly consistent with Future Transport Strategy 2056 which seeks greater consideration of providing social and physical infrastructure required by future residents in releases without relying on cars. The co-location of this infrastructure as proposed in the Structure Plan enable good active transport links and location for public transport.

**Is the planning proposal consistent with applicable SEPPs?**

The Planning Proposal has been reviewed against the provisions of relevant State Environmental Planning Policies (SEPPs) to confirm the outcomes would be consistent and not compromise future applications once rezoned.

**Table 2 Assessment against relevant SEPPs**

SEPP Title	Comment
State Environmental Planning Policy (Biodiversity and Conservation) 2021	The Planning Proposal does not include any provisions which impede operation of this SEPP over the subject land.
Ch 2 Vegetation in non-rural areas	This chapter is applicable to the existing Industrial Land and future B5 Business Development and B2 Local Centre Zones.  Part of the land contains an endangered ecological community which may exceed the biodiversity offsets scheme threshold. This is a small part of the land which would apply whether or not the Planning Proposal proceeds. It is proposed to prepare a BDAR required at the Development Application Stage to enable biodiversity offsets if required.
Ch 6 Bushland in urban areas	Not Applicable as there are no identified areas
State Environmental Planning Policy (Resilience and Hazards) 2021	The Planning Proposal does not include any provisions which impede operation of this SEPP over the subject land.
Ch 4 Remediation of land	Preliminary Investigations identify minor potential for contaminants associated with the former agricultural use of the land, but nothing that would prevent the proposed land use.
State Environmental Planning Policy (Transport and Infrastructure) 2021	The Planning Proposal does not include any provisions which impede operation of this SEPP over the subject land.
Ch 2 Infrastructure	The Mitchell Highway (Narromine Road) is a classified road Any development with frontage to a classified road must consider safe access to and operation of the classified road. Development listed in Schedule 2 to be assessed as Traffic Generating Development.

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SEPP Title	Comment
	These provisions would apply to the future development of the land whether under the existing or proposed zoning.
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008	Exempt and complying development under this SEPP will continue to apply to the land.
State Environmental Planning Policy (Transport and Infrastructure) 2021	Under the EP&A Regulations, any development application located within 200km of the Siding Spring Observatory where the application is state significant, designated development or development specified within State Environmental Planning Policy (Planning Systems) 2021, Schedule 6 (i.e. regionally significant), is required to consider the Dark Sky Planning Guideline prepared by DPE.
State Environmental Planning Policy (Planning Systems) 2021	Further, State Environmental Planning Policy (Transport and Infrastructure) 2021 requires consultation for development that may increase the amount of artificial light in the night sky and that is on land within the dark sky region as identified on the dark sky region.  While not necessary as part of this rezoning, any future DA will consider these requirements for dark sky planning, as necessary.

**Is the planning proposal consistent with applicable Ministerial Directions (section 9.1 Directions)**

The Minister for Planning and Environment issues Local Planning Directions that Councils must follow when preparing a Planning Proposal. This Planning Proposal is considered to be consistent with all applicable Section 9.1 Directions, as demonstrated within **Table 3**.

**Table 3 Assessment against Section 9.1 Directions**

Direction	Consistent
Focus Area 1: Planning Systems	
1.1 Implementation of Region Plans	The Planning Proposal is consistent with the Draft Central West and Orana Regional Plan 2041 as discussed in Section 5.2.1.
1.3 Approval and Referral Requirements	No new unnecessary referral or concurrence conditions are proposed as part of the Planning Proposal.
1.4 Site Specific Provisions	The Planning Proposal utilises appropriate zones to achieve the intended land use outcomes which do not require or impose any additional provisions or development standards and hence is consistent with this direction.
Focus Area 1: Planning Systems – Place-based	Not applicable

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Direction	Consistent
Focus Area 3: Biodiversity and Conservation	
3.1 Conservation Zones	The Planning Proposal changes the IN2 Light Industrial Zone to B5 Business Development and B2 Local Centre. There is no proposal to amend or change Conservation Zones.
3.2 Heritage Conservation	The Planning Proposal does not propose changes to the LEP clause or Maps relating to Heritage.  All future Development Applications submitted will be required to comply with the relevant provisions within the LEP, National Parks and Wildlife Act and Heritage Act.  The Planning Proposal is consistent with this Direction.
Focus Area 4: Resilience and Hazards	
4.1 Flooding	Not applicable. The site is not identified as flood prone land.
4.3 Planning for Bushfire Protection	The land is not mapped as bushfire prone land.
4.4 Remediation of Contaminated Land	Preliminary Site Investigations found low risk of contamination with further gap analysis at demolition of existing structures. There are no structures on this part of the land.
Focus Area 5: Transport and Infrastructure	
5.1 Integrating Land Use and Transport	Land uses have been located to ensure access to key transport nodes/networks will be provided via appropriate road, cycle and pedestrian linkages.  The Planning Proposal is considered consistent with this Ministerial Direction.
5.2 Reserving Land for Public Purposes	Not applicable.
5.3 Development Near Regulated Airports and Defence Airfields	The site is not within Dubbo Regional Airport's ANEF contours. The site is currently zoned for industrial development and the Planning Proposal anticipates similar built form. There are no changes to development standards. Consultation with the airport will occur as required as part of exhibition of the Planning Proposal.
Focus Area 6: Housing	Not Applicable
Focus Area 7: Industry and Employment	
7.1 Business and Industrial Zones	The Planning Proposal will vary the existing IN2 Light Industry boundaries. However, consistency with this direction is justified based on the Council's Employment Lands Strategy and LSPS that notes the oversupply of the existing IN2 zone and demand for commercial floorspace for the growing residential population in the

## Planning Proposal

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Direction	Consistent
	west. The economic analysis justifying both the B5 Business Development Zone and B2 Local Centre Zone has been prepared by Location IQ and is discussed in the next section.
Focus Area 8: Resources and Energy	Not applicable
Focus Area 9: Primary Production	Not Applicable

### Section C – 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 because of the proposal?

Preliminary ecological assessment of the existing industrial land has identified the potential for the following species on site that could be impacted:

*PCT 511 – Queensland Bluegrass - Redleg Grass - Rats Tail Grass - spear grass - panic grass derived grassland of the Nandewar Bioregion and Brigalow Belt South Bioregion (approximately 9ha)*

*PCT 458 – White Cypress Pine - Buloke - White Box shrubby open forest on hills in the Liverpool Plains – Dubbo region, Brigalow Belt South Bioregion (approximately 1,400m<sup>2</sup>)*

These areas are located adjacent to the southern boundary of the existing IN2 Light Industrial land holding and the future development of this land would need to consider this constraint at the development application stage regardless of the Planning Proposal. Investigations to determine whether a Biodiversity Development Assessment Report is required are underway for the Development Application stage.

#### Are there any other likely environmental effects of the planning proposal and how are they proposed to be managed?

No, preliminary site investigations concluded that there is low risk of contamination and Geotechnical and Contamination. (See **Appendix A**).

An Aboriginal Heritage Assessment by Apex Archaeology found there was no sub surface archaeological potential and recommended that no further Aboriginal archaeological assessment is required prior to the commencement of development works as described in this report. (see **Appendix B**).

A Traffic Impact Assessment by Amber Traffic and Transport has informed the intersection design for the entry to the employment precinct with Narromine Road (See **Appendix C**).

The site will convey water from the adjoining residential subdivision and development on this land toward Narromine Road. Importantly the Water Cycle Management process designed by Maker Engineering will utilise dry basins to deter birds inhabiting or gathering in close proximity to the airport (See **Appendix D**)

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**Has the planning proposal adequately addressed any social and economic effects?**

The economic analysis supporting both the B2 Local Centre and B5 Business Development Zone has been prepared by Location IQ and looks at the demand and impact of the Planning Proposal. The Location IQ Report is at **Appendix E**.

As noted previously the Planning Proposal site adjoins a large residential release which is relatively isolated with physical barriers including railway line and Mitchell Highway. Road proposals which will better link the release to other community facilities and retail services will not be provided in the short term. Good release area planning focusses on the connections to and co-location of social infrastructure, in this case district open space, TAFE site, site for potential school and a retail site which provides the northern border to the district park.

**Section D – Infrastructure (Local, State and Commonwealth)****Is there adequate public infrastructure for the planning proposal?**

Public utilities services can be extended to the site as outlined in the Utilities Services Report prepared by Maker Engineers at **Appendix F**.

A new intersection will be required to access Narromine Road to access the site which will be part of the broader planning for the arterial roads in Council's Planning and Transport Strategy.

**Section E – 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**

Preliminary consultation has been undertaken with Transport for NSW and DPE concerning State Government interests in relation to this and the adjoining residential urban release area.

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### Part 4 Mapping

The following map tiles are proposed to be amended as part of the Planning Proposal.

Map	Tile Number
Land Zoning	Sheet LZN_001A

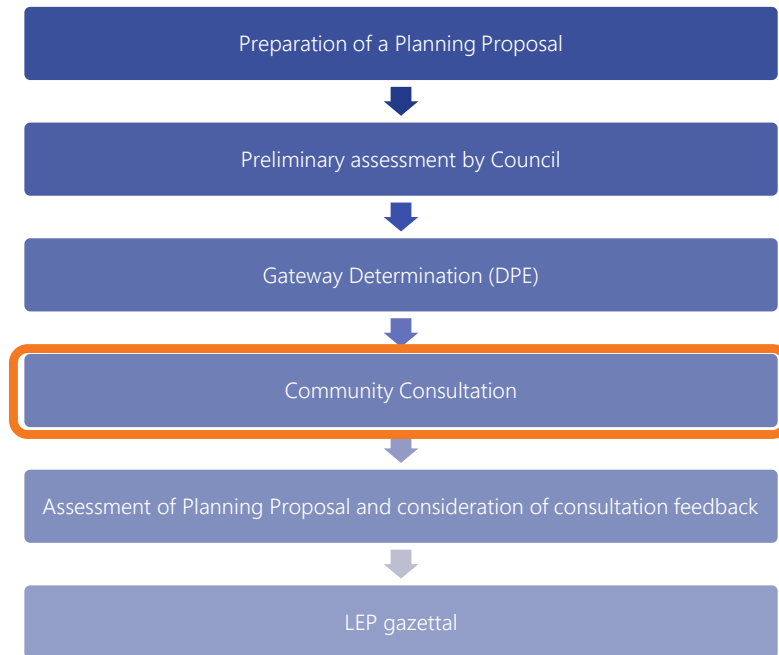
The existing and proposed LZN\_001A map tiles referenced by the existing and proposed zoning in Dubbo Regional LEP 2022 are provided at **Appendix G**.

### Part 5 Community Consultation Approach

Schedule 1, clause 4 of the EP&A Act requires the relevant planning authority to consult with the community for PPs to amend an LEP in accordance with the Gateway determination.

The Dubbo Regional Council Community Participation Plan identifies that PPs are required to be notified for a minimum period of 28 days (unless this timeframe is modified as part of the Gateway Determination process). Community consultation is required to be undertaken by written notice and on the website. However, this will be a process for Council and DPE to undertake.

The key steps in relation to the PP are outlined below showing when community consultation occurs in the process.



**Figure 5 Key steps in Planning Proposal process**



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## Part 6 Project timeframe

The project timeline provides a mechanism to monitor and resource the various steps required to progress planning proposal through the plan making process. The following table provides estimated timeframes for the various steps.

**Table 4 Project timeframe**

Step	Anticipated Date
Consideration by Council	4 <sup>th</sup> October 2022
Council Decision	21 <sup>st</sup> October 2022
Gateway Determination	8 <sup>th</sup> November
Pre-Exhibition	15 <sup>th</sup> November
Public exhibition period	22 <sup>nd</sup> November – 20 <sup>th</sup> December 2022
Consideration of submissions	21 <sup>st</sup> January 2023
Post-exhibition review and additional studies	24 <sup>th</sup> March 2023
Submission to the Department for finalisation (where applicable)	3 <sup>rd</sup> April 2023
Gazettal of the LEP amendment	28 <sup>th</sup> April 2023

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### Conclusion

This Planning Proposal seeks to amend Dubbo Regional Local Environmental Plan 2022 to apply a B2 Local Centre Zone and B5 Business Development Zone within Proposed Lot 221 in the subdivision of Lot 22 DP 1038924 at the northern part of 13L Narromine Road, Dubbo. The land is currently zoned IN2 Light Industrial and has an area of approximately 66ha.

The rezoning will give effect to Council's Employment Lands Strategy to rezone the land for Business Development and to incorporate a proposal for a Local Centre to service the local area including the adjoining residential release being developed by Bathla. A Structure Plan has been prepared that seeks to collocate community infrastructure and uses such as shops, potential future school and TAFE adjacent to new sports fields. It is intended the adjacent residential area will also include smaller lots to maximum the benefit of this strategic grouping of facilities.

The Planning Proposal is consistent with Local and State Strategies in relation to employment lands whilst incorporating local convenience shops that will deliver a more socially integrated and equitable release including place making and community building outcomes.



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### Glossary

Abbreviation	
CBD	Central Business District
Council	Dubbo Regional Council
DPE	Department of Planning and Environment
LEP	Local Environmental Plan
SEPP	State Environmental Planning Policy



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# APPENDIX A: GEOTECHNICAL AND CONTAMINATION REPORTS

PP-Industrial to E1 Local shops and E3 Productivity Support.docx  
September 2022



Planning Proposal .....  
Employment Land Precinct - Planning Proposal .....

PP-Industrial to E1 Local shops and E3 Productivity Support.docx  
September 2022



Planning Proposal .....  
Employment Land Precinct - Planning Proposal .....

## APPENDIX B: ABORIGINAL HERITAGE ASSESSMENT

PP-Industrial to E1 Local shops and E3 Productivity Support.docx  
September 2022



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**B.1:**

PP-Industrial to E1 Local shops and E3 Productivity Support.docx  
September 2022



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# APPENDIX C: TRAFFIC AND TRANSPORT ASSESSMENT

PP-Industrial to E1 Local shops and E3 Productivity Support.docx  
September 2022





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**C.1:**

PP-Industrial to E1 Local shops and E3 Productivity Support.docx  
September 2022



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# APPENDIX D: WATER CYCLE MANAGEMENT REPORT

PP-Industrial to E1 Local shops and E3 Productivity Support.docx  
September 2022



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## APPENDIX E: ECONOMIC ANALYSIS

PP-Industrial to E1 Local shops and E3 Productivity Support.docx  
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PP-Industrial to E1 Local shops and E3 Productivity Support.docx  
September 2022



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# APPENDIX F: UTILITIES SERVICES REPORT

PP-Industrial to E1 Local shops and E3 Productivity Support.docx  
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## APPENDIX G: MAPS

PP-Industrial to E1 Local shops and E3 Productivity Support.docx  
September 2022





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# URBAN RELEASE OFF NARROMINE ROAD, DUBBO

## Preliminary Market Potential

Prepared for Bathla Group  
November 2022





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## INTRODUCTION

This report presents a preliminary market assessment of the potential for retail and supporting non-retail floorspace to be provided at the Narromine Urban Release Area (NURA) as part of a new residential estate. The site is situated on the fringe of the Dubbo urban area, adjacent to the Dubbo regional airport.

This report has been prepared in accordance with instructions received from Bathla Group and is structured and presented in **six (6)** sections as follows:

- **Section 1** provides an overview of the regional and local context of the NURA subject site. A summary of the NURA masterplan is also included.
- **Section 2** details the trade area that is likely to be served by the retail and complementary non-retail uses at the NURA site, including current and projected population and retail spending levels over the period to 2041. A review of the likely socio-economic profile of the future trade area population is also provided.
- **Section 3** considers the competitive environment which a supermarket facility at the NURA subject site would operate.
- **Section 4** details comparable sample supermarket based developments and their corresponding tenant mix.
- **Section 5** discusses the retail and complementary non-retail facilities that could be incorporated as part of the NURA subject site.
- **Section 6** assesses the potential for a portion of the Light Industrial IN2 land at NURA to be rezoned to Business Development B5.



## EXECUTIVE SUMMARY

The key points to note from this report regarding the market potential for retail and other uses at the future NURA subject site include the following:

- i. Bathla has secured an interest in 270 hectares of land for a mix of residential and industrial zoned land in Dubbo. It is anticipated that around 5,000 – 5,500 residents will ultimately be accommodated across the masterplan. The northern portion of the masterplan that fronts onto Narromine Road is zoned as industrial land. The residential component is situated on the southern portion of the site. At capacity, the subject site is planned to provide between 1,650 and 1,750 dwellings over a 20 year time frame.
- ii. The defined trade area likely to be served by the NURA subject site and generally extends 3 – 10 km around the subject site.
- iii. The NURA site main trade area population is projected to ultimately comprise some 19,290 persons by 2041. This represents projected growth of 2.5% per annum over the forecast period. The combined primary sectors, of most relevance to NURA subject site will ultimately comprise 18,500 persons including 10,160 persons by 2026.
- iv. The total retail expenditure level of the main trade area population is currently \$167.9 million and projected to increase to \$322.3 million by 2041.
- v. Total supportable development would be in the order of 6,000 sq.m by 2036-41 (refer Table 1.1). A range of other uses such as a service station, and drive-thru facility are likely to be supportable, but some tenants would only be supportable with exposure main road exposure.
- vi. The ultimate composition of the NURA site is summarised under two stages, as follows (refer Table 1):

### Medium term (2031)

- **Supermarket (1,500 sq.m):** a small supermarket would be supportable, with final size to be dictated by operator demand and requirements.
- **Retail Specialty Floorspace (800 – 1,000 sq.m):** a modest and convenience-focused provision of tenants.



- **Non-retail Floorspace:** approximately around 700 sq.m of non-retail floorspace (GLA) is considered supportable.

**Medium-long term (2036 - 2041)**

- **Supermarket (3,000 sq.m):** a larger supermarket is likely to be supportable at the subject site over the longer term, from around 2036. The ability to expand the store at this time would require prior planning for the future expansion requirements.
  - **Retail Specialty Floorspace (1,000 – 1,400 sq.m):** a moderate and still convenience-focused provision of tenants.
  - **Non-retail Floorspace:** approximately around 1,600 sq.m of non-retail floorspace (GLA) is considered supportable.
- vii. The first stage of the NURA centre would most likely be supportable from when at least 1,000 homes have been constructed (and are occupied) within the subject estate. This would equate to some 3,000 additional persons. This is anticipated to occur around 2031.
- viii. The ultimate development would be around 6,000 sq.m, anchored by a full line supermarket and speciality shops totalling 1,000 to 1,400 sq.m if the centre was developed prior to a centre in the North-West Urban Release Area. Childcare, gym and medical would also be supportable at that time. Stage two is likely to be supportable when around 7,000 residents are in the combined primary sectors.
- ix. Any centre that is developed first at NURA, will play an important role in servicing the North-West Urban Release growth area, particularly until a time when that growth area can support its own centre. Consequently, one centre will likely be larger than the other, with the ability to include a full-line supermarket of over 2,500 sq.m.
- x. At less than 6,000 sq.m, the subject centre would be a Local Centre serving the convenience needs of combined primary sector residents. At least one of NURA or North-West Urban Release Area centres will have the capacity to accommodate a supermarket of up to 3,000 sq.m. A centre of this size would be much smaller than the Dubbo CBD and Orana Mall which will continue to serve the non-food requirements of trade area residents.
- xi. A neighbourhood centre in the North-West Urban Release Area will be developed once a sufficient population exists in that release area. With over 10,000 future residents, it will be able support a centre over time of at least 3,000 sq.m., serving the convenience needs of its immediate population.
- xii. There is economic potential to convert some Light Industrial IN2 land to Business Development B5 land without any implications for the efficient supply of IN2 land.



TABLE 1.1. TENANT RECOMMENDATIONS

Category	Short-medium Term 2031		Long Term 2036 - 2041	
	Tenants (no.)	Total GLA	Tenants (no.)	Total GLA
Supermarket	1	1,500	1	3,000
Food Retail	3	300	4	400
Food Catering	3	300	3	400
Apparel	-	-	-	-
Household Goods	-	-	-	-
General Retail	1	200	2	200
Leisure	1	100	1	100
Retail Services	1	100	2	200
<b>Total Retail</b>	<b>10</b>	<b>2,500</b>	<b>13</b>	<b>4,300</b>
• Supermarket	1	1,500	1	3,000
• Retail Specialty Space	9	1,000	12	1,300
Childcare Centre	-	-	1	250
Fast Food Driv Thru*	-	-	1	200
Service Station*	1	250	1	250
Medical	1	250	2	500
Health & Wellness	-	-	1	200
Other Non-retail	1	200	1	200
<b>Total Non-retail</b>	<b>3</b>	<b>700</b>	<b>7</b>	<b>1,600</b>
<b>Total Precinct</b>	<b>13</b>	<b>3,200</b>	<b>20</b>	<b>5,900</b>

\* Should be provided with main road exposure



Urban Release off Narromine Road, Dubbo  
Preliminary Market Potential  
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# 1 LOCATION AND PLANNED DEVELOPMENT

This section provides an overview of the regional and local context of the NURA site.

## 1.1. Local Context and Proposed Development

- i. Bathla Group are proposing the development of a new residential suburb at NURA located 3.4 km east of Dubbo Central Business Area (CBA). Dubbo is a major regional service centre and is a commercial, industrial, and administrative hub for the NSW Central West. Dubbo is some 305 km north-west of the Sydney Central Business District (CBD) - refer to map 1.1.
- ii. The population of Dubbo is currently estimated at 54,843 persons as at 2021 and is projected to increase to 66,341 persons by 2041. NURA is one of the planned urban growth areas within Dubbo, with a current focus for residential development at Dubbo East.
- iii. The NURA is located south west of the Mitchell Highway (also known as Narromine Road). The southern part of the Mitchell Highway forms part of the National Highway A32 corridor, which stretches from Sydney to Adelaide via Dubbo and Broken Hill. Dubbo City is located at the intersection of Newell, Mitchell, and Golden Highways.
- iv. The suburb of NURA is currently planned for development south west of Narromine Road and is the focus of this report (refer figure 1.1). It is anticipated that between 1,650 – 1,750 dwellings (5,000 to 5,500 residents) will ultimately be accommodated within the proposed masterplan across the 270 hectares of residential and industrial zoned land.
- v. The remainder of this report assesses the ultimate potential for retail and non-retail facilities as part of a local centre within the suburb, including the preferred location for such facility.

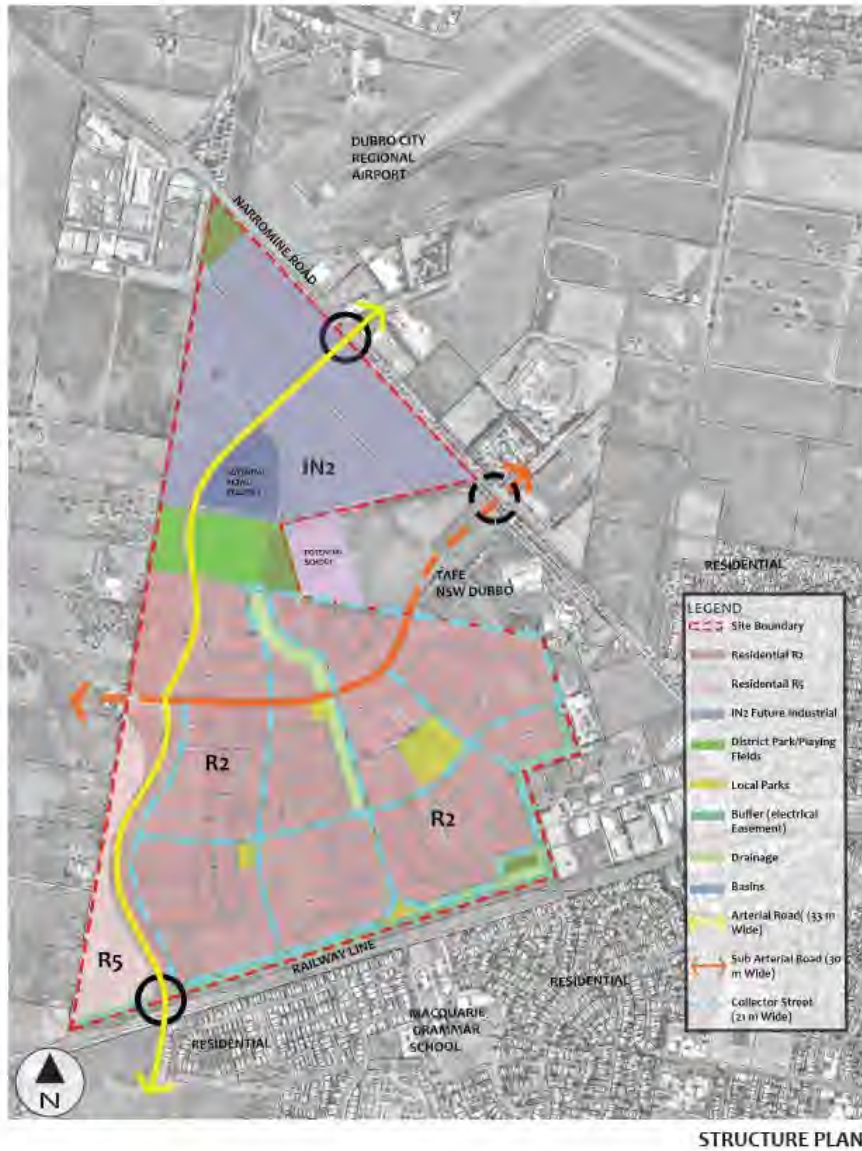


MAP 1.1. NURA REGIONAL CONTEXT



Urban Release off Narromine Road, Dubbo  
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FIGURE 1.1. NURA STRUCTURE PLAN



STRUCTURE PLAN





## 2 TRADE AREA ANALYSIS

This section of the report provides a review of the trade area likely to be served by a retail centre at the NURA site, including current and projected population and retail spending levels over the period to 2041. A review of the socio-economic profile is also provided.

### 2.1. Trade Area Definition

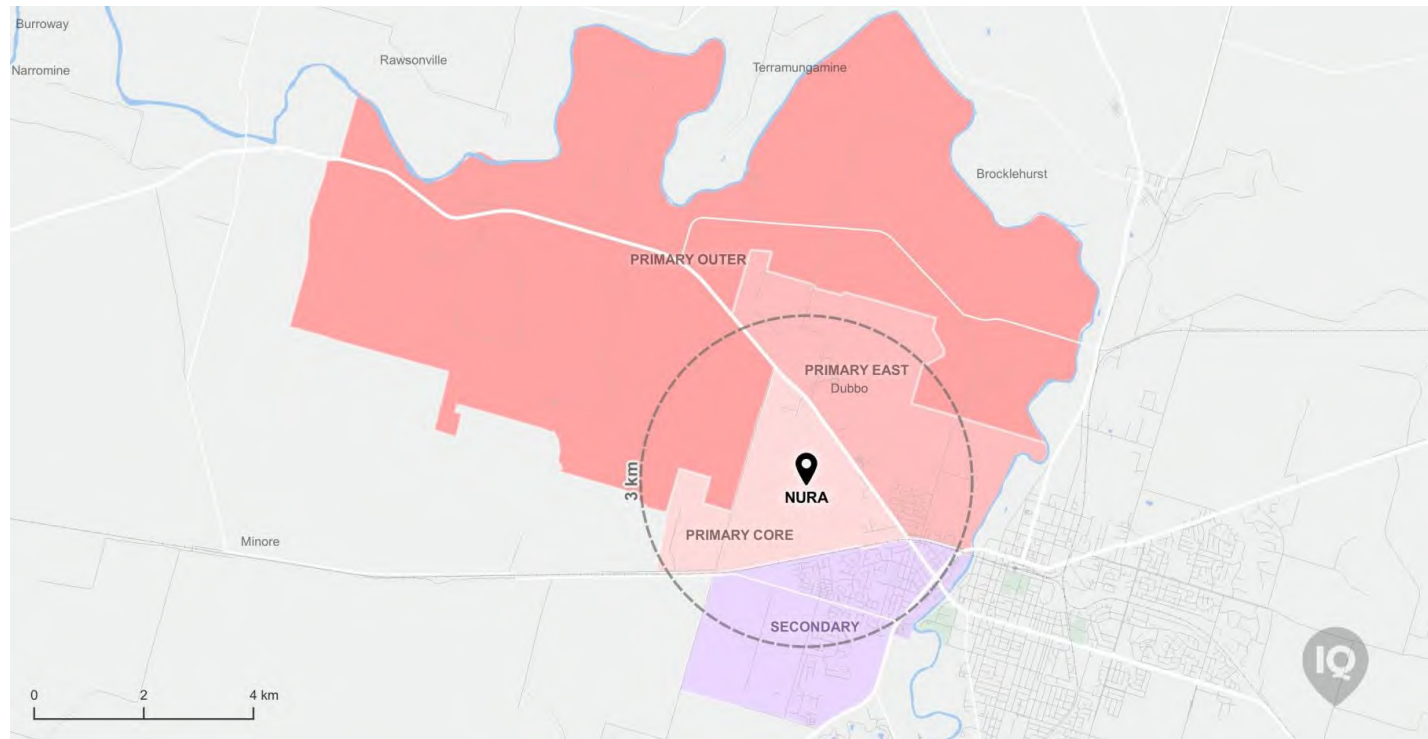
- i. The trade area for the NURA subject site area has been defined taking into consideration the following key factors:
  - The provision of competitive retail facilities throughout the surrounding area.
  - Regional and local accessibility.
  - The pattern of urban development throughout the region.
  - Significant physical barriers including future barriers.
- ii. Map 2.1 illustrates the defined trade area likely to be served by the NURA subject site broken into four sectors including three primary sectors and one secondary sector:
  - A **primary core** sector comprising the proposed NURA development.
  - A **primary east** sector encompassing the North-West Urban Release Area which is currently on exhibition.
  - A **primary outer** sector, including the rural areas to the north and north-west of the site, who would pass the subject site before accessing facilities in the Dubbo CBA.
  - A **secondary** sector incorporating West Dubbo, Delroy Park, and Grangewood, bounded to the north by the railway line and east by the Macquarie River and Peak Hill Road. The sector is also limited by the extent of the urban area to the south and west.
- iii. Currently, the railway line separates the primary and secondary sectors and there is no access across the railway line. In the future it is assumed that there will be some road connection between the two sectors although this connection is still to be finalised.



- iv. The main trade area generally extends 3 – 10 km around the subject site. The combination of the primary and secondary sectors is defined as the NURA main trade area and will be referred to as for the remainder of the report.



**MAP 2.1. NURA MAIN TRADE AREA AND SUBURBS**



## 2.2. Trade Area Population

- i. Table 2.1 details the main trade area current and projected population levels by sector. This information is sourced from information provided by the Bathla Group on the expected development yield of the masterplan.
- ii. The NURA main trade area population is estimated at 10,430 (2021), with 2,570 persons in the primary sector. Over the period to 2041, the main trade area population is projected to increase to 19,290 including 10,160 persons in the combined primary sectors. The main trade area is projected to grow at an average of 2.5%-3.0%, per year over the forecast period.
- iii. An ultimate population is also detailed based on planned development – 27,750 persons, including 5,500 persons in the primary core sector and 12,000 persons in the primary east sector.
- iv. Residential development within the main trade area will be driven primarily by the subject proposal in the primary core sector, which is assumed to yield between 1,650 – 1,750 dwellings over the periods 2026 - 2041.
- v. It is also relevant to note that the primary east sector includes the designated North-West Urban Release Area, on the eastern side of Narromine Road and also illustrated on Map 2.1. This area is indicated to house over 10,000 persons over the next 30 years or more. For the purpose of this report, it is assumed that the NURA is developed before the North-West Urban Release Area, with the North-West Urban Release Area to start development around 2030.
- vi. The primary sector population, therefore, is projected to ultimately comprise some 10,160 persons by 2041. This represents projected growth of around 400 persons per annum over the forecast period (2021 - 2041).
- vii. It is important to note that timing around the recommendations provided within this report assume population growth occurs as outlined in Table 2.1. If residential development occurs at a slower rate than is indicated, population growth, and consequently projected timing for the recommended retail and commercial uses, would be impacted.



TABLE 2.1. MAIN TRADE AREA POPULATION, 2011 – 2041

Population	Actual			Forecast				Ultimate Capacity
	2011	2016	2021	2026	2031	2036	2041	
<b>Primary Sectors</b>								
• Core	23	3	0	900	2,475	3,975	5,225	5,500
• East	1,342	1,716	2,009	2,259	2,634	3,234	4,084	12,000
• Outer	<u>580</u>	<u>609</u>	<u>648</u>	<u>698</u>	<u>748</u>	<u>798</u>	<u>848</u>	<u>1,000</u>
Total Primary	1,945	2,328	2,657	3,857	5,857	8,007	10,157	18,500
Secondary sector	6,104	7,087	8,182	8,682	8,932	9,032	9,132	9,250
<b>Main Trade Area</b>	<b>8,049</b>	<b>9,415</b>	<b>10,839</b>	<b>12,539</b>	<b>14,789</b>	<b>17,039</b>	<b>19,289</b>	<b>27,750</b>
<b>Average Annual Change (No.)</b>								
	Actual		Forecast					
	2011-16	2016-21	2021-26	2026-31	2031-36	2036-41		
<b>Primary Sectors</b>								
• Core		-4	-1	180	315	300	250	
• East		75	59	50	75	120	170	
• Outer		<u>6</u>	<u>8</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	
Total Primary		77	66	240	400	430	430	
<b>Secondary Sectors</b>								
Secondary sector		197	219	100	50	20	20	
<b>Main Trade Area</b>		<b>273</b>	<b>285</b>	<b>340</b>	<b>450</b>	<b>450</b>	<b>450</b>	
<b>Average Annual Change (%)</b>								
	Actual		Forecast					
	2011-16	2016-21	2021-26	2026-31	2031-36	2036-41		
<b>Primary Sectors</b>								
• Core	-33.5%	-100.0%	49.5%	22.4%	9.9%	5.6%		
• East	5.0%	3.2%	2.3%	3.1%	4.2%	4.8%		
• Outer	<u>1.0%</u>	<u>1.2%</u>	<u>1.5%</u>	<u>1.4%</u>	<u>1.3%</u>	<u>1.2%</u>		
Total Primary	3.7%	2.7%	7.4%	8.7%	6.5%	4.9%		
Secondary sector	3.0%	2.9%	1.2%	0.6%	0.2%	0.2%		
<b>Main Trade Area</b>	<b>3.2%</b>	<b>2.9%</b>	<b>2.9%</b>	<b>3.4%</b>	<b>2.9%</b>	<b>2.5%</b>		
<i>Rest of NSW</i>	0.7%	0.9%	0.7%	0.7%	0.4%	0.3%		
<i>Australian Average</i>	1.6%	1.2%	1.3%	1.3%	1.2%	1.1%		

All figures as at June and based on 2021 SA1 boundary definition.  
Sources : ABS; NSW DPIE



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### 2.3. Socio-economic Profile

- i. Table 2.2 summarises the socio-economic profile of the NURA main trade area (MTA) population by sector, compared with the non-metropolitan NSW and Australian benchmarks. This information is based on the 2021 Census of Population and Housing.
- ii. Key characteristics of the socio-economic profile of the NURA main trade area include:
  - Average household income levels across the main trade area are significantly higher than the non-metropolitan NSW benchmark, attributed to the secondary sector.
  - The average age of main trade area residents at 37.3 years is younger than the Non-metropolitan NSW (42.2 years) and Australian (39.8 years) benchmarks.
  - The average household size at 2.6 persons is higher than both benchmarks. New residential estates in outer suburban areas are likely to have larger household sizes as estates cater towards a family market.
  - The proportion of Australian born residents across the main trade area, at 90.2% higher than the non-metropolitan NSW average (88.5%).
  - The household structure of the main trade area predominately comprises of couples with children characterised by a younger family market.
- iii. In summary, residents of the main trade area are generally characterised as being affluent, predominately Australian-born families who would likely associate strongly with convenience-based facilities.
- iv. Future residents of the primary core and primary east sectors are likely to exhibit a socioeconomic profile similar to the secondary sector catchment, comprising young affluent families.
- v. Table 2.3 summarises the changes in the socio-economic profile of the main trade area population over the 2011 – 2021 Census period. As shown, both average per capita and household income levels within the main trade area increased faster than the non-metropolitan NSW average.



TABLE 2.2. NURA MTA SOCIO-ECONOMIC PROFILE, 2021 CENSUS

Characteristic	Primary Sector	Secondary Sector	Main TA	Rest of NSW Average	Australia Average
<b>People</b>					
<b>Age Distribution (% of Pop'n)</b>					
Aged 0-14	25.8%	21.8%	22.8%	17.6%	18.0%
Aged 15-19	5.9%	5.8%	5.8%	5.7%	5.7%
Aged 20-29	14.6%	13.7%	14.0%	11.2%	13.3%
Aged 30-39	15.0%	14.0%	14.3%	11.8%	14.6%
Aged 40-49	10.7%	11.3%	11.1%	11.7%	13.0%
Aged 50-59	10.2%	10.1%	10.1%	12.9%	12.5%
Aged 60+	17.7%	23.3%	22.0%	29.1%	23.0%
Average Age	34.4	38.2	37.3	42.2	39.5
<b>Birthplace (% of Pop'n)</b>					
Australian	93.4%	89.2%	90.2%	88.5%	72.0%
Overseas	6.6%	10.8%	9.8%	11.5%	28.0%
• Asia	3.3%	5.9%	5.2%	2.8%	12.1%
• Europe	1.5%	2.0%	1.9%	4.8%	7.2%
• Other	1.8%	2.9%	2.7%	3.9%	8.7%
<b>Family</b>					
Average Household Size	2.8	2.5	2.6	2.4	2.5
<b>Family Type (% of Pop'n)</b>					
Couple with dep't children	46.3%	41.8%	43.0%	38.4%	44.2%
Couple with non-dep't child.	6.0%	5.5%	5.6%	7.4%	7.7%
Couple without children	19.0%	23.9%	22.6%	27.1%	23.8%
Single with dep't child.	14.9%	12.5%	13.1%	9.6%	8.6%
Single with non-dep't child.	4.7%	4.2%	4.3%	4.3%	4.0%
Other family	1.2%	1.1%	1.1%	0.9%	1.0%
Lone person	7.9%	10.9%	10.2%	12.3%	10.8%
<b>Employment</b>					
<b>Income Levels</b>					
Average Per Capita Income	\$50,313	\$54,151	\$53,264	\$49,683	\$55,301
Per Capita Income Variation	1.3%	9.0%	7.2%	n.a.	n.a.
Average Household Income	\$99,361	\$104,301	\$103,158	\$95,175	\$109,594
Household Income Variation	4.4%	9.6%	8.4%	n.a.	n.a.
<b>Housing</b>					
<b>Tenure Type (% of Dwellings)</b>					
Owned	74.2%	63.6%	66.0%	70.9%	67.4%
Rented	24.8%	31.8%	30.2%	26.9%	30.8%
Other Tenure Type	1.0%	4.7%	3.8%	2.2%	1.8%
<b>Dwelling Type (% of Dwellings)</b>					
House	98.3%	83.3%	86.7%	82.8%	72.6%
Semi-detached	0.9%	10.3%	8.1%	9.9%	12.6%
Apartment	0.0%	6.1%	4.7%	6.3%	14.2%
Other Dwelling Type	0.9%	0.3%	0.4%	1.0%	0.5%
<b>Dwelling Occupancy (% of Dwellings)</b>					
Occupied Dwellings	94.2%	93.8%	93.9%	88.8%	89.9%
Unoccupied Dwellings	5.8%	6.2%	6.1%	11.2%	10.1%

Sources: ABS Census of Population and Housing 2021



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TABLE 2.3. NURA MTA SOCIO-ECONOMIC PROFILE CHANGES, 2011-2021

Characteristic	Dubbo North Main Trade Area			Change (%)			Rest of NSW			Change (%)		
	2011	2016	2021	2011-16	2016-21	2011-21	2011	2016	2021	2011-16	2016-21	2011-21
<b>People</b>												
Average Age	35.1	36.4	37.3	0.7%	0.5%	0.6%	40.1	41.6	42.2	0.7%	0.3%	0.5%
<b>Birthplace (% of Pop'n)</b>												
Australian	94.7%	92.7%	90.2%	-2.0%	-2.5%	-4.5%	88.6%	89.3%	88.5%	0.8%	-0.8%	-0.1%
Overseas	5.3%	7.3%	9.8%	2.0%	2.5%	4.5%	11.4%	10.7%	11.5%	-0.8%	0.8%	0.1%
• Asia	0.8%	3.2%	5.2%	2.4%	2.0%	4.4%	1.6%	2.1%	2.8%	0.5%	0.7%	1.2%
• Europe	1.5%	1.5%	1.9%	0.0%	0.3%	0.3%	6.1%	5.2%	4.8%	-0.9%	-0.4%	-1.3%
• Other	2.9%	2.6%	2.7%	-0.3%	0.1%	-0.2%	3.8%	3.4%	3.9%	-0.4%	0.5%	0.1%
<b>Family</b>												
Average Household Size	2.7	2.6	2.6	-0.8%	0.3%	-0.2%	2.4	2.4	2.4	-0.5%	0.1%	-0.2%
<b>Family Type (% of Pop'n)</b>												
Couple with dep't children	42.9%	42.9%	43.0%	0.1%	0.0%	0.1%	40.7%	39.4%	38.4%	-1.3%	-1.0%	-2.3%
Couple with non-dep't child.	5.7%	5.7%	5.6%	0.0%	0.0%	0.0%	7.0%	7.4%	7.4%	0.4%	0.0%	0.5%
Couple without children	23.0%	23.4%	22.6%	0.4%	-0.7%	-0.4%	25.7%	26.1%	27.1%	0.3%	1.1%	1.4%
Single with dep't child.	15.4%	13.8%	13.1%	-1.6%	-0.6%	-2.2%	10.6%	10.2%	9.6%	-0.4%	-0.5%	-1.0%
Single with non-dep't child.	3.4%	3.6%	4.3%	0.2%	0.7%	0.9%	3.5%	4.0%	4.3%	0.5%	0.2%	0.8%
Other family	0.8%	1.0%	1.1%	0.2%	0.1%	0.3%	0.9%	0.9%	0.9%	0.0%	0.0%	0.0%
Lone person	8.8%	9.6%	10.2%	0.8%	0.6%	1.4%	11.7%	12.1%	12.3%	0.4%	0.2%	0.6%
<b>Employment</b>												
<b>Income Levels</b>												
Average Per Capita Income	\$36,351	\$43,900	\$53,264	3.8%	3.9%	3.9%	\$35,013	\$41,203	\$49,683	3.3%	3.8%	3.6%
Per Capita Income Variation	3.8%	6.5%	7.2%	2.7%	0.7%	3.4%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Average Household Income	\$69,245	\$83,267	\$103,158	3.8%	4.4%	4.1%	\$66,798	\$78,375	\$95,175	3.2%	4.0%	3.6%
Household Income Variation	3.7%	6.2%	8.4%	2.6%	2.1%	4.7%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: ABS Census of Population and Housing 2011, 2016 &amp; 2021



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## 2.4. Trade Area Retail Expenditure Capacity

- i. The estimated retail expenditure capacity of the total trade area population is based on information sourced from MDS Market Data Systems. MDS utilises a detailed micro-simulation model of household expenditure behaviour for all residents of Australia.
- ii. Table 2.3 outlines the retail expenditure levels generated by the main trade area population while Table 2.4 provides a breakdown of this information by key commodity category. The total retail expenditure level of the main trade area population is currently \$167.9 million and projected to increase to \$322.3 million by 2041. All figures presented in this report are in constant dollars and include GST.
- iii. The main trade area retail spending projected growth rate takes into account the following:
  - Real growth in retail spending per capita of 0.0% is assumed over the period to 2023, reflecting the impact of the COVID-19 pandemic on the economy. From 2024 real growth per capita is assumed at 0.5% annually for food retail and 1.0% for non-food retail over the period to 2036.
  - Main trade area population which is projected to be 19,290 by 2041 representing an average annual growth of 2.5%-3.0%.



TABLE 2.4. TRADE AREA RETAIL EXPENDITURE, 2022 – 2041

Y/E June	Primary Sectors			Total	Secondary Sector	Main TA
	Core	East	Outer			
2022	0.0	27.5	11.1	38.6	129.3	167.9
2023	3.0	28.2	11.3	42.4	130.9	173.3
2024	4.5	29.0	11.5	45.1	133.4	178.5
2025	6.8	29.9	11.8	48.5	136.0	184.5
2026	10.2	30.9	12.1	53.1	138.7	191.8
2027	13.9	32.0	12.3	58.2	141.0	199.2
2028	17.2	33.3	12.6	63.1	142.9	206.0
2029	21.2	34.7	12.9	68.8	144.8	213.6
2030	26.2	36.1	13.2	75.5	146.8	222.2
2031	32.4	37.5	13.5	83.4	148.7	232.2
2032	37.9	39.2	13.8	90.9	150.5	241.4
2033	41.9	41.2	14.1	97.2	152.0	249.2
2034	46.4	43.2	14.4	104.0	153.5	257.5
2035	51.4	45.4	14.7	111.4	155.0	266.4
2036	56.9	47.6	15.0	119.4	156.6	276.0
2037	61.7	50.1	15.3	127.1	158.1	285.2
2038	65.7	52.9	15.6	134.1	159.7	293.8
2039	69.9	55.8	15.9	141.6	161.3	302.9
2040	74.3	58.9	16.2	149.5	162.9	312.4
2041	79.1	62.2	16.6	157.8	164.5	322.3
<b>Expenditure Growth</b>						
2022-26	10.2	3.4	1.0	14.5	9.4	23.9
2026-31	22.2	6.7	1.4	30.3	10.0	40.3
2031-36	24.5	10.0	1.5	36.0	7.8	43.9
2036-41	22.2	14.6	1.6	38.4	8.0	46.3
2022-41	79.1	34.7	5.4	119.2	35.2	154.4
<b>Average Annual Growth Rate</b>						
2022-26	0.0%	2.9%	2.1%	8.3%	1.8%	3.4%
2026-31	26.1%	4.0%	2.2%	9.4%	1.4%	3.9%
2031-36	11.9%	4.9%	2.1%	7.4%	1.0%	3.5%
2036-41	6.8%	5.5%	2.0%	5.7%	1.0%	3.2%
2022-41	0.0%	4.4%	2.1%	7.7%	1.3%	3.5%

\*Constant 2021/22 dollars & including GST  
Source : MarketInfo



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TABLE 2.5. MTA RETAIL EXPENDITURE BY KEY COMMODITY GROUP, 2022 – 2041

Y/E June	Food & Liquor	Food Catering	Apparel	H'hold Goods	Leisure	General Retail	Retail Services
2022	78.8	19.7	15.4	29.9	6.7	12.8	4.6
2023	81.4	20.3	15.9	30.9	6.9	13.2	4.7
2024	83.7	20.9	16.4	31.9	7.1	13.6	4.9
2025	86.4	21.7	17.0	33.0	7.4	14.1	5.0
2026	89.6	22.6	17.6	34.4	7.7	14.7	5.2
2027	92.9	23.5	18.3	35.8	8.0	15.2	5.4
2028	95.9	24.4	18.9	37.1	8.3	15.8	5.6
2029	99.3	25.3	19.6	38.5	8.6	16.4	5.8
2030	103.2	26.4	20.4	40.2	8.9	17.1	6.1
2031	107.7	27.6	21.2	42.0	9.3	17.9	6.3
2032	111.8	28.8	22.1	43.8	9.7	18.6	6.6
2033	115.3	29.7	22.8	45.3	10.0	19.2	6.8
2034	118.9	30.8	23.5	46.9	10.4	19.9	7.1
2035	122.8	31.9	24.4	48.6	10.7	20.7	7.3
2036	127.1	33.1	25.2	50.5	11.1	21.4	7.6
2037	131.1	34.3	26.1	52.3	11.5	22.2	7.8
2038	134.8	35.4	26.9	53.9	11.9	22.9	8.1
2039	138.7	36.6	27.7	55.7	12.2	23.6	8.3
2040	142.8	37.8	28.6	57.6	12.6	24.4	8.6
2041	147.0	39.1	29.5	59.5	13.1	25.3	8.9
<b>Expenditure Growth</b>							
2022-26	10.8	2.9	2.2	4.5	1.0	1.9	0.7
2026-31	18.1	5.0	3.6	7.6	1.6	3.2	1.1
2031-36	19.4	5.5	4.0	8.4	1.8	3.6	1.2
2036-41	20.0	6.0	4.3	9.1	1.9	3.8	1.3
2022-41	68.3	19.4	14.0	29.6	6.3	12.5	4.3
<b>Average Annual Growth Rate</b>							
2022-26	3.3%	3.5%	3.3%	3.5%	3.4%	3.5%	3.4%
2026-31	3.7%	4.1%	3.8%	4.1%	3.9%	4.1%	3.9%
2031-36	3.4%	3.7%	3.5%	3.7%	3.6%	3.7%	3.6%
2036-41	3.0%	3.4%	3.2%	3.4%	3.2%	3.3%	3.2%
2022-41	3.3%	3.7%	3.5%	3.7%	3.6%	3.7%	3.5%

*\*Constant 2021/22 dollars & including GST  
Source : MarketInfo*



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# 3 COMPETITIVE ENVIRONMENT

This section of the report provides a summary of the existing and proposed competitive developments within the area surrounding the NURA main trade area (refer Table 3.1 and Map 3.1).

## 3.1. Existing Retail Hierarchy

i. The Employment Lands Strategy for Dubbo Regional Council is dated 2 July 2019. Section 4 of that report outlines a commercial centre's hierarchy as follows:

- A **Principal Centre** being the Central Business District (CBD) which comprises of over 35,000 square metres of retail floor space, as well as a wide range of commercial, visitor, social, civic, cultural, tourist and entertainment facilities. The total provision of floor space would be well in excess of 60,000 square metres.

The largest component is Dubbo Square, a sub-regional shopping centre provided along Macquarie Street in the CBD. The centre spans 12,700 sq.m anchored by a Coles supermarket of 3,700 sq.m and a Kmart (5,500 sq.m) discount department store.

- A **Major Centre, subregional** being Orana Mall. This is the second order centre for Dubbo and is the largest enclosed shopping centre in Dubbo. The sub-regional centre provides an aggregate retail floorspace of 23,700 sq.m, anchored by a Big W (8,000 sq.m), and Woolworths (4,100 sq.m). Notable tenants also include three mini-majors traders JB Hi-Fi Home, The Reject Shop, and Cotton On, along with 72 specialty retailers. According to Big Guns 2021 (Shopping Centre News), the shopping centre achieves sales in the order of \$208 million.
- **Local centres/neighbourhoods** are the third order centres. They are small-scale centres that provide a variety of retail uses and are more convenient alternatives for day-to-day shopping convenience. The most relevant local centre is Delroy as discussed in the following subsection. In relation to the subject site, some of the smaller local centres include Victoria Street, West Dubbo where there is a small IGA food store of around 600 square metres.
- **Specialised Activity Centres** such as the airport, health, wellbeing and education precincts which include clusters of similar industries which benefit from each other through shared synergies and infrastructure.



- **Commercial employment clusters** which accommodate a range of industries including bulky goods retailing and business activities which are either directly along or easily accessible from major transport routes. In terms of commercial clusters there are two commercial clusters in and around West Dubbo including Cobbora Street and Victoria Street.
  - **Rural centres.**
- ii. The proposal at the subject site would effectively comprise a local centre/neighbourhood as exists in other parts of Dubbo, to service the new growth area.

### 3.2. Supermarket Based Centres

- i. Supermarkets are typically defined in planning documents and courts as "grocery and dry goods stores of at least 500 sq.m, with smaller stores classified as foodstore."
- ii. Further, a full-line supermarket is at least 2,500 sq.m in size and a major full-line supermarket that serves the weekly food and grocery needs of local residents is around 3,200 – 4,000 sq.m in size. These large format stores are generally operated by major chains such as Woolworths or Coles.
- iii. The nearest existing supermarket from the subject site is provided along Victoria Street 2.4 km to the south-east located within the secondary sector. The free-standing IGA at West Dubbo is approximately 600 sq.m in size, providing 22 at-grade car spaces.
- iv. The nearest major convenience centre to the subject site is Riverdale Shopping Centre 3.5 km to the south-east provided along Macquarie Street in the CBD. The centre offers 6,100 sq.m of retail floorspace anchored by a Woolworths supermarket of 2,700 sq.m in the Dubbo CBD.
- v. Delroy Park Shopping Centre provides 4,900 sq.m of total retail floorspace which is based on a full-line Woolworths supermarket of 2,900 sq.m. The neighbourhood shopping centre is situated 3.7 km north of NURA site, in the secondary sector, on the corner of Minore Road and Baird Drive.

### 3.3. Future Competition

- i. There are no relevant competitive developments within the main trade area.
- ii. The Dubbo Employment Lands Strategy at Section 14.3.9 identifies that the North-West Urban Release Area recognises that the area will see approximately 2,600 dwellings developed over the next 30 years with an estimated population catchment of 7,500 people. Given the trend of smaller supermarkets to be located on residential fringe areas to provide convenient shopping, the anticipated population catchment would likely warrant a neighbourhood centre to be provided in the North-West Urban Release Area. A 3 hectare site, centrally within the North-West Urban Release Area has been



identified in the precinct plan of the exhibition documents for a potential neighbourhood shopping centre. Any neighbourhood shopping centre would only be of a scale which would service residential development in the precinct and limited servicing of adjacent development in the immediate locality

- iii. Given the overall growth within Dubbo, it is very likely that both urban release areas of NURA and the North-West Urban Release Area will proceed in the next 20 years, although additional growth will still occur post that time. Each will be able to support its own retail centre once sufficient population has occurred in the immediate release areas themselves. As indicated previously in Table 2.1, the ultimate population in the combined primary sectors will be in excess of 18,500 persons, supportive of two centres in each of the growth areas.
- iv. The centre that is developed first, will play an important role in servicing the other growth area, particularly until a time when the other growth area can support its own centre. Consequently, one centre will likely be larger than the other, with the ability to include a full-line supermarket of over 2,500 sq.m.
- v. Beyond the main trade area, at 102-108 Macquarie Street a commercial development has been approved with ground level retail. For the purposes of this report a supermarket is not assumed to be incorporated within the development.

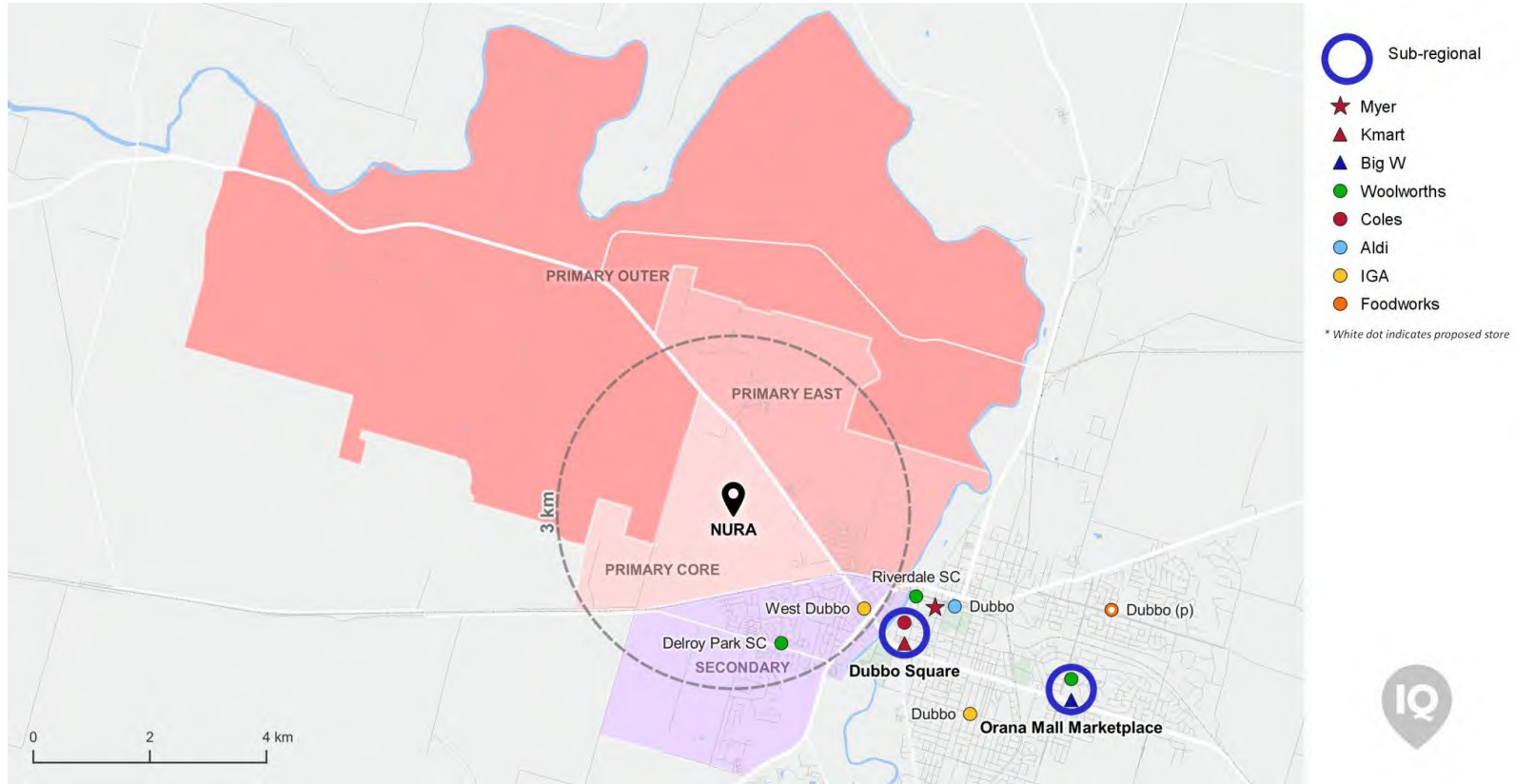
**TABLE 3.1. COMPETITION**

Centre	Shopfront GLA (sq.m)	Anchor Tenants	Dist. From Site (km)
<b>Within The Main Trade Area</b>			
<u>Secondary Sector</u>			
Delroy Park Square	4,900	Woolworths (2,900)	3.7
Other	600	IGA (600)	2.4
<b>Beyond The Main Trade Area</b>			
<u>Dubbo CBA</u>	<u>33,700</u>		<u>3.2</u>
• Dubbo Square	12,700	Kmart (5,500), Coles (3,700)	
• Riverdale SC	6,100	Woolworths (2,700)	
• Other	14,900	Myer (7,000), Aldi (1,900), IGA (950)	
Orana Mall Marketplace	23,700	Big W (8,000), Woolworths (4,100)	6.5

Source: Australian Shopping Centre Council Database



MAP 3.1. NURA MAIN TRADE AREA AND COMPETITION



# 4 COMPARABLE EXAMPLES

This section provides a summary of uses provided at other similar sized towns in New South Wales with recently developed supermarkets.

## 4.1. Sample Locations

- i. To review the typical uses at comparable towns in New South Wales, the following locations have been selected based on recent supermarket developments on the outskirts of major towns.
  - North Orange, Orange
  - Calala, Tamworth
  - Delroy Park, Dubbo
  - Koorungal, Wagga Wagga
  - Glenfield Park, Wagga Wagga
  - Lighthouse Plaza, Port Macquarie
  - Lakes Innes, Port Macquarie
- ii. Table 4.1 shows the relevant study area population for each site within a 3 km radius as well as the key socio-economic characteristics.

## 4.2. Summary Findings

- i. Key findings conclude the following:
  - The overall size of the centre is typically around 5,000 to 6,000 square metres.
  - In total, the average number of speciality shops is 10 with the majority in the food and liquor and food catering floorspace.
  - The larger the population within a 3 km radius the larger the supermarket size. Full-line supermarkets (more than 3,000 sq.m) serve a population in excess of 14,000 persons.
  - The level of retail and non-retail floorspace is positively correlated with the overall size of the centre and major tenant.
  - Medical facilities were provided at a number of the centres as well as gyms.





- While there are no childcare centres provided as part of the centre across the sample, numerous centres sit adjacent to a childcare centre.
- Mini-majors are not commonly provided in non-metropolitan neighbourhood centres.



**TABLE 4.1. COMPARABLE TOWNS**

	North Orange	Calala	Delroy Park	Glenfield Park	Port Macquarie	Port Macquarie	Sample Average
3 Km Radius Population (2016)	16,889	10,057	12,225	24,388	18,291	14,039	15,982
<b>Traditional Retail</b>							
Shopping Centre	North Orange SC		Delroy Park SC	Southcity SC	Lighthouse Plaza	Lake Innes Village	n.a.
Supermarket Brand	WOW	IGA	WOW	Coles	Coles	Coles	n.a.
Supermarket GLA (sq.m)	<b>3,500</b>	<b>1,600</b>	<b>2,900</b>	<b>3,800</b>	<b>3,000</b>	<b>3,400</b>	<b>2,033</b>
Mini-major				1			1
Food & Liquor	3	2	3	4	1	4	3
Food Catering	9	2	3	5	2	7	5
Apparel					1		1
Leisure							n.a.
General Retail	1	1	2	2	2	2	2
Retail Services	1	1		1	2		1
Non-retail shops			4	1	1	3	2
<b>Other Uses</b>							
Childcare							
Medical			•			•	
Gym			•				
Post Office			•				

Source: Location IQ Database (based on desktop survey)



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### 4.3. Key Findings

- i. Based on a review of the comparable sites, key conclusions would be as follows:

#### Traditional Retail

- Critical success factors for traditional retail floorspace within master planned precincts and communities include:
  - **Location:** excellent local and regional accessibility based on location along or near a major entry to suburb.
  - **Quantum and Composition:** larger precincts typically include in-excess of 4,000 sq.m of retail floorspace within the main retail component/shopping centre. This generally comprises a full-line supermarket and specialty shops.
  - **Convenience:** retail precincts should be designed with convenience in mind with at-grade parking, particularly in light of supermarkets being a highly frequented facility for catchment area residents.
  - **Lack of Competition:** generally, spatial separation of major full-line supermarkets is recommended for Local Town Centre sites.

#### Other Non-retail

- Successful neighbourhood shopping centres within master planned communities generally include, or are located in close proximity to the following non-retail uses:
  - **Gyms,** with 24-hour gyms generally preferred.
  - **Childcare facilities.** Proximity to schools and retail precincts is often preferred.
  - **Medium density housing** is provided in the area surrounding the majority of successful neighbourhood shopping centres.
  - At least one **Primary School** should be included nearby.
  - **PAD sites** typically enjoy frontage to the major arterial routes. These include fast food and petrol stations.



# 5 FLOORSPACE PROVISION RECOMMENDATIONS

This section of the report assesses the potential for retail and non-retail floorspace to be provided at NURA Site.

## 5.1. Supermarket Floorspace Potential

- i. A supermarket would be the largest retail tenant to be provided within the NURA subject site.
- ii. There is currently one full-line supermarket provided within the main trade area namely the Woolworths at Delroy Park. One smaller IGA supermarket of 600 sq.m is also provided within the secondary sector.
- iii. Typically, a full line supermarket of over 3,000 square metres is typically provided for every 8,000 to 9,000 persons in Australia. The primary sector population would be close to this level post 2036. Table 5.1 presents an analysis of supportable supermarket floorspace within the trade area over the period 2021 to 2041 and at ultimate capacity, on the following basis:
  - Applying the average provision in non-metropolitan NSW (410 sq.m per 1,000 persons)
  - Allows for 75% of the supportable floorspace to be retained in the trade area. The remaining 25% would be directed to facilities at Orana and Dubbo Central Business Area.
- iv. Over time, there is potential for a supermarket of over 2,500 to 3,000 square metres in the trade area by 2036, however, timing for such facility will only occur once there is around 7,000 persons in the combined primary sectors. A second supermarket of up to 2,500 sq.m. will also be supportable at ultimate capacity with over 18,500 persons in the combined primary sector (over 6,690 sq.m of supermarket floorspace in total).
- v. As noted previously, the two designated centres in the NURA and North-West Urban Release Area will be supportable. The centre that is developed first will play an important role in serving the other release area, until that release area population can support its own facilities. The first centre developed will, therefore, likely be larger than the second centre, with a larger supermarket



- vi. Consequently, in the short-term, a smaller supermarket of 1,500 square metres will be supportable, by around 2031. A larger supermarket is possible, depending on growth and timing of NURA as compared with the North-West Urban Release Area.

**TABLE 5.1. SUPERMARKET FLOORSPACE PROVISION**

Metric	Benchmark	Existing	Projected					Ult. Capacity
		2021	2021	2026	2031	2036	2041	
<b>Population</b>								
Primary Sector		2,657	2,657	3,857	5,857	8,007	10,157	18,500
<b>Supportable Smkt* FloorSpace</b>								
	<i>Non-metro NSW</i>	<i>Existing</i>						
Primary Sector	410 sq.m per 1,000 persons	0	1,089	1,581	2,401	3,283	4,164	7,585
-supportable floorspace	(@ 75% of total)	0	817	1,186	1,801	2,462	3,123	5,689

\*Supermarkets > 500 sq.m

## 5.2. Retail Specialty Potential

- i. It is observed throughout the Australian retail environment that those shopping centres with a larger provision of major and mini-major tenant floorspace typically support a larger provision of retail specialty floorspace as the major tenants act as key customer attractors with the specialty shops feeding off the customer flows generated by the larger tenants.
- ii. For the subject site, the indicative recommended retail specialty floorspace would be in the order of 800 – 1000 sq.m across some eight to ten shops. The recommended retail floorspace provision could indicatively include:
  - **Food Retail:** one food retail tenants could be provided, such as a bakery/butcher/deli. Liquor is often incorporated as part of the supermarket.
  - **Food Catering:** around 300 - 400 sq.m food catering floorspace, including cafes, takeaway food stores and possible a small restaurant that also does takeaway.
  - **Apparel and Household Goods:** No/limited apparel and household goods floorspace should be provided.
  - **Leisure and General Retail:** Around 300 sq.m of leisure and general floorspace could be provided, including tenants such as a pharmacy, newsagent, small discount variety store, and/or florist.
  - **Retail Services:** Limited retail services should be considered such examples include a beautician, dry cleaners, key cutters/shoe repairs or possibly an optometrist.

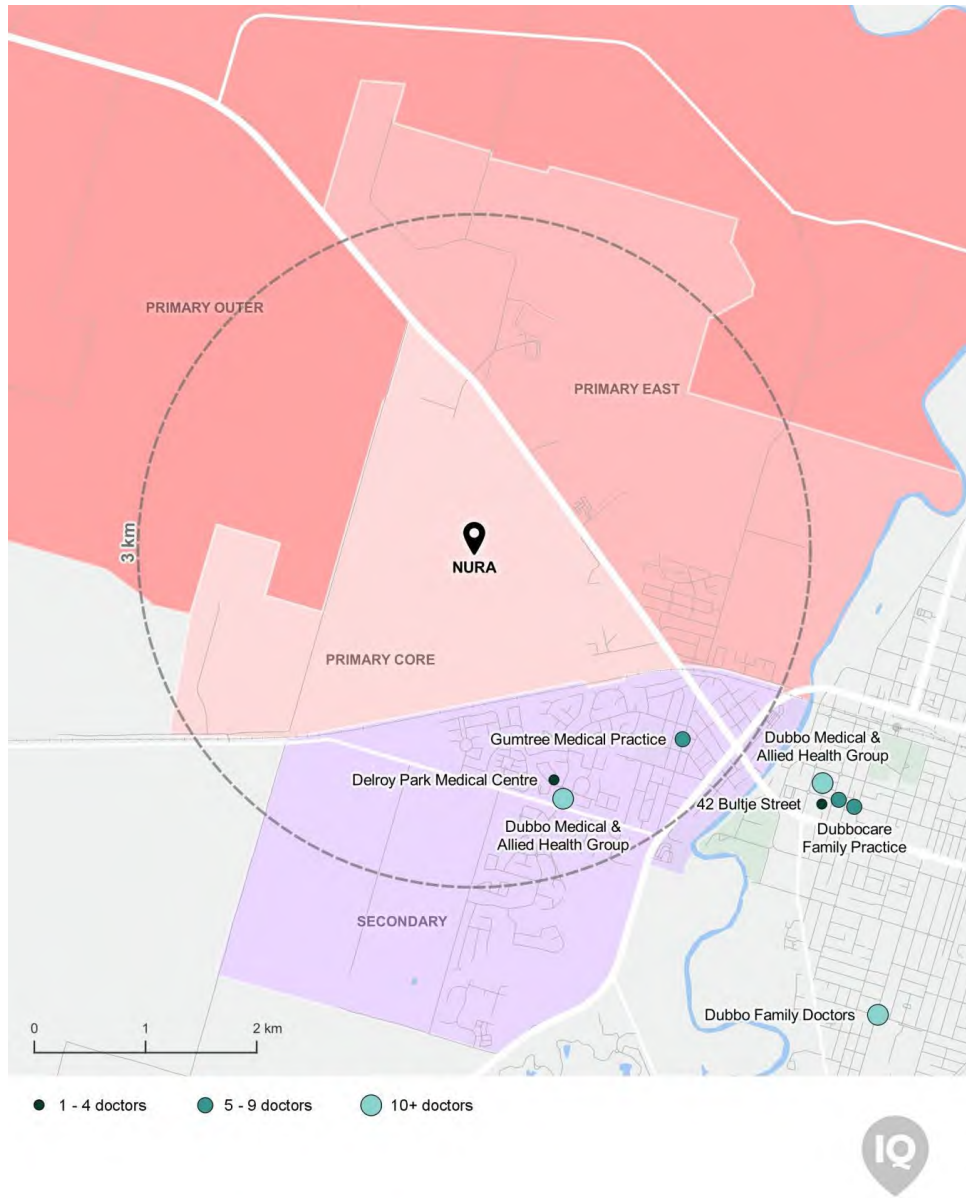


### 5.3. Medical Centre Potential

- i. 'Medical centre' is a term used for a collection of medical services provided at the same site, typically including General Practitioners (GPs) and other services such as a pharmacist, pathology specialists, and the like.
- ii. At present, there are no medical centres located in the primary sector. There are three medical centres in the secondary sector the largest medical centre is provided by Dubbo Medical & Allied Health Group at Delroy Park Shopping Centre, in combination 19 GPs are provided across the main trade area.
- iii. Typically, 12.8 GPs are provided for every 10,000 residents in Australia. By 2026, some 15.5 GPs will be demanded within the main trade area by 2026, including some five GPs in the primary sector. By 2041, the primary sector will support 12-13 doctors. Consequently, medical centres should be planned for as part of the main commercial/retail precinct.
- iv. Successful medical centres and facilities are typically situated within high profile locations, either along main roads or within proximity to a retail and/or commercial centre. This location enables facilities to receive maximum exposure to passing traffic, but more importantly, are easily recognisable and accessible for the surrounding population.



MAP 5.1. NURA MAIN TRADE AREA AND MEDICAL CENTRE



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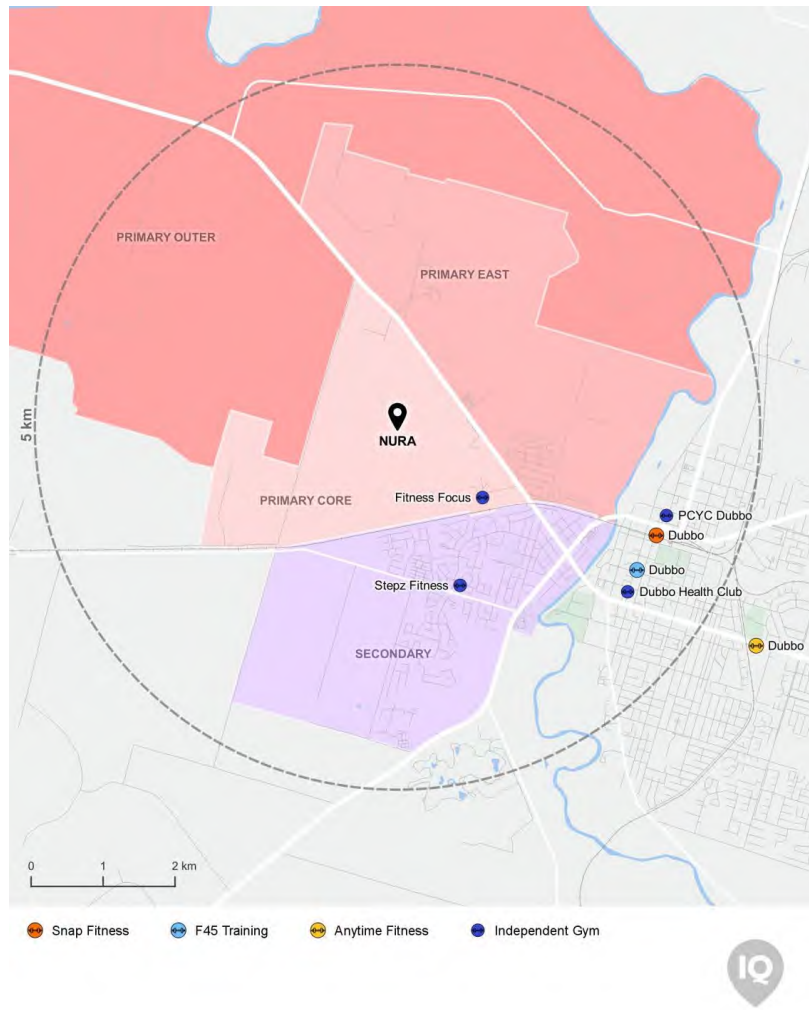
## 5.4. Gym/Fitness Centre Potential

- i. There are many different sizes and forms of gyms provided throughout Australia as follows:
  - National brands such as Virgin Active and Fitness First operate large-sized gyms of around 1,000 sq.m and serve a catchment of approximately 50,000 – 70,000 persons.
  - Smaller format gyms are typically around 200 sq.m in size serve a catchment of around 10,000 persons.
- ii. Map 5.2 illustrates the existing provision of gyms and fitness facilities throughout the surrounding region. There are currently two fitness facilities provided within the main trade area.
- iii. The nearest gym Fitness Focus is provided directly adjacent to the subject site along Jannali Road. The gym operates limited hours over the week.
- iv. Stepz Fitness located within the secondary sector at Delroy Park Shopping Centre operates 24 hours.
- v. Given the ultimate population within main trade area of 27,750, 3-4 gyms will be supportable, including 2-3 over the period to 2041.
- vi. A gym may have limited potential at the subject site and should be considered if tenant demand is experienced.





MAP 5.2. NURA MAIN TRADE AREA AND GYMS

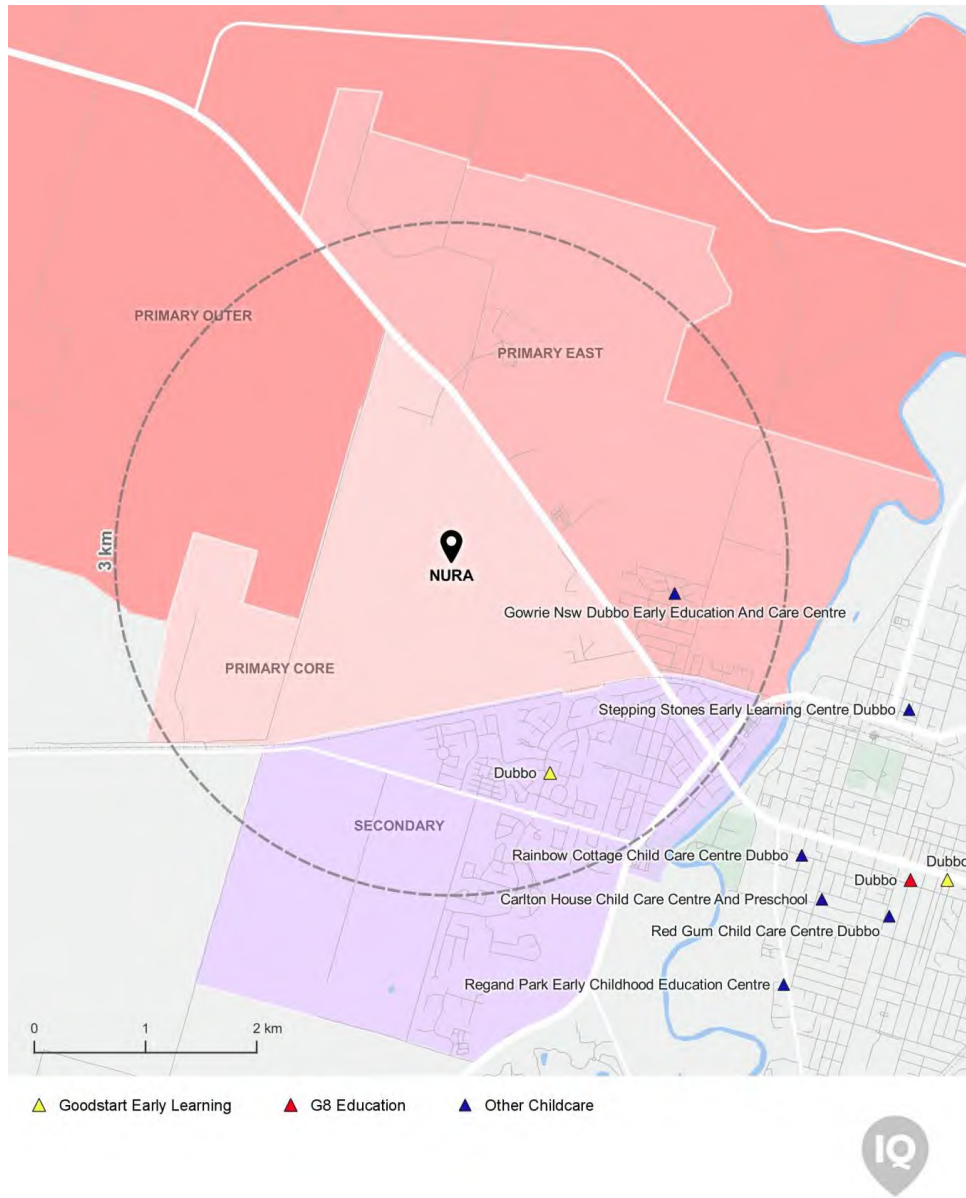


## 5.5. Childcare Centre Potential

- i. There are a range of early childhood education and care services available to Australian children, including childcare centres (long day care), family day care, outside school hours care and occasional care. Childcare centres are the largest component of the childhood education & care services market, making up 58%.
- ii. Childcare centres provide care for children under school age (up to 6 years of age) within facilities built (or adapted) for early childhood education and care services. Childcare centres can offer all-day or part-time care and can be operated by private operators, community, and non-profit organisations.
- iii. Map 5.3 illustrates the location of childcare centres currently provided in the surrounding area, with two childcare centres currently provided within NURA main trade area.
- iv. Assuming the average capacity of childcare centres in the regional NSW (83 places per centre), typically, one childcare centre is provided for every 2,700 people. The primary sector population would be in excess of 5,800 persons by 2031, which is likely the earliest an additional childcare centre would be supportable. A third childcare centre would be supportable by 2041, with further facilities ultimately supportable with further population growth post-2041.
- v. Childcare centres can vary in size with a range from 250 sq.m up to in-excess of 1,000 sq.m, (not including play areas and car parking).
- vi. A childcare facility is likely to increase visitation to the retail centre, with parents picking up their daily or weekly shopping items when collecting their children from childcare. A childcare facility therefore should form part of the overall development with the potential second one close to any educational facilities.



MAP 5.3. NURA MTA AND CHILDCARE CENTRES



## 5.6. Total Centre Potential

- i. The supportable level of floorspace at the subject site is outlined in Table 5.2, with development likely over two stages. The stage one development would be supportable by around 2031 and be in the order of 3,000 sq.m anchored by a supermarket of 1,500 sq.m.
- ii. The first stage of the NURA centre would most likely be supportable from when at least 1,000 homes have been constructed (and are occupied) within the subject estate. This would equate to some 3,000 additional persons. This is anticipated to occur around 2031. The key components are outlined in Table 5.1 and include:
  - A small format supermarket which is assumed to be 1,500 sq.m
  - Approximately 800 – 1,000 sq.m of retail specialty space
  - A small medical centre
- iii. The ultimate development would be around 6,000 sq.m, anchored by a full line supermarket and speciality shops totalling 1,000 to 1,400 sq.m if the centre was developed prior to a centre in the North-West Urban Release Area. Childcare, gym and medical would also be supportable at that time. Stage two is likely to be supportable when around 7,000 residents are in the combined primary sectors.
- iv. The above recommendations are subject to tenant demand. Development should only be pursued if tenant pre-commitments can be secured.



TABLE 5.2. INDICATIVE NURA SITE FLOORSPACE RECOMMENDATIONS

Use	Floorspace (Sq.m)	
	Stage 1 (2031)	Stage 2 (2036-41)
<b>Within Centre</b>		
Supermarket	1,500	3,000
Retail Specialty Shops	800 - 1000	1,000 -1,400
Non-retail (Bank, Real Estate Agent etc)	200	200
Medical Centre	250	500
Childcare Centre*	n.a.	250
Gym	n.a.	200
<b>Freestanding - should be provided with main road exposure</b>		
Fast Food Drive Thru	n.a.	200
Service Station	250	250
<b>Total</b>	<b>3,000 - 3,200</b>	<b>5,600 - 6,000</b>

\* Denotes Indoor Area Only



## 5.7. Centre Location

- i. For a retail centre to be developed early in the estate, it would require exposure to all traffic entering and exiting the estate.
- ii. The structure plan is conveniently located along Narromine Road north west of Dubbo City, adjacent to TAFE NSW Dubbo and Dubbo City Regional Airport.
- iii. Longer term, a more centralised location may be more appropriate for a retail centre, however, this would mean that a centre would be developed at a later stage. A centrally located development would still require most residential traffic to bypass the site, and also be co-located with facilities such as primary school, parks, childcare centre and other community facilities to create a destination for local residents.
- iv. The proposed structure plan indicated a retail precinct through the industrial area to the north and near parks/school. This is proposed to be the only entry into the estate from Narromine Road and should provide exposure and accessibility for the proposed retail facilities.
- v. Ultimately, the key for any retail centre is that effectively, residents should be able to access the centre or bypass the centre before they are able to access other centres outside the trade area or in the secondary sector.
- vi. In terms of land size, typically a ratio of floorspace to land space is 30%, such that a 6,000 sq.m centre would typically require around 20,000 sq.m or two hectares of land.

## 5.8. Implications for the Centres Hierarchy

- i. The recommended centre as part of NURA will not have any implications for the Centres Hierarchy due to the following:
  - A first stage of up to 3,000 sq.m., which would service the NURA itself. This sized centre has no implications for the hierarchy of centres
  - At less than 6,000 sq.m, the subject centre would be a Local Centre serving the convenience needs of combined primary sector residents. At least one of NURA or North-West Urban Release Area centres will have the capacity to accommodate a supermarket of up to 3,000 sq.m. A centre of this size would be much smaller than the Dubbo CBD and Orana Mall which will continue to serve the non-food requirements of trade area residents.
  - A neighbourhood centre in the North-West Urban Release Area will be developed once a sufficient population exists in that release area. With over 10,000 future residents, it will be able to support a



centre over time of at least 3,000 sq.m., serving the convenience needs of its immediate population.



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## 6 INDUSTRIAL LAND

This section presents an analysis of the supply and demand of Business Development (B5) and Light Industrial (IN2) zoned land within the Dubbo Local Government Area (LGA). It is specifically aimed at assessing the implications of rezoning some of the IN2 land along Narromine Road in NURA to B5.

### 6.1. Employment Lands Strategy

- i. Figure 6.2 outlines the Employment Lands in Dubbo LGA, including industrial land.
- ii. The subject site is located in close proximity to the Airport Precinct. Section 14.8 of the Dubbo Employment Lands Strategy outlines the rationale for the future development of the Airport Precinct. Figure 6.2 illustrates the airport precinct's lands including light industrial, heavy industrial and infrastructure being the airport itself.
- iii. Relevantly, there is a recommendation for B5 business land to be allowable in the southern portion of the existing IN2 light industrial on the western side of the Mitchell Highway. The analysis in this section of this report supports the change.
- iv. Further, the employment lands strategy on page 79 indicates the following:

*The B5 Business Development zone allows a variety of permissible uses which would support and service the West Dubbo population catchment, nearby industrial zones and Dubbo City Regional Airport. The B5 Business Development zone is flexible in allowing a mixture of large format commercial uses including bulky goods, warehouse and distribution centres as well as a range of light industrial uses including industrial training facilities, freight transport, passenger, transport and truck depots. This provides a good mixture of uses given its location adjacent to the Mitchell Highway.*

*Analysis in Part 2 of this report has shown that to meet the required industrial land supply demand in 2031, 53 to 80 hectares of industrial zoned land should be available for development. As there is currently 724 hectares of vacant/ undeveloped industrial zoned land within the former Dubbo City Council area, there is an ample supply of industrial zoned land available to cater for future demands.*





*It is desirable for bulky goods uses to be consolidated and clustered together into defined areas. The land as shown below, is considered suitable as it provides one large parcel rather than creating several smaller pieces of land. This rezoning would also have minimal impact on the supply of industrial zoned land or jobs, particularly noting that the current Dubbo Local Environmental Plan 2011 permits several light industrial uses within the B5 Business Development zone.*

- v. Clearly there is a substantial amount of industrial land throughout Dubbo which will not be utilised over an extended period. The potential rezoning of land to B5 in this airport precinct including on the Bathla Group land would be an economic sensible outcome as discussed in the following subsections.
- vi. The remainder of section assesses the provision of light industrial land supply and demand, and not just total industrial land.



**FIGURE 6.1. DUBBO INDUSTRIAL LANDS**

5. Dubbo's existing employment lands

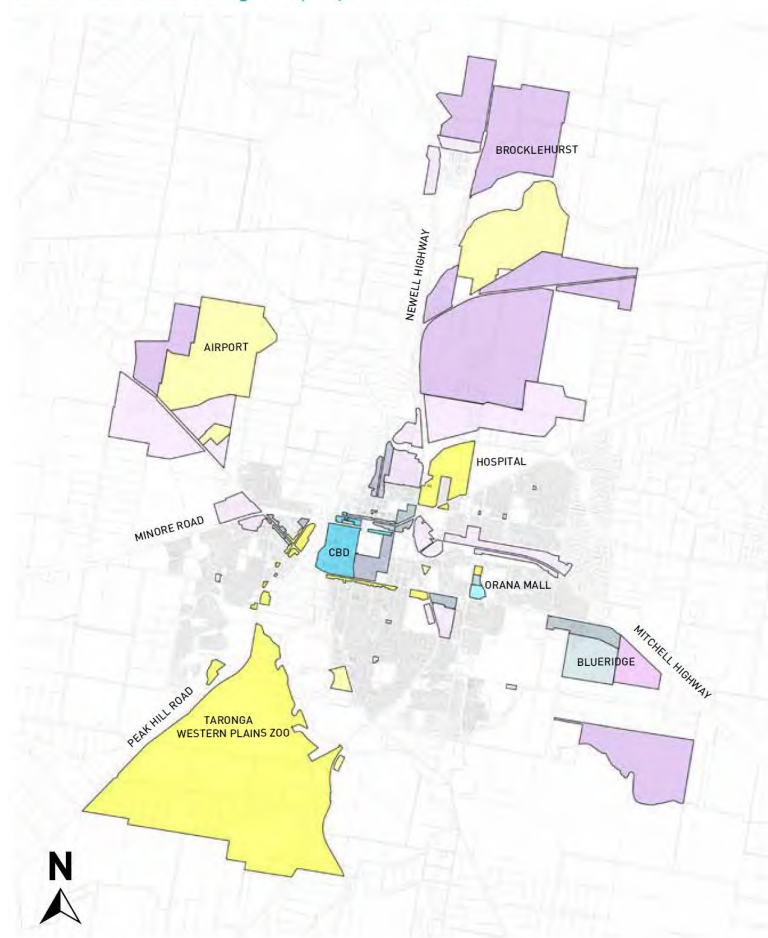
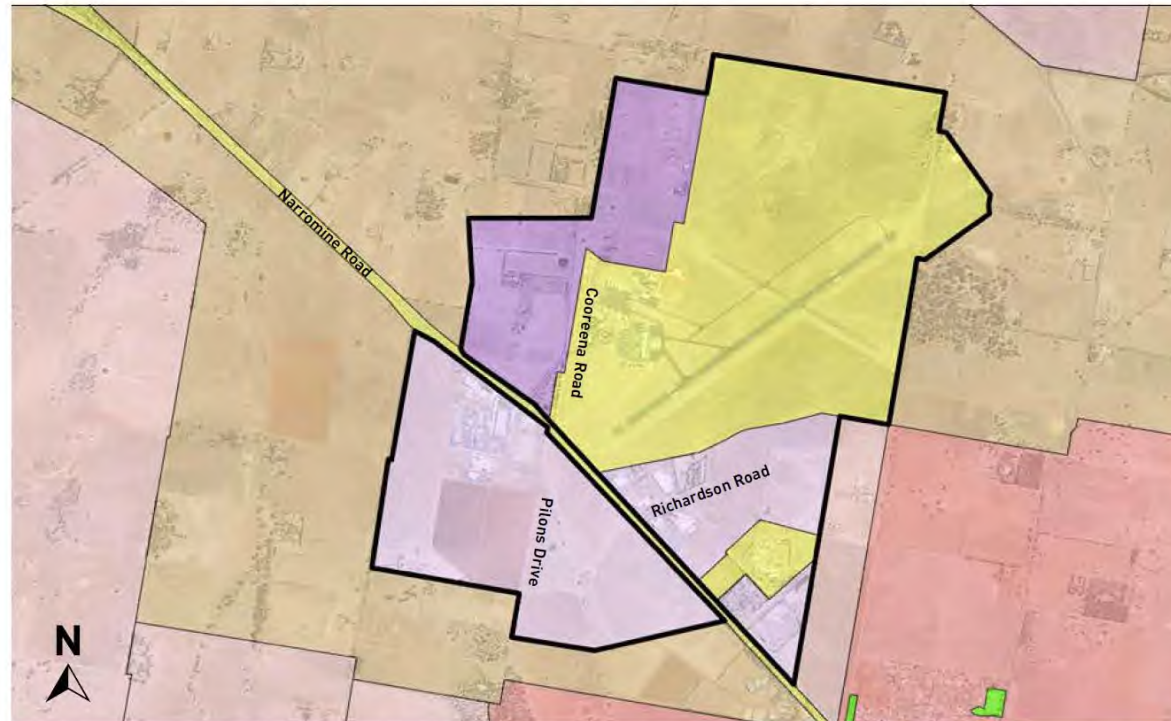


Figure 11: Dubbo's existing employment lands

Key:

B1 Neighbourhood Centre	B4 Mixed Use	B7 Business Park	SP2 Infrastructure
B2 Local Centre	B5 Business Development	IN2 Light Industrial	SP3 Tourist
B3 Commercial Core	B6 Enterprise Corridor	IN3 Heavy Industry	

FIGURE 6.2. AIRPORT PRECINCT



Precinct Map 17: Airport Precinct

Key:

Outline of Precinct	R2 Low Density Residential	IN2 Light Industry	SP2 Infrastructure
RU1 Primary Production	R5 Large Lot Residential	IN3 Heavy Industry	RE1 Public Recreation



## 6.2. Allowable Uses

- i. Table 6.1 summarises the allowable uses within the IN2 and B5 zones, with key differences including:
  - The B5 zone allows for business premises, centre-based childcare facilities, food and drink premises, health services facilities, home industries, office premises, research station, respite day care centres, restaurants or cafés, specialised retail premises.
  - On the other hand, IN2 land includes crematoriums, mortuaries and waste or resource transfer stations.
- ii. B5 zoned land, therefore, includes a range of uses which is aimed at and would be more compatible with a residential population in and around the B5 land. As will be outlined in the following analysis, there is no B5 land around Dubbo North, however, at the same time there is no immediate resident population currently.
- iii. With the development of the Bathla Group land for up to 1,750 homes and 5,000-5,500 residents and other nearby release areas, there would be a substantial population within and around the existing IN2 land at Dubbo North in the future. It would be appropriate to include a provision of B5 land to this location.



TABLE 6.1. B5 &amp; IN2 USES

Use	Zone	
	IN2	B5
Agricultural produce industries	✓	✓
Boat building and repair facility	✓	✓
Business premises	✗	✓
Centre-based child care facilities;	✗	✓
Community facilities	✓	✓
Crematorium	✓	✗
Data centre	✓	✓
Depots;	✓	✓
Early education and care facility	✓	✓
Educational Establishment	✓	✓
Food and drink premises	✗	✓
Freight transport facility	✓	✓
Funeral homes	✓	✓
Garden centres	✓	✓
Hardware and building supplies	✓	✓
Health consulting rooms	✓	✓
Highway service facility	✓	✓
Health Services Facilities	✗	✓
Hospitals	✓	✓
Home industries	✗	✓
Industrial Retail Outlet	✓	✓
Industrial training facilities	✓	✓
Information and education facility	✓	✓
Kiosk	✓	✓
Landscaping material supplies	✓	✓
Light industries;	✓	✓
Liquid fuel depots;	✓	✓
Local distribution premises	✓	✓
Medical centres	✓	✓
Mortuaries	✓	✗
Neighbourhood shops	✓	✓
Office premises	✗	✓
Oyster aquaculture;	✓	✓
Passenger transport facilities	✓	✓
Places of public worship;	✓	✓
Plant nurseries;	✓	✓
Research station	✗	✓
Respite day care centres	✗	✓
Restaurants or cafes;	✗	✓
Rural supplies	✓	✓
Specialised retail premises	✗	✓
Service Station	✓	✓
Signage	✓	✓
Storage premises	✓	✓
Take away food and drink premises	✓	✓
Tank-based aquaculture	✓	✓
Timber yards	✓	✓
Transport Depot	✓	✓
Truck depot	✓	✓
Vehicle body repair workshop	✓	✓
Vehicle repair station	✓	✓
Vehicle sales or hire premises	✓	✓
Vetinary Hospital	✓	✓
Warehouse or distribution centres	✓	✓
Waste or resource transfer stations	✓	✗
Water reticulation systems	✓	✓
Wholesale supplies	✓	✓



### 6.3. Zoned Land

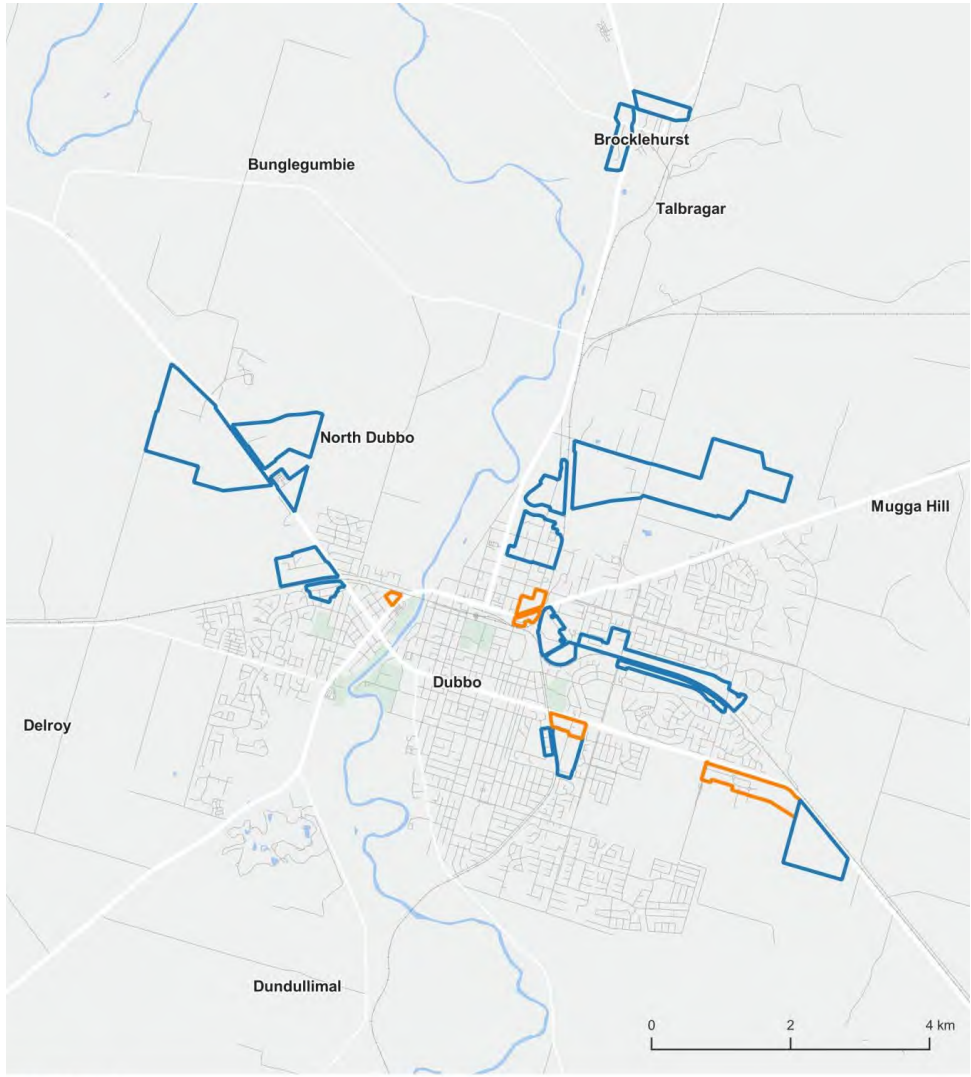
- i. Map 6.1 illustrates the location of B5 and IN2 land throughout Dubbo. Table 6.2 summarises the total provision of B5 and IN2 land including as to whether it is vacant or occupied. Maps 6.2 to 6.5 detail vacant land by sub-area.
- ii. Overall, the provision of IN2 land is substantially higher than B5 land at 7.2 million square metres as compared with 0.6 million square metres.
- iii. In terms of vacancy levels, around 39% of B5 land is vacant and 53% of a much larger pool of IN2 land is vacant. Consequently, the conversion of a small amount of IN2 land to B5 has minimal, if any, consequence on the overall availability of IN2 land throughout Dubbo LGA.
- iv. Relevantly, given the extensive supply of vacant IN2 land, at more than existing occupied IN2 land throughout Dubbo LGA, there would appear to be many, many years of industrial zone land available. A review of aerial imagery over the past 10 years indicates that around 1.5 hectares (15,000 sq.m) of IN2 land is occupied each year in Dubbo LGA. Based on existing vacant land, there is over 200 years supply.

**TABLE 6.2. B5 & IN2 LAND DUBBO LGA**



Status	Land (000 Sq.m)		
	IN2	B5	Total
Occupied	3,368	344	3,712
Vacant	3,818	216	4,035
<b>Total</b>	<b>7,186</b>	<b>560</b>	<b>7,746</b>
<i>% Vacant</i>	<i>53%</i>	<i>39%</i>	<i>52%</i>



MAP 6.1. DUBBO B5 & IN2 LAND



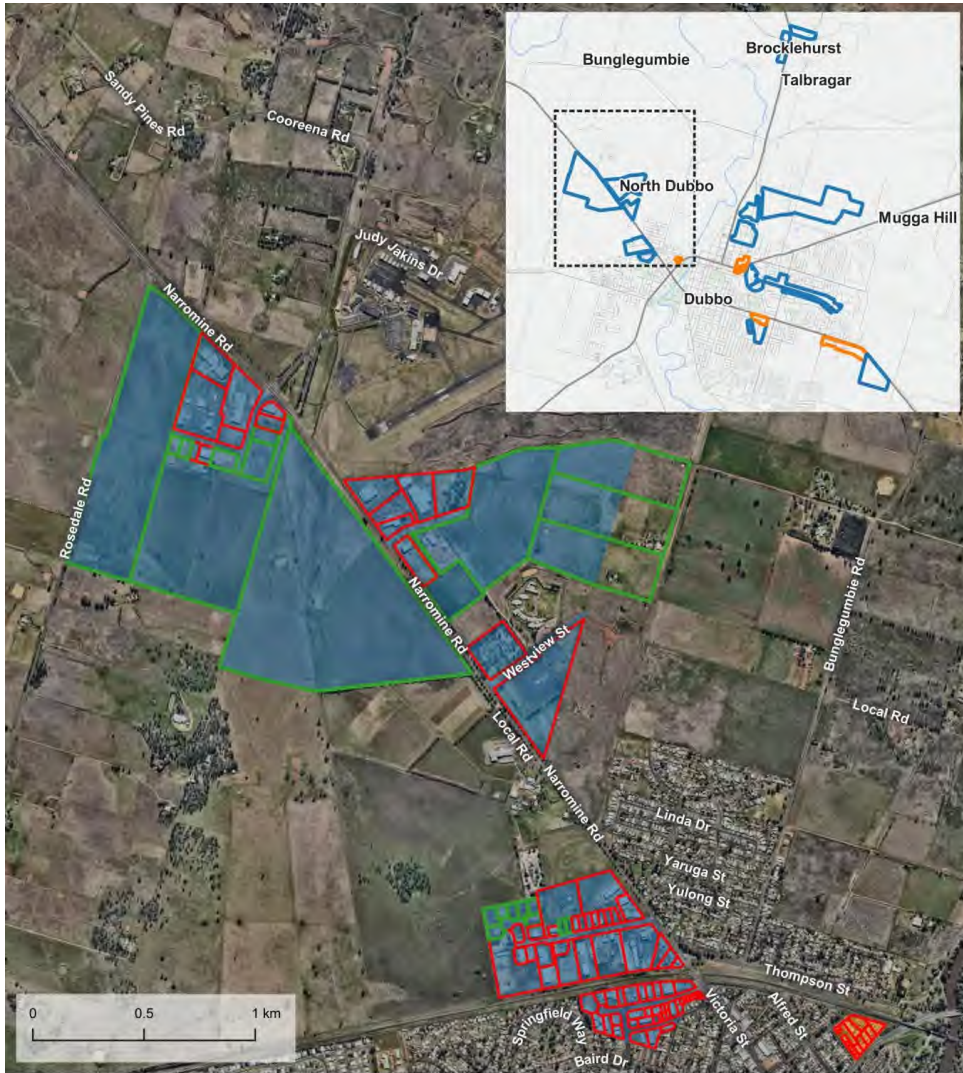
Land Zoning

-  B5 Business Development
-  IN2 Light Industrial



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MAP 6.2. DUBBO B5 & IN2 LAND VACANT LAND ANALYSIS



Land Zoning	Status
B5 Business Development	Occupied
IN2 Light Industrial	Vacant

PhotoMap by nearmap.com





MAP 6.3. DUBBO B5 & IN2 LAND VACANT LAND ANALYSIS (CONT.)

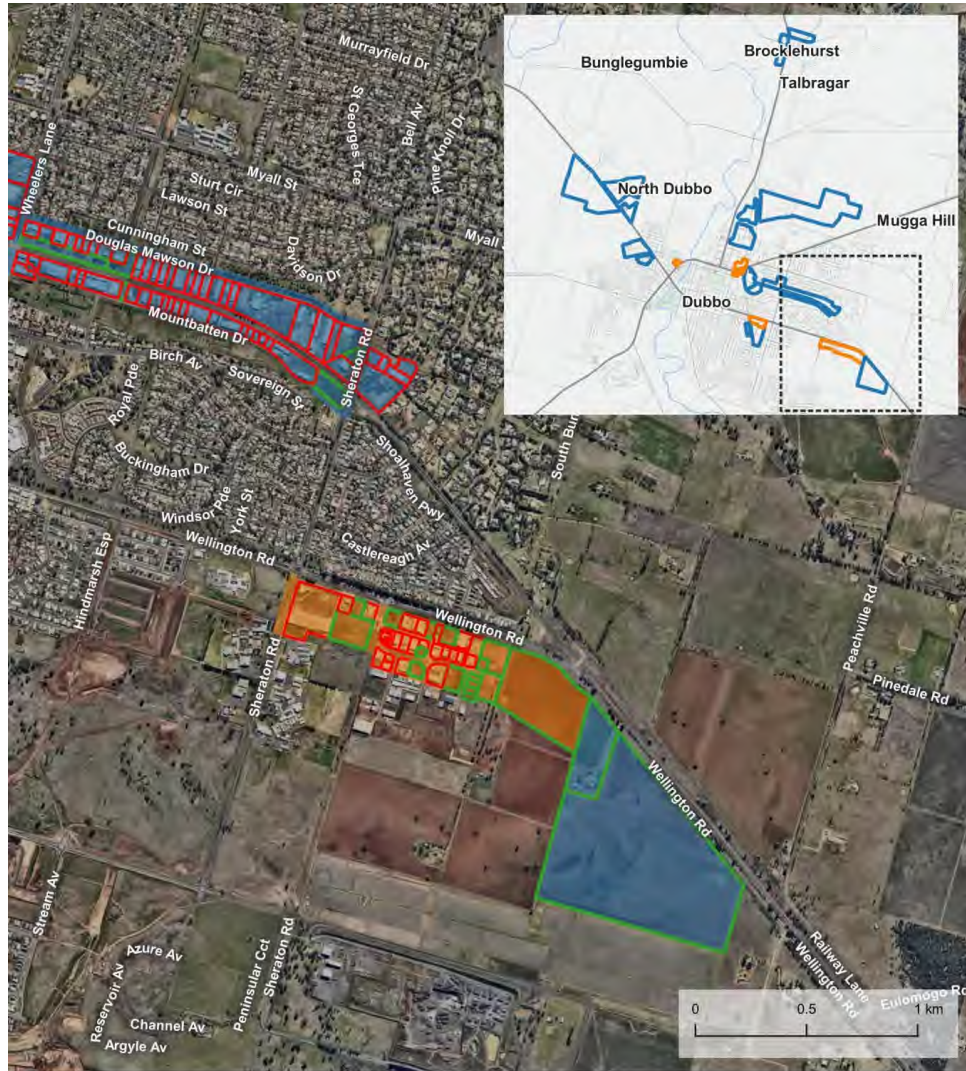


Land Zoning	Status
B5 Business Development	Occupied
IN2 Light Industrial	Vacant

PhotoMap by nearmap.com



MAP 6.4. DUBBO B5 & IN2 LAND VACANT LAND ANALYSIS (CONT.)

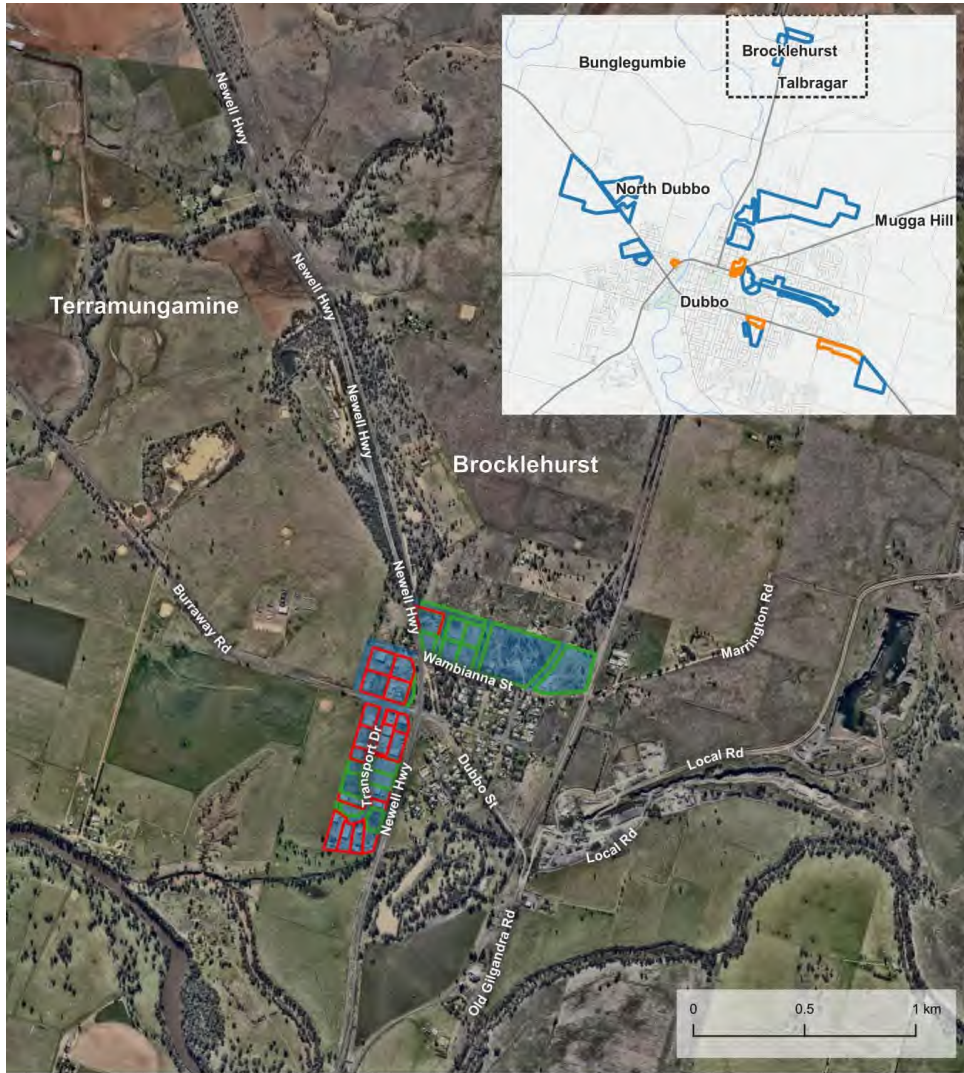


Land Zoning	Status
B5 Business Development	Occupied
IN2 Light Industrial	Vacant

PhotoMap by nearmap.com



MAP 6.5. DUBBO B5 & IN2 LAND VACANT LAND ANALYSIS (CONT.)



PhotoMap by nearmap.com

Land Zoning	Status
<span style="display: inline-block; width: 15px; height: 10px; background-color: #4a90e2; border: 1px solid black;"></span> IN2 Light Industrial	<span style="display: inline-block; width: 15px; height: 10px; border: 2px solid red;"></span> Occupied
<span style="display: inline-block; width: 15px; height: 10px; border: 2px solid green;"></span> Vacant	



## 6.4. Mix of Zoned Land

- i. The B5 and IN2 land is generally located on the outskirts of Dubbo to the north, north-west and south-east of the City Centre. Relevantly, given the range of similar uses generally allowable on the land, B5 land is often located in close proximity to or adjoining IN2 land. Relevantly, none of the land to the north-west in the existing Dubbo North area is zoned B5.
- ii. Again, with future residential now planned at Dubbo North on the Bathla Group land, it is logical and economically sensible to zone some of this land B5.

## 6.5. Conclusions

- i. Overall, there is a substantial amount of vacant IN2 land throughout the Dubbo LGA. B5 land is more closely associated with uses that would serve a residential population. The approval of the Bathla Group development will result in an increased population in and around the existing IN2 land. The conversion of a portion of this land to B5, to allow a range of uses which are effectively the same as IN2 land but including a range of additional uses would serve future residents of this and nearby release areas. The rezoning would have no impact on the ongoing efficient provision of IN2 land more broadly throughout Dubbo LGA.
- ii. More relevantly, the range of additional uses allowed on B5 as compared to IN2 land will be required by the population. These uses would either locate in the B5 land or elsewhere within the proposed Dubbo North residential development area (future centre zone). The location of the proposed B5 land is not such that it would be attractive to uses which would serve a Dubbo-wide area but more focused at serving a localised area (Dubbo North).





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Tim Howlet  
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14 October 2022

Dear Tim Howlet

### Subject: 13L Narromine Road, Dubbo Peer Review

Dubbo Regional Council (Council) is in the process of reviewing a Planning Proposal submitted by The Bathla Group (the Proponent) for the Proposed Lot 221 in the subdivision of Lot 22 DP 1038924 at the northern part of 13L Narromine Road, Dubbo (Subject Site). The Planning Proposal seeks to rezone the existing IN2 Light Industrial zones to B2 Local Centre and B5 Business Development Zones.

The Planning Proposal was prepared by GLN Planning and was supported by a report prepared by LocationIQ in 2022 titled 'Urban Release Off Narromine Road Dubbo: Preliminary Market Potential' (referred to as the Market Assessment hereafter). The LocationIQ report provided an economic assessment to support the land use proposed and, more specifically, assessed the potential for retail and non-retail employment floorspace proposed in the Narromine Urban Release Area (NURA) as part of a new residential estate. Council has since engaged HillPDA to peer review the Market Assessment and consider how the Planning Proposal aligns with Council's Employment Land Strategy (ELS) and commercial hierarchy and its potential impacts on the B1 and B4 land currently being planned for in the North West Urban Release Area (NWURA).

#### 1.1 Study Aims and Objectives

The purpose of this Study is to assess the accuracy, consistency and transparency of the Market Assessment undertaken by LocationIQ and provide an independent opinion on:

- the validity of the assumptions and methodology used
- the Planning Proposal's alignment to the ELS
- the potential impacts of the Planning Proposal on the B1 and B4 land currently being planned for in the NWURA.

#### 1.2 Study Structure

To meet the requirements of the brief, we have structured this Study as follows:

- **Section 1.3 Proposal Context:** This section provides a brief over of the local context of the Subject Site and Planning Proposal particulars.
- **Section 1.4: Peer review of the Market Assessment:** This section assesses the Market Assessment's key findings, including the trade area definition, projected population, retail expenditure capacity, competitive environment, floorspace provision recommendations. An independent retail and demand analysis is undertaken to inform the recommended retail centre size for the Subject Site.
- **Section 1.5: Recommended Centre Size:** This section outlines the recommended centre size.

■ Liability limited by a scheme approved under the Professional Standards Legislation

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- **Section 1.5: Implications on the NWURA B1 and B4 zones:** This section considers the impacts that a centre at the Subject Site could potentially have on the NWURA.
- **Section 1.6: Alignment to ELS:** This section considers the Planning proposal's alignment to the ELS.

### 1.3 Planning Proposal Context

#### 1.3.1 Local context and the Subject Site

The Subject Site is located at the northern end of 13L Narromine Road, Dubbo, and will form part of a new master-planned urban release area comprising both residential and employment land uses (referred to as NURA). The planned urban area will be delivered by the Proponent and upon completion is anticipated to accommodate 1,650-1,750 dwellings (5,000 to 6,500 residents) across the wider 270Ha of residential and employment zoned land. The Subject Site (shown in Figure 1) is adjacent to the existing TAFE facility and arterial road and immediately north of the planned sports field site, currently zoned RU2 Rural Landscape. The Subject Site received Development Consent in May 2022 to be separated from remaining land at Lot 22 DP 1038924. It is understood that the remaining land and adjoining Bathla parcel will be progressively delivered as part of the adjoining Stage 4 South West District forming part of the West Dubbo Urban Release Area.

Figure 1: Subject Site



Source: GLN Planning (2022), Planning Proposal – 13L Narromine Road, Dubbo



### 1.3.2 Planning Proposal Particulars

The Planning Proposal seeks to rezone the IN2 Light Industrial zones at the Proposed Lot 221 in the subdivision of Lot 22 DP 1038924 to B2 Local Centre and B5 Business Development Zones. The Planning Proposal states that the intended outcomes of the Planning Proposal are to:

- zone land to B5 to meet the long term demand for a mix of business, warehouse and specialised retail premises that require a large floor area to meet the projected undersupply of this floorspace to service Dubbo's future residential development in the west.
- zone land to B2 to enable convenience local shops located close to the adjacent to sports field and potential new school site that will service the future residential release areas and surrounding industrial areas.

### 1.4 Peer review of the Market Assessment

The methodology LocationIQ used in Market Assessment was to:

1. Define the trade area likely to be served by a retail centre at the Subject Site.
2. Review the current and projected population and retail spending levels over the period to 2041.
3. Consider existing and proposed competitive developments within the area surrounding the subject site and trade area.
4. Consider comparable towns retail mixes.
5. Apply the average non-metropolitan provision benchmark rates and capture rates to estimate the potential for supermarket floorspace as well as retail specialty, medical centre and gym floorspace.
6. Analysis of supply and demand of B5 Business Development and IN2 Light Industrial Land.

Overall, we were satisfied with their methodology, but we do have a few concerns with some of the assumptions and outputs which is discussed below.

#### 1.4.1 Trade Area

LocationIQ have defined the main trade area for a retail centre at the subject site to include two sectors as follows:

- A primary sector bounded to the south by a railway line and extends north and east limited by the Macquarie River. The sector is constrained by the extent of the urban area to the west.
- A secondary sector which includes West Dubbo, Delroy Park, and Grangewood, bounded to the north by the railway line and east by the Macquarie River and Peak Hill Road. The sector is also limited by the extent of the urban area to the south and west.

LocationIQ makes the following assumptions in defining their trade area:

- The North-West Urban Release Area will accommodate 2,600 dwellings (7,500 residents) and a potential neighbourhood centre in the next 20 years. The subject urban release area (referred to as NURA in the Market Assessment) and the NWURA will be able to support its own retail centre once sufficient population has occurred in the immediate release areas themselves.
- An improved road connection will be delivered in the future that will provide access across the railway and connect residents within the secondary sector to the primary sector and in turn the proposed retail centre at the subject site. They note that this connection is still yet to be finalised.

HillPDA believe that the trade area defined by LocationIQ is greater than we would expect for the following reasons.





**Reason 1:** The Draft North-West Precinct Plan updated on 16<sup>th</sup> September 2020 proposes that the NWURA will accommodate 5,000-6,000 dwellings (12,500 – 15,000 residents) upon completion and has the capacity to support a new Neighbourhood or Precinct Centre to service the future population in the Precinct. The Draft Plan also stipulates that the precinct area will “*have the ability to support various mixed use commercial and residential developments.*” Moreover, this area “*will enable a range of small-scale commercial development, including convenience retail premises, business premises, medical centres and community uses within easy walking distance. Shop top housing is encouraged in the zone*”. The proposed land use zoning map indicates that the B1 Neighbourhood Centre zoned land will occupy 3.0Ha, with a further 26.7Ha of B4 Mix Use land surrounding the Neighbourhood Centre. Based on these areas and population catchment it can be assumed that Neighbourhood Centre will provide 6,000+sqm of GLAR, with a significant provision of shopfront retail and commercial uses also likely to occupy the ground floor areas in the B4 zone. For this reason we **do not** believe the primary sector of the proposed centre on the subject site should extend further east of Narromine Road.

**Reason 2:** Notwithstanding that there is no confirmation that a road connection between primary sector and secondary will be delivered in the future (thereby improving access to the Subject Site from the south) these residents will still likely continue to undertake the majority of their food and grocery shopping at the Delroy Park Square (which includes a Woolworths of 2,900sqm and supporting specialty) and higher order shopping at Dubbo CBA and Orana Mall Marketplace. Moreover, the Planning Proposal prepared by GLN also acknowledges the poor connection between the two sectors even after the planned future road connections. Given the poor connection and competition to the south, we do not believe the secondary sector should form part of the main trade area for the proposed retail centre at the Subject Site.

Based on the above, we consider the trade area should largely be contained to NURA and the rural properties within 5km to the north of NURA.

The smaller trade area (referred to as the revised trade area hereafter) and corresponding population catchment will have substantial implications on the provision of supermarket floorspace which can be supported on the Subject Site. For this reason, the next section (Section 1.4.2) considers the potential for retail floorspace based on this revised trade area.

#### 1.4.2 Retail demand modelling

This section provides a forecast of the demand for retail floor space in the revised trade area based on population growth and expenditure levels. This method differs from the approach adopted by LocationIQ (i.e. applying the average non-metropolitan supermarket provision benchmark rates and capture rates to estimate the potential for supermarket floorspace).

##### 1.4.2.1 Revised Trade Area population growth

As at 2021 the revised trade area had a population of 470 residents based on ABS Census 2021 data. The population is forecast to reach 5,500 to 6,000 by 2041 as shown in the table below, which equates to a growth rate of around 13% per annum. The forecasts are based on expected development yield of the masterplan provided by Bathla Group and assume 1,650-1,750 dwellings are fully occupied over the periods 2026-2041 (which is consistent with the Market Assessment) and less than 1% growth rate for the rural areas to the north of NURA. Note, if the residential development uptake occurs at a slower rate than projected, the timing for the retail and commercial uses may need to be delayed accordingly.

**Table 1: Revised Trade Area population growth rates**

Year	2021	2026	2031	2036	2041
Low growth Scenario	470	780	2,300	3,800	5,500
High Growth Scenario	470	780	2,780	4,780	6,000

Source: ABS Census 2021



#### 1.4.2.2 Resident expenditure

Total forecast sales from the revised trade area residents is shown in the table immediately below.

**Table 2: Forecast expenditure from trade area residents (2020 dollars) (\$m)**

Year	2021	2026	2031	2036	2041
<b>Low Growth Scenario</b>					
Population	470	780	2,300	3,800	5,500
Supermarkets and grocery stores	2.3	4.0	12.4	21.6	32.9
Specialised food stores	0.6	1.0	3.0	5.0	7.4
Bulky goods stores	1.1	1.9	5.9	9.9	14.7
Department stores	0.4	0.6	1.8	3.0	4.3
Apparel stores	0.7	1.1	3.4	5.7	8.5
Other non-food stores	0.9	1.6	4.8	8.1	12.0
Restaurants and fast-food services	0.7	1.2	3.8	6.6	10.1
Personal services	0.2	0.4	1.3	2.1	3.1
<b>TOTAL</b>	<b>6.9</b>	<b>11.9</b>	<b>36.2</b>	<b>62.0</b>	<b>93.0</b>
<b>High Growth Scenario</b>					
Population	470	780	2,780	4,780	6,000
Supermarkets and grocery stores	2.3	4.0	15.0	27.2	35.8
Specialised food stores	0.6	1.0	3.6	6.3	8.1
Bulky goods stores	1.1	1.9	7.1	12.5	16.0
Department stores	0.4	0.6	2.2	3.8	4.7
Apparel stores	0.7	1.1	4.1	7.2	9.3
Other non-food stores	0.9	1.6	5.8	10.2	13.1
Restaurants and fast-food services	0.7	1.2	4.5	8.3	11.0
Personal services	0.2	0.4	1.5	2.7	3.4
<b>TOTAL</b>	<b>6.9</b>	<b>11.9</b>	<b>43.8</b>	<b>78.0</b>	<b>101.5</b>

Assumes real growth in retail spend per person per annum at the rates of 1% in food and groceries, 1.2% in food services, 0.5% for non-food retail and -0.25% for department stores generally in line with historic trends over the past 3 decades. Weighted average is around 0.75% per annum.

Sources: ABS Census 2021, ABS Retail Turnover, ABS Household Expenditure Survey and HillPDA

Estimating potential retail sales of a retail centre in the revised trade area is done by applying capture rates to household expenditure. A high proportion of food, groceries and regular shopping goods and services is usually done close to home as shoppers generally have a preference to minimise travel time and cost when undertaking 'chore shopping'. This is manifested in the retail hierarchy where smaller centres are generally anchored by supermarkets and comprise a range of specialty stores in food, groceries, personal services (hair/beauty, pharmaceuticals, etc) and other regular service categories. The fewer and larger regional centres such as Dubbo CBD and Orana Mall are generally anchored by larger stores, department stores and have a more specialist retailers in fashion, homewares, and other comparative goods as well as a range of entertainment and commercial services. Usually trips to these centres are less frequent and shoppers are prepared to travel further. Note we have applied a lower capture rate of 50% for the supermarket compared to Market Assessment's, 75% to account for the stronger retail offer which is likely to be provided in the North-West urban release Area.



The table immediately below shows total potential retail sales in the revised trade area:

**Table 3: Total forecast potential retail sales in the trade area (2021 dollars) (\$m)**

Year	Capture	2021	2026	2031	2036	2041
<b>Low Growth Scenario</b>						
Supermarkets and grocery stores	50.0%	1.2	2.1	6.5	11.3	17.2
Specialised food stores	50.0%	0.3	0.5	1.5	2.6	3.9
Bulky goods stores	-	0.0	0.0	0.0	0.0	0.0
Department stores	-	0.0	0.0	0.0	0.0	0.0
Apparel stores	-	0.0	0.0	0.0	0.0	0.0
Other non-food stores	10.0%	0.1	0.2	0.5	0.8	1.3
Restaurants and fast-food services	15.0%	0.1	0.2	0.6	1.0	1.6
Personal services	15.0%	0.0	0.1	0.2	0.3	0.5
<b>TOTAL</b>	<b>24.2%</b>	<b>1.8</b>	<b>3.0</b>	<b>9.4</b>	<b>16.2</b>	<b>24.5</b>
<b>High Growth Scenario</b>						
Supermarkets and grocery stores	50.0%	1.2	2.1	7.9	14.3	18.8
Specialised food stores	50.0%	0.3	0.5	1.9	3.3	4.2
Bulky goods stores	-	0.0	0.0	0.0	0.0	0.0
Department stores	-	0.0	0.0	0.0	0.0	0.0
Apparel stores	-	0.0	0.0	0.0	0.0	0.0
Other non-food stores	10.0%	0.1	0.2	0.6	1.1	1.4
Restaurants and fast-food services	15.0%	0.1	0.2	0.7	1.3	1.7
Personal services	15.0%	0.0	0.1	0.2	0.4	0.5
<b>TOTAL</b>	<b>24.2%</b>	<b>1.8</b>	<b>3.0</b>	<b>11.3</b>	<b>20.4</b>	<b>26.7</b>

Please note also that the above figures make an allowance for 5% of turnover to be derived from sources outside the trade area. This includes residents that live further to the south and east, visitors from the proposed bulky goods component at NURA and day trippers.

#### 1.4.2.3 Demand for retail space

Demand for retail space is estimated by dividing potential retail sales by industry standard retail turnover density (RTD) levels. The results are shown in the table immediately below.



Table 4: Retail Floorspace Demand (sqm)

Store Type	Target RTD*	2021	2026	2031	2036	2041
<b>Low Growth Scenario</b>						
Supermarkets and grocery stores	10,500	115	201	622	1,080	1,643
Specialised food stores	7,500	40	68	207	350	519
Other non-food stores	6,000	16	28	84	141	210
Restaurants and fast food services	6,000	18	31	98	173	265
Personal services	6,000	6	11	33	56	83
<b>TOTAL</b>	<b>8,953</b>	<b>196</b>	<b>339</b>	<b>1,043</b>	<b>1,800</b>	<b>2,720</b>
<b>High Growth Scenario</b>						
Supermarkets and grocery stores	10,500	115	201	752	1,358	1,792
Specialised food stores	7,500	40	68	250	440	566
Other non-food stores	6,000	16	28	101	178	229
Restaurants and fast food services	6,000	18	31	119	217	289
Personal services	6,000	6	11	40	70	90
<b>TOTAL</b>	<b>8,953</b>	<b>196</b>	<b>339</b>	<b>1,261</b>	<b>2,264</b>	<b>2,967</b>

\* Sources: Various including ABS Retail Surveys, Shopping Centre News, Urbis Retail Averages, Property Council of Australia, various consultancy studies and HillPDA research

With no other retail facilities provided or planned within the revised trade area, the above retail demand analysis suggests that the revised trade area could support Market Assessment's Stage 1 proposal by 2041. That is a supermarket of up to 1,500sqm and 800-1,000sqm of retail specialty shops. This will allow for a small provision of other food services and the like to be provided with the bulky goods retailing proposed as part of NURA and elsewhere in the trade area.

Note, that if the proposed centre at the Subject Site was developed prior to the Neighbourhood Centre at the NWURA, it would have a trade area that extends into the NWURA. mean that the proposed retail centre at NURA could also service the NWURA residential population in the interim and could be delivered as early as 2031 to 2036. Once the Neighbourhood Centre opens, the proposed retail centre will likely lose trade from residents in the NWURA.

The revised trade area population would not be able to support the Stage 2 proposal (i.e. 3,000sqm supermarket and 1,000-1,400sqm of retail specialty shops). For this reason we advise against proceeding with Stage 2 development at this stage. Stage 2 would only be viable for a trade area of at least 8,000 people. In the long term there may be an argument to support Stage 2, if for example, the centre at NWURA was overtrading and additional competition was deemed to be a healthy measure of correction. However that is speculation in relation to a possible long term scenario.

#### 1.4.2.4 Demand for retail space using average supermarket provision method

The above analysis has been cross-checked against LocationIQ's method of applying the average provision in non-metropolitan supermarket floorspace for NSW (410sqm per 1,000 persons) and 75% capture rate (which as discussed previously, we consider to be bullish given the likely stronger retail offer likely to be provided at NWURA) to the revised trade area. The second method suggests there is demand for 700 to 850 sqm of supermarket floorspace by 2031, increasing to 1,700 to 1,850sqm in 2041, with the calculations shown in the table below. Again, this supports the above findings that Subject Site could support the Stage 1 proposal by 2041. As previously discussed, the retail centre may be developed as early as 2031-36 if the retail centre were developed prior to the Neighbourhood Centre for reasons outlined above.

Table 5: Supermarket floorspace provision for Subject Site using Method 2

Category	2021	2026	2031	2036	2041
<b>Low growth scenario</b>					
Population (persons)	470	780	2,300	3,800	5,500
Supportable Supermarket Floorspace					
Non-metro NSW	193	320	943	1,558	2,255
Supportable floorspace (@75% of total)	145	240	707	1,169	1,691
<b>High growth scenario</b>					
Population	470	780	2,780	4,780	6,000
Supportable Supermarket Floorspace					
Non-metro NSW	193	320	1,140	1,960	2,460
Supportable floorspace (@75% of total)	145	240	855	1,470	1,845

\* Sources: Market Assessment, ABS Census 2021 and HillPDA research

#### 1.4.3 Medical centre, gym and childcare potential

The Market Assessment indicates that 12.8 GPs are provided for every 10,000 residents in Australia. A source for these assumed rates was not provided. The Australian Institute of Health and Welfare (AIHW) indicate the rate for medical practitioners is much higher at 420 full-time equivalent (FTE) per 100,000 persons which equates to 4.2 per 1,000 persons. Based on the revised trade area this would suggest the trade area could support up to 25 medical practitioners by 2041 based on the AIHW provisional rate and up to 7 based on the Market Assessment rate. This suggests the revised trade area could support a small scale medical centre on the Subject Site.

Similarly, the Market Assessment indicates that national gym brands typically serve a catchment of 50,000-70,000sqm, whilst smaller format gyms typically serve a catchment of 10,000 persons. Again a source for the data is not provided. A desktop<sup>1</sup> review reveals that gym operators typically target a catchment of 20,000 to 60,000 persons pending on the scale of the gym, with smaller scale gym facilities (i.e. 200sqm) lower at around 10,000 persons. As such, the Market Assessment assumptions appear reasonable. With a trade area population of around 5,500 to 6,000 persons, this would suggest that there a gym facility would not be supportable, with the NWURA a more appropriate location to accommodate a second gym. As such, we agree with Market Assessments conclusion that *"a gym may have limited potential at the Subject Site and should only be considered if tenant demand is experienced"*.

In terms of the childcare centres, based on a review of growth centre planning codes,<sup>2</sup> proposed provisional rates provided in the Market Assessment, the revised trade area could potentially support a childcare centre over the forecast period.

#### 1.4.4 Other concerns

Other issues identified in the Market Assessment:

- The population forecasts presented in Table 2.1 are not consistent with the text presented in the Executive Summary and Section 2.2 (i.e. in the Executive Summary and Section 2.2 it states there is 17,080 persons in the Main Trade Area and 8,270 persons in the Primary Sector, whilst Table 2.1 shows there is 17,489 persons in the Main Trade Area and 8,357 persons in the Primary Sector) or the population forecasts presented in Table 5.1. The discrepancies are relatively minor and would not have impacted the Market Assessment's overall analysis or conclusions.
- The population forecasts assumed for the NWURA (i.e. at 7,500 persons) were under represented, with the Draft North-West Precinct Plan forecasting 12,500 – 15,000 residents. Moreover, the Market Assessment concludes that the immediate catchment could support a Neighbourhood Centre at the NWURA which is similar in size to that proposed centre at the Subject Site (which we assume to mean

<sup>1</sup> The Gym group Full year Results, 2020; Strategies for success in the fitness arena: jets and various other consultancy reports

<sup>2</sup> NSW Growth Centre Development Code 2006, SEQ Growth Centres 2007, Growth Vic, 2008



a 5,600-6,000sqm centre). Given the larger population catchment at NWURA, we would anticipate that the immediate catchment population could support a Neighbourhood Centre of up to 6,000sqm, including a full-line supermarket and potentially a smaller scale second supermarket at the centre over time if population grows at a higher rate (i.e. the high growth scenario). Based on the primary sector population (and allowing for a further 4,500-7,500 residents in the North-West Release Area) this would suggest that there is limited potential to provide a full line supermarket at both the NWURA and the Subject Site. Rather a smaller scale supermarket (i.e. up to 1,500sqm) at the Subject Site to service the immediate population catchment would be more appropriate. The recommended size for the centre at the Subject Site has been addressed and accounted for in the revised Trade Area and Section 1.4.2 analysis and discussed in Section 1.5.

- The Executive Summary suggests Stage 1 could be delivered as early as 2026, whilst the analysis and conclusions in the body of the Market Assessment indicates 2031. As discussed above, we believe 2031-2036 is a more appropriate timeframe and this assumes that the residential development uptake surrounding the subject site and the NWURA Area occurs at the projected rates and the Neighbourhood Centre is delivered after the centre at the Subject Site. If it occurs at a slower rate than projected and/or the Neighbourhood Centre is delivered prior or at the same time the centre at the Subject Site, the delivery of the centre at the Subject Site should be delayed until a sustainable immediate population catchment is reached.

### 1.5 Recommended Centre Size

As established in the retail demand analysis the revised trade area could support up to 2,500sqm of retail floorspace, including a supermarket of 1,500sqm on the Subject Site once there is sufficient population. Allowing for another 20% of non-retail specialty (banks, real estate agents, medical services) which is typical for centres of this scale would suggest the Subject Site could support a centre of around 3,000sqm. This is consistent with Market Assessment's Stage 1 indicative floorspace recommendations. They also propose a further freestanding Service Station of around 250sqm which we consider reasonable if it is provided with main road exposure. This brings the total centre size to around 3,000-3,200sqm. In terms of timing, the retail centre may be developed as early as 2031-36 if the retail centre were developed prior to the Neighbourhood Centre for the reasons outlined above.

### 1.6 Implications on the NWURA B1 and B4 zones

We anticipate that a centre of 3,000-3,200sqm would not have any significant impacts for the B1 to B4 zoned proposed at the NWURA. It would be a relatively small-scale centre serving the convenience needs of the new residents in the immediate catchment. Moreover, the projected population at the NWURA has the capacity to support a Neighbourhood Centre, without having to rely on trade from residents at NWURA. As such it is unlikely that the retail centre at the Subject Site will re-direct sales from the Neighbourhood Centre (or other existing centres in the locality).

If, however, Market Assessment's Stage 2 is delivered on site (i.e. a centre of 5,600-6,000sqm) we anticipate that this may have some implications on the Neighbourhood Centre at the NWURA, potentially delaying its delivery or undermining its performance. The more likely scenario, however, is that the trade area of the Subject Site would contract to Narromine Road and it would lose a significant level of market share.

### 1.7 Alignment to ELS

HillPDA agree with both GLN Plannings and LocationIQ's findings that the Planning Proposal's implementation of the B5 Business Development Zone is supported by the ELS. We also agree with GLN's assertion that, although a local centre at the Subject Site was not referenced in the ELS, the future residents of the NWURA would benefit from a local scale centre, particularly given they are not well connected to other local retail offers. Moreover, a



local centre of 3,000-3,200sqm would not undermine the employment function associated with the Employment Precinct. On the contrary it would improve amenity, providing important services that would contribute to the success of the employment zone.

Yours sincerely,

**Draft**

.....

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# COUNCIL POLICY

## INVESTMENT POLICY

**Date**

**Council Resolution Date** 23 March 2023

**Clause Number**

**Responsible Position**

Chief Financial Officer

**Branch**

Financial Operations

**Division**

Organisational Performance

**Version**

**TRIM Reference Number**

**Review Period**

Annually (or when a change in either regulation or market condition necessitate a review)

**Review Date**

**Consultation**

Document Revision History	
Description	Date
<b>Notes</b>	

## POLICY

### Purpose

The Policy provides a framework for the optimum investment of Council's funds. While exercising the power to invest, consideration is to be given to the preservation of capital, liquidity and the return on investment. Council therefore has several primary objectives for its investment portfolio:

- Compliance with legislation, regulations, the prudent person tests of the *Trustee Act* and best practice guidelines;
- The preservation of the amount invested;
- To ensure the investment portfolio holds sufficient liquidity to meet all reasonably anticipated cash flow requirements, as and when they fall due, without incurring significant costs due to the unanticipated sale of an investment;
- To generate income from the investment that exceeds the performance benchmarks mentioned later in this document;
- To set boundaries for the exposure to market risk, credit risk and interest rate risk within the investment portfolio and the 'counterparty' exposure of the portfolio to individual institutions or products; and
- To establish a framework for monitoring investments.

In addition, Council may nominate, and take account of, secondary objectives that are to the benefit of the community's broader interests. These can include:

- Environmental, social and governance (ESG) or similar responsible investment and impact objectives.
- Adhering to investment conditions of concessional loans from the State government.

### BACKGROUND AND RELATED LEGISLATION

All investments are to comply with the following:

- *Local Government Act (1993)*;
- *Local Government (General) Regulation (2021)*;
- Ministerial Investment Order;
- *The Trustee Amendment (Discretionary Investments) Act (1997)* – Section 14;
- Local Government Code of Accounting Practice and Financial Reporting;
- Australian Accounting Standards;
- Office of Local Government *Investment Policy Guidelines*; and
- Office of Local Government Circulars;

Council's Investment Strategy will run in conjunction with this Investment Policy.

## **SCOPE**

This Policy has been prepared to recognise the legislative requirements and obligations for the investment of Council's funds.

Council will comply with investment regulations, and directions of the Office of Local Government which will prevail in the event of inconsistencies with the adopted Policy. This document replaces any previous Investment Policy document adopted by Council. This Investment Policy will be reviewed at least annually in March each year, or when a change in either regulation or market conditions necessitate a review.

## **DEFINITIONS**

Refer to Appendix 1.

## **POLICY**

### **Policy statement**

Council's investment objective is to ensure funds that are surplus to Council's immediate requirements are invested within acceptable risk parameters to optimise interest income and the community's best interests, while ensuring the security of these funds.

### **Investment governance**

The following internal control practices are in place to ensure adequate governance and allow transparent and clear performance measurement for the management of Council's cash and investment portfolio:

- financial planning and cash-flow management;
- delegated authorities and investment approval;
- measurement of investment performance;
- performance benchmarks;
- reporting and review; and
- audit oversight.

These internal control practices are explained in more detail below.

### **Financial planning and cash-flow management**

Funds that are surplus to Council's immediate cash requirements will be managed in accordance with the long, medium and short-term financial cash requirements.

Long term financial plans are developed to ensure the long-term financial sustainability of Dubbo Regional Council. These plans will incorporate forecasts of cash inflows and outflows to:

- estimate cash surpluses and shortages in future periods
- identify the longer and medium term investment horizon for surplus funds.

Shorter term financial plans are used to predict funds availability and monitor the Council's cash management needs throughout the year. These cash flow models are monitored daily to facilitate informed investment decisions and to ensure that sufficient liquidity exists to satisfy Council's financial commitments.

In accordance with section 409 of the Local Government Act, money and property held in the Council's Consolidated fund may be applied towards any purpose allowed by the Act, however in accordance with subsection (3), money received for the specific purpose of water supply or sewerage services may only be used for the specific purpose of water supply and sewerage services. Accordingly, Council holds investments within its Investment Register separately for General fund, Water fund and Sewerage fund and must ensure that sufficient General fund operating cash is available to cover General fund, Water fund and Sewerage fund requirements.

#### **Delegated authorities and investment responsibilities**

Authorities and investment responsibilities are defined within Council's Delegation Authority register. Authority for the implementation of the Investment Policy is delegated by Council to the Chief Executive Officer in accordance with the *Local Government Act 1993*.

The Chief Executive Officer has also delegated authority to invest surplus funds as follows:

- Director Organisational Performance (DOP);
- Chief Financial Officer (CFO);
- other senior financial officers who have the requisite skills to undertake investment functions (as per the Delegations Register).

Officers with delegated authority are required to acknowledge they have received a copy of this Policy and understand their obligations in this role.

#### **Investment responsibilities**

When determining surplus funds available for investments, Council's Revenue Section must reasonably determine that Council's general fund cash liquidity can meet cash flow requirements including water fund and sewer fund.

Council's Revenue Section prepares investment recommendations in accordance with this Policy and the Investment Strategy. To achieve the best value for Council's investments, recommendations will consider:

- credit risk;
- forecast cash requirements;
- alternative investments with comparable risk;
- liquidity and maturity profiles.

Where investing directly, Council shall demonstrate reasonable endeavours to ensure best execution, having regard to competing rates. Council will have regard to:

- the range of ADIs of acceptable quality;
- sources of deposits (treasury department direct, brokers, retail rates, branches, etc.) and tradeable securities (brokers, primary issuance);
- relative value at various terms;
- the character and competing merits of managed funds (TCorpIM) and direct investments.

Two authorised signatories, with appropriate delegation limits, must approve each investment recommendation. Recommendations must be retained on file as a permanent record.

**Cash** - Council retains funds for daily operational payment needs in a combination of a cheque account and sweep account. A sweep facility manages savings and day-to-day spending money by automating transfers between linked transaction and savings accounts. Council sets a lower and upper limit for its transaction account balance. A sweep facility automatically moves money from higher interest saver accounts to maintain a minimum transaction account balance. At the upper limit, money is automatically transferred to savings.

**Ethics and Conflicts of Interest** - Officers shall refrain from personal activities that would conflict with the proper execution and management of Council's investment portfolio. Officers must disclose any conflict of interest to the Chief Executive Officer. Independent advisors are also to declare that they have no actual or perceived conflicts of interest and receive no inducements in relation to Council's investments.

#### **Measurement of investment performance**

Investment performance includes both interest returns and any change in the underlying capital value of the investments.

Interim fluctuations of capital value are excluded from the monthly measurement of investment performance on the basis that:

- fixed investments have no mechanism for realising gains prior to maturity, and tradeable securities are held on a multi-year perspective – not actively traded;
- there is no certainty that these returns will be realised, until the point of maturity or sale of the asset and so they should not be spent;
- cash liquidity requirements are structured and managed to ensure that Council is not in a financial position that will require a forced sale of these assets.

Notwithstanding the above position, changes in capital value are relevant and the monthly investment report will therefore provide Council with indicative market valuations of each investment. In the event that the capital value of any investment becomes permanently impaired, or a capital loss or gain is actually realised (through disposal), the loss or gain of value will be recognised within that month's financial accounts.

**Performance benchmarks**

The performance of each investment will be assessed against the benchmarks listed in the table below.

It is Council’s expectation that the performance of each investment will be greater than or equal to the applicable benchmark whilst taking into account its risks, liquidity and other benefits. Council will take due steps to ensure that any investment is executed at the best pricing reasonably possible.

<b>Investment</b>	<b>Performance Benchmark</b>	<b>Time Horizon</b>
Funds held in overnight accounts - 11 am Account including TCorpIM Cash Fund, Cash Management Accounts.	AusBond Bank Bill Index (BBI)	3 months or less
Short dated bills, Term Deposits of appropriate remaining term, FRNs nearing maturity, TCorpIM Short Term Income.		3 months to 12 months
Term Deposits, FRNs with a maturity date between 1 and 2 Years.		1 to 2 years
FRNs, Bonds, Term deposits with a maturity date between 2 and 5 Years.		2 to 5 Years
TCorpIM Managed Funds (Diversified or growth assets).	Fund’s Internal Benchmark	3 Years (M/T Growth) 5+ Years (L/T Growth or other Growth)

Grandfathered investments are allocated to the appropriate horizon based on expected or average exit date and should be taken into account when allocating the rest of the portfolio. The decision on when to exit such investments are based on a range of criteria specific to the investments – including but not limited to factors such as:

- Returns expected over the remaining term;
- Fair values;
- Competing investment opportunities;
- Costs of holding;
- Liquidity and transaction costs;
- Outlook for future investment values; and
- Risk of defaulting payment.

In general, it is expected that professional advice will be sought before transacting in “grandfathered” investments. This Policy does not presume disposal; however, the removal of an asset from the Minister’s Order would warrant a review of its suitability for retention.

**Reporting and Review**

Documentary evidence must be held for each investment and details thereof maintained in the investment register. The documentary evidence must provide Council legal title to the investment.

Council will maintain a separate record of money it has invested under section 625 of the *Local Government Act 1993*, in accordance with the criteria defined by the *Local Government Code of Accounting Practice and Financial Reporting*.

A monthly investments report will be provided to Council. The report will detail the investment portfolio in terms of holdings by maturity, returns generated for the portfolio compared to the AusBond Bank Bill Index, and comparison with the budget. The monthly report will also confirm compliance of Council's investments within legislative and Policy limits.

In accordance with the *Local Government Code of Accounting Practice & Financial Reporting*, Council will undertake at least an annual review of its Investment Policy and Investment Strategy.

If there are any significant changes to the Act, regulations, issued guidelines, or if the market changes to a degree that warrants an earlier examination, the Policy and/or Strategy will be reviewed and brought back to Council for its consideration.

#### **Audit oversight**

Council's external auditors will review Council's investments as part of the Annual Financial Reports. This includes seeking independent certification from the relevant financial institutions (banks, fund managers, etc.) to confirm the balance of investments held on Council's behalf at the end of the financial year, and the adequacy of their internal control procedures.

Council's Internal Audit unit will also periodically review the adequacy of the Investment Policy, Strategy and management's internal controls as part of the internal audit program.

#### **Investment criteria**

This section sets out the criteria for investments to be considered for inclusion within Council's portfolio. In particular, it defines the mandatory investment criteria which all investments must satisfy.

Current investment regulations require Councils to invest with governments, NSW Treasury Corporation (NSW TCorp and NSW TCorpIM) or in specified investments with Approved Deposit-taking Institutions (ADI) such as Australian banks or branches of foreign owned banks, credit unions and/or building societies as it acknowledges the additional assurance that arises from their regulation by the Australian Prudential Regulation Authority (APRA).

#### **Mandatory investment criteria**

##### ***Scope***

Investments must comply with legislative authorities.

##### ***Currency***

Investments must be denominated in Australian Dollars.



**Ownership**

Investments must be held in the name of Dubbo Regional Council. This includes beneficial ownership, where invested through a custodian.

**Portfolio Credit rating framework**

Direct investments beyond government guaranteed deposits must have a credit rating, with the exception of a permitted allocation to a local financial institutions that are unrated as per the investment limit table.

The credit rating structure of individual investments and the total portfolio must comply with the maximum tenor as listed in the following table, which also applies differential tenor limits by rating:

Investment Class	Portfolio Limits	Counterparty Limit	Max Term
TCorp	100%	100%	N/A
AAA Rated	100%	100%	N/A
AA+ to AA- Rated including the 4 major banks	100%	40%	5 years
A+ to A- Rated	60%	35%	5 years
BBB+ to BBB- Rated	35%	15%	5 years
Unrated	10%	5%	12 months
Unrated – Local ADI	5%	5%	12 months

Standard & Poor's (or equivalent Moody's or Fitch) ratings attributed to each individual institution will be used to determine maximum holdings.

In the event of disagreement between two agencies as to the rating band ("split ratings") Council shall use the lower of the ratings. Where more than two ratings exist, Council shall discard the lowest rating and then use the lower of the higher two ratings when assessing new purchases.

Credit ratings can apply to either, products and institutions. However, this Policy requires the rating applicable to the institution responsible for the product (e.g. guarantor) to be taken as the relevant rating given this represents the underlying risk to Council. Rating criteria use the best applicable guide where an investment is not explicitly rated. For example, the TCorpIM fixed interest funds are assessed based on the underlying investment mix. In some ADIs (such as Rabobank Australia) a rating is only held by a parent institution.

**Notes:**

- Credit ratings must be monitored regularly by Finance staff to ensure ongoing compliance. Investments with credit ratings downgraded to an extent that they no longer comply will be divested as soon as practicable, in accordance with grandfathering under this Policy.

- Credit risk investment parameters are based on credit rating bands as published by the Standard and Poor's credit rating agency. If not rated by S&P, Moody's or Fitch Ratings may be used instead.

#### ***Risk Management Guidelines***

Investments obtained are to be considered in light of the following key criteria:

- ***Preservation of Capital*** – the requirement for preventing losses in an investment portfolio's total value;
- ***Credit Risk*** – The risk that a party or guarantor to a transaction will fail to fulfil its obligations. In the context of this document it relates to the risk of loss due to the failure of an institution/entity with which an investment is held to pay the interest and/or repay the principal of an investment;
- ***Diversification*** – the requirement to place investments in a broad range of products so as not to be over exposed to a particular sector of the investment market;
- ***Liquidity Risk*** – the risk that Council is unable to redeem investments at a fair price within a timely period, and thereby Council incurs additional costs (or in the worst case is unable to execute its spending plans) either through investment in fixed term products, products with long redemption periods, or failure of the counterparty of honour intended liquidity terms;
- ***Market Risk*** – the risk that fair value or future cash flows will fluctuate due to changes in market prices, or benchmark returns will unexpectedly overtake the investment's return;
- ***Legal Risk*** – inability to enforce a contract, resulting in loss;
- ***Fidelity Risk*** – inadequate procedures and controls, resulting in fraud by internal or external parties;
- ***Maturity Risk*** – the risk relating to the length of term to maturity of the investment. The longer the term, the greater the length of exposure and risk to market volatilities; and
- ***Rollover Risk*** – the risk that income will not meet expectations or budgeted requirement because interest rates are lower than expected in future.

#### ***Safe Custody Arrangements***

Where necessary, investments may be held in safe custody on Council's behalf, as long as the following criteria are met:

- Council must retain beneficial ownership of all investments;
- Adequate documentation is provided, verifying the existence of the investments at inception, in regular statements and for audit;
- The Custodian conducts regular reconciliation of records with relevant registries and/or clearing systems; and
- The Institution or Custodian recording and holding the assets will be:
  - The Custodian nominated by NSW TCorp for TCorpIM Funds;
  - Austraclear;
  - An institution with an investment grade Standard and Poor's, Moody's or Fitch rating; or

- An institution with adequate insurance, including professional indemnity insurance and other insurances considered prudent and appropriate to cover its liabilities under any agreement.

***Investment Horizon Limits***

Council’s investment portfolio shall be structured around the time horizon of investment to ensure that liquidity and income requirements are met. “Horizon” represents the intended minimum term of the investment, which can be designated as shorter than the legal maturity in case of an expectation of earlier call or the intention to sell the investment. (Such a designation may have accounting implications which must be taken into account.)

Once the primary aim of liquidity is met, Council will ordinarily diversify its maturity profile as this will ordinarily be a low-risk method of obtaining additional return as well as reducing the risks to Council’s income. However, Council always retains the flexibility to invest as short as required by cashflow requirements or the economic outlook.

The factors and/or information used by Council to determine minimum allocations to the shorter durations include:

- Council’s liquidity requirements to cover both regular payments as well as sufficient buffer to cover reasonably foreseeable contingencies;
- Medium term financial plans and major capital expenditure forecasts;
- Known grants, asset sales or similar one-off inflows;
- Seasonal patterns to Council’s surplus funds.

In addition to the term limits of investments based on rating (above), the aggregate portfolio should comply with the following:

<b>Investment Horizon Description</b>	<b>Investment Horizon - Maturity Date</b>	<b>Minimum Allocation</b>	<b>Maximum Allocation</b>
Working capital funds	0-3 months	10%	100%
Short term funds	3-12 months	20%	100%
Short-Medium term funds	1-2 years	0%	70%
Medium term funds	2-5 years	0%	50%
Long term funds	5-10 years	0%	25%

^Council’s Working Capital Funds are inclusive of NAB Professional Fund Account, 31 Day AMP notice saver account and any other similar notice saver accounts with other financial institutions.

Within these broad ranges, Council relies upon assumptions of expected investment returns and market conditions that have been examined with its investment advisor.

***Environmentally and Socially Responsible Investments***

Council will consider the purpose of an investment opportunity in terms of environmental and social outcomes when investing funds where the investment return is favourable relative to alternate investment opportunities.

Subject to compliance with legislation and Investment Policy objectives and parameters, Council will consider investment securities and financial institutions that meet our environmentally and socially responsible investments (ESRI) criteria. ESRI status may be in respect of the individual investment, the issuer of the investment, or both and should be endorsed by an accredited environmentally and socially responsible industry body or institution.

Environmentally and socially responsible investments will be assessed on the same basis as other investment opportunities and the Council will select the investment that best meets its overall investment selection criteria.

The Council's criteria relating to an ESRI are those which:

- Direct investment towards the socially and environmentally productive activities listed below;
- Avoid investment in the socially and environmentally harmful activities listed below. The criteria for ESRI are all preferred and not mandatory requirements.

Environmentally productive activities are considered to be:

- Resource efficiency-especially water and energy;
- Renewable energy;
- Production of environmentally friendly products;
- Recycling, and waste and emissions reduction.

Socially productive activities are considered to be:

- Fair trade and provision of a living wage;
- Human health and aged care;
- Equal opportunity employers, and those that support the values of communities, indigenous peoples and minorities;
- Provision of housing, especially affordable housing.

Environmentally harmful activities are considered to be:

- Production of pollutants, toxins and greenhouse gases (coal, oil and gas);
- Habitat destruction, especially destruction of forests and marine eco-systems;
- Nuclear power;
- Uranium mining.

Socially harmful activities are considered to be:

- Abuse of Human Rights and Labour Rights;
- Involvement in bribery/corruption;
- Production or supply of armaments;
- Manufacture of alcohol, tobacco or gambling products.

Council will advocate for the further development of ESRI options through engagement with financial institutions.

***Investment Advisor***

The Council's investment advisor is appointed by the Chief Executive Officer and must operate under a licence issued by the Australian Securities and Investment Commission. The advisor must be independent and must confirm in writing that they have no actual or potential conflict of interest in relation to investment products being recommended and are free to choose the most appropriate product within the terms and conditions of the Investment Policy. 'Independence' includes receiving no commissions or other benefits in relation to the investments being recommended or reviewed, unless such remuneration is rebated 100% to Council, promptly. Council will make all decisions in relation to the placement of investments as described in the below table shown as **Appendix 1**

Appendix 1	
Term	Definition
Act	<i>Local Government Act 1993</i>
ADI	Authorised Deposit-Taking Institutions (ADIs) are corporations that are authorised under the Banking Act 1959 (Commonwealth) to take deposits from customers.
AusBond BBI	The Bank Bill Index represents the performance of a notional rolling parcel of bills averaging 45 days and is the widely used benchmark for local councils and other institutional cash investments.
Bill of Exchange	A Bill of Exchange is an unconditional order in writing, addressed by one person to another, signed by the person giving it, requiring the person to whom it is addressed to pay on demand, or at a fixed or determinable future time, a sum certain in money to or to the order of a specified person, or to bearer. These can be underwritten by banks, to become "bank bills" on which the benchmark return is calculated.
BBSW	The Bank Bill Swap reference rate (BBSW) is the midpoint of the nationally observed best bid and offer for AFMA Prime Bank eligible securities. The BBSW is calculated daily. Floating rate securities are most commonly reset quarterly to the 90-day BBSW.
Chief Executive Officer	Refers to the statutory executive of the Council as defined in section 335 of the Act, including where on an Interim or Acting basis, and under any alternative titles.
Council Funds	Monies that are invested by Council in accordance with section 625 of the Act.
Debenture	A debenture is a document evidencing an acknowledgement of a debt, which a company has created for the purposes of raising capital. Debentures are issued by companies in return for medium and long-term investment of funds by lenders.
FRN	A Floating Rate Note (FRN) is a medium to long term fixed interest investment where the coupon is a fixed margin ("coupon margin") over a benchmark, also described as a "floating rate". The benchmark is usually the BBSW and is reset at regular intervals – most commonly quarterly.
TCorp	New South Wales Treasury Corporation (NSW TCorp) including the TCorp Investment Management arm which manages the TCorpIM funds (formerly Hour-glass).

Appendix 2



Investment  
Strategy

March

2023

## Investment Strategy

### Purpose

The annual Investment Strategy sets out Council's investment goals and targets for the coming year. The aim of the strategy is to guide the management of Council's investment portfolio over the short to medium term to:

- achieve a balanced and diversified portfolio, in terms of allowable investment products, credit ratings and maturation terms that will outperform the benchmark indices; and
- ensure liquidity when required for Council's operational and capital expenditure needs.

This strategy has been prepared in consultation with Laminar Capital Pty Ltd.

### Scope

The *Investment Strategy* applies to all managers and employees who actively manage investments or have responsibility for employees who actively manage investments.

This strategy should be read in conjunction with Council's *Investment Policy*.

### Effective Date

This document replaces any previous Strategy document approved by Council.

The effective date of this Strategy is 23 March 2023 and will be reviewed in March each year or when a change in either regulation or market conditions necessitates a review.

### Context

Council's investment strategy is determined after taking into consideration a review of the following issues:

- global and domestic economic investment environments;
- investment policy and legislative constraints;
- current composition of Council's investment portfolio;
- long, medium and short term financial plans.

### Global and domestic investment environments

The global economy is showing signs of recovery from the impact of the Covid-19 pandemic. Interest rates remained low throughout 2021 and the beginning of 2022 to provide a supportive environment for investment, however inflation concerns as well as supply chain



issues exacerbated by the Ukraine War have caused central banks to begin raising interest rates from all-time lows.

Bond, credit and share markets fell in December 2022 amid concerns that central banks may need to underpin higher interest rates for longer to return inflation to their targets. A longer period of higher interest rates would increase the already high risk of a global recession developing through 2023.

Australia and New Zealand have been notable exceptions on the inflation front compared to Europe and the US, where annual rates are still rising and are still coming in higher than expected. Even where annual inflation is receding, the growing optimism about the economic outlook may prove to be premature if central banks stick to their guidance of doing “all that it takes” to get inflation down to their targets.

Labour markets are still exceptionally tight almost everywhere. Annual wage growth is running, or threatening to run, at rates that will not allow inflation to come down to target consistently over the next few years. Central banks will need to see some easing of tight labour market conditions before they can end rate hikes.

The RBA lifted the cash rate by 25bps to 3.10% at its early December 2022 policy meeting and indicated more rate hikes would occur over coming months while the RBA assess economic readings. The economic data released during December 2022 and January 2023 show continuing strong spending other than on housing.

In terms of the yield curve, with central banks regularly hiking official rates, adding to risk of a weaker economic growth outlook, the upward pressure remaining on bond yields in the current cycle is likely to be more pronounced on shorter-term bond yields rather than longer-term bond yields. More rate hikes heighten the risk of recession in 2023 and notwithstanding recent yield curve steepening on more positive economic news that implies the yield curve moves towards flat shape and eventually inverse for a period.

#### **Legislative environment**

Council’s investment opportunities are constrained by a combination of legislation, regulation and any directions and guidelines issued by the Minister or the Office of Local Government. There has been no change to the investment legislative environment for a number of years and the most recent Ministerial Investment Order released in January 2011 continues to limit Council’s investment options to:

- term and at-call deposits with Approved Deposit-taking Institutions (ADIs);
- other ADI senior ranked securities;
- investments with NSW Treasury Corporation including their investment management division (TCorp and TCorpIM);
- funds or securities issued or guaranteed by the Commonwealth or any State or Territory.

### Composition of Council's investment portfolio

The conservative nature of Council's Investment Strategy is clearly reflected in the structure of the portfolio, where 94.42% of the portfolio is invested with Australian Prudential Regulation Authority (APRA) - regulated ADIs and 5.58% of the portfolio is invested in Northern Territory Government Bonds.

Council's current portfolio is as follows (as at the end of January 2023)

Investment	Split
Big Four banks	21.67%
Australian mid-tier banks	63.05%
Foreign controlled Australian based ADIs	8.84%
Unrated – Local ADI	0.86%
<b>Total APRA-regulated ADIs</b>	<b>94.42%</b>
Northern Territory Government Bonds	5.58%
<b>Total Investment Composition</b>	<b>100.00%</b>

### Investment strategy

Council's investment portfolio will continue to be prudently managed in accordance with:

- Council's *Investment Policy* and related legislative and regulatory requirements;
- documented risk management procedures to preserve capital; and
- Council's operational and capital funding requirements.

### Objectives

Council's investment strategy for the period is to maintain the highly secure profile of the portfolio, provide liquidity and deliver competitive investment returns commensurate with the portfolio structure.

### Risk profile

The risk profile for Council's investment portfolio is based on the principles of being prudent, conservative and risk averse. This is achieved by managing the diversity and creditworthiness of investments in accordance with the *Investment Policy* and other relevant requirements.

Current investments are with APRA regulated financial institutions and Northern Territory Government Bonds so that credit risk remains minimal.

The maturity profile of the investments is adequately spread to ensure that liquidity and maturity risks are also kept to a minimum.

Securities are highly liquid and Council makes full use of this rather than holding at-call money. Council has historically held Floating Rate Notices (FRNs) to maturity, but is increasingly seeking to optimise the entry and exit points for these types of investments.

#### Liquidity / Maturity

The majority of Council's cash and investments portfolio is held as restricted reserves to satisfy legislative responsibilities and funding commitments contained within the *Dubbo 2040 Community Strategic Plan*.

To ensure Council has available funds to meet these short-term commitments, the following liquidity targets are set in accordance with the *Investment Policy*.

Investment Horizon Description	Investment Horizon - Maturity Date	Minimum Allocation	Maximum Allocation
Working capital funds	0-3 months	10%	100%
Short term funds	3-12 months	20%	100%
Short-Medium term funds	1-2 years	0%	70%
Medium term funds	2-5 years	0%	50%
Long term funds	5-10 years	0%	25%

Council's capital funding requirements will continue to increase over the next few years. Major capital expenditures in 2023 are anticipated to be approximately \$80 million.

Projects are being funded from either grants or restricted assets and impact the overall cash available for investment. The maturity profile of the investment portfolio has become more concentrated in the short and medium term rather than the longer term.

Council's liquidity will be monitored on an ongoing basis to ensure cash requirements are met and that liquidity parameters remain within allowable limits set out in the *Investment Policy*.

#### The Strategy

Investments are to be placed with the advantageous rate to Council and within the limits as set in the tables included in the *Investment Policy* and the Investment Strategy as listed below;

- Investment Policy - Performance Benchmark Table
- Investment Policy - Credit Rating Structure and Tenor Limits
- Investment Strategy – Investment Horizon Description

To maximise performance, the intention is to pursue the following actions during this strategy period;

- Maintain to slightly reduce current cash holdings due to changes to cash rate forecasts from static to rising significantly.

- Increase fixed term deposits past 12 months as comparable term deposit rates have begun to improve.
- Take advantage of longer tenor specials available up to a maximum of 2 to 3 years unless an advantageous rate is available.
- Take advantage of special rates being offered by banks such as Bank of Sydney, Australian Unity bank, BankVic and Auswide bank.
- Identify opportunity in Regional Covered Bonds and Floating Rate Notes.
- Purchase secondary market FRNs where investment can be optimised reducing the liquidity risk and interest rate risk while having no impact on credit risk of the portfolio
- Maintain a well-structured portfolio with a mix of maturities laddered across tenors.
- Maintain longer term investment mix where FRN's represent 30% (currently 17.91 %) is deemed appropriate.

#### **Environmentally and Socially Responsible Investments**

Council's ability to acquire environmentally and socially responsible investments within the current investment and policy environment remains limited, as:

- the structure of many of these investments remains prohibited under the current Ministerial Investment Order; and
- the global financial crisis caused significant declines in the valuation of the financial assets that comprise many of these investments.

Council will, however, continue to explore opportunities for supporting environmentally and socially responsible investments within these constraints. The investment climate is changing over time and Council notes that many large scale renewable projects are expected to evolve, which may offer sustainable investment opportunities in the future *via* co-investments. Council will continue to encourage and give preference to these investments where they comply with the Ministerial Investment Order and satisfy Council's policy and investment objectives.

#### **References**

##### **Laws and standards**

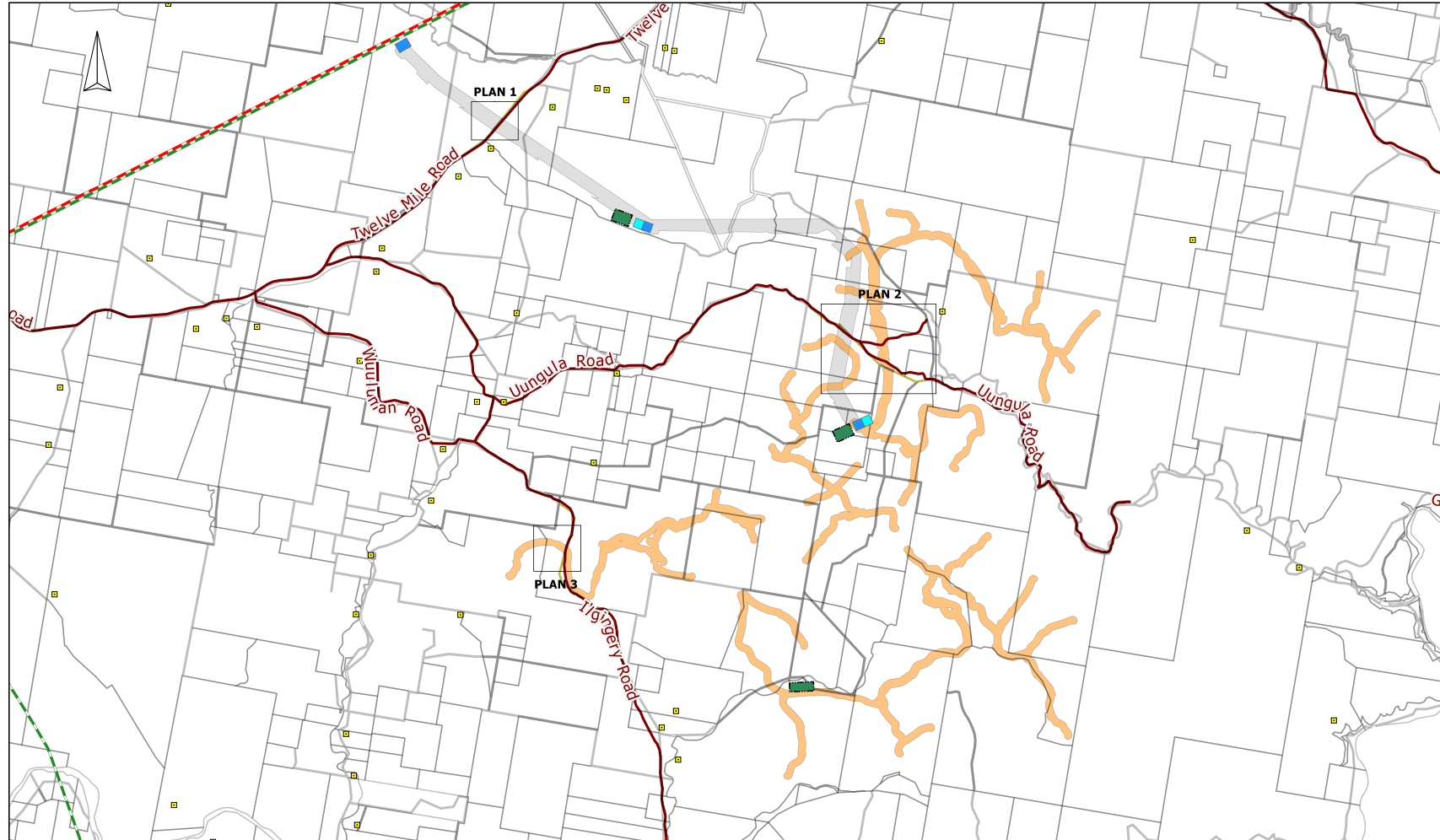
- *Local Government Act 1993*;
- *Local Government (General) Regulation 2021*;
- Ministerial Investment Order;
- *Local Government Code of Accounting Practice and Financial Reporting*;
- Australian Accounting Standards;
- Office of Local Government Circulars.

##### **Policies and procedures**

- Investment Policy

**CCL23/84 Easements and Deed of Agreement to Grant Easements -  
Uungula Wind Farm**

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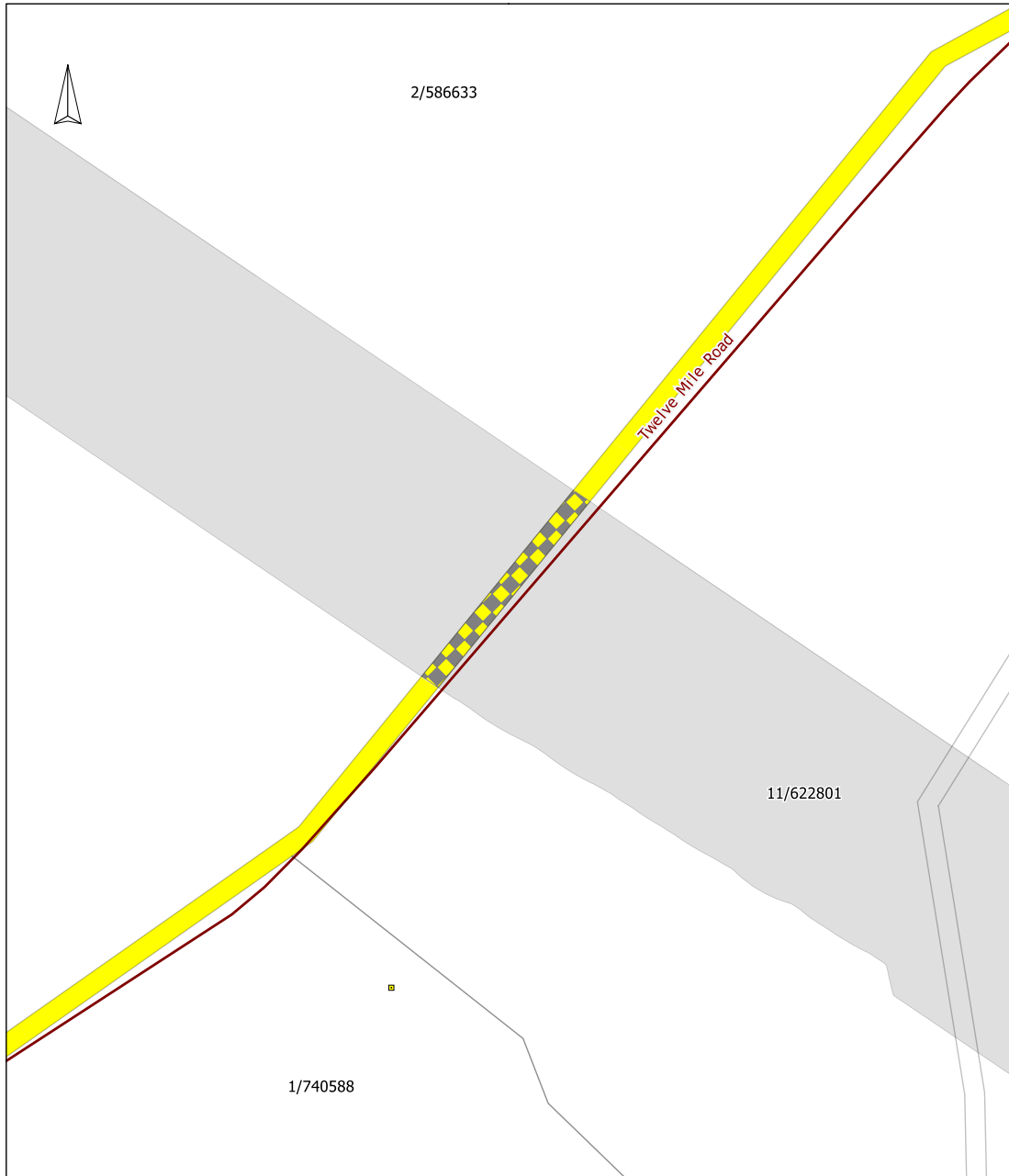


**LEGEND**

Dwelling	Wind farm infrastructure
Area of Road for Easement	Electrical Cable Corridor (UG)
Road Corridor	Electrical Cable Corridor (OH)
Cadastral Lots	Existing powerlines
Public Road	132kV
	330kV

SCALE BAR: 0 to >200 m

COMPANY		<b>UUNGULA WIND FARM PTY LTD</b>			
TITLE		Council Road Crossing – Overview Plan			
DATE	22/02/2023	SCALE	1:61000	DWG NO	UWF-167
DRAWN BY	B KRONENBERG	CHECKED BY	M FLOWER	REV	B
				SHEET	4 OF 4
				JOB NO	110247
				VER	1
				SIZE	A3



<b>LEGEND</b> 	<b>COMPANY</b> UUNGULA WIND FARM PTY LTD				
	<b>TITLE</b> Council Road Crossing – Plan 1: Twelve Mile Road				
<b>SCALE BAR</b> 	DATE 22/02/2023	SCALE 1:3600	DWG NO UWF-167	REV B	VER 1
	DRAWN BY B KRONENBERG	CHECKED BY M FLOWER	SHEET 1 OF 4	JOB NO 110247	SIZE A3



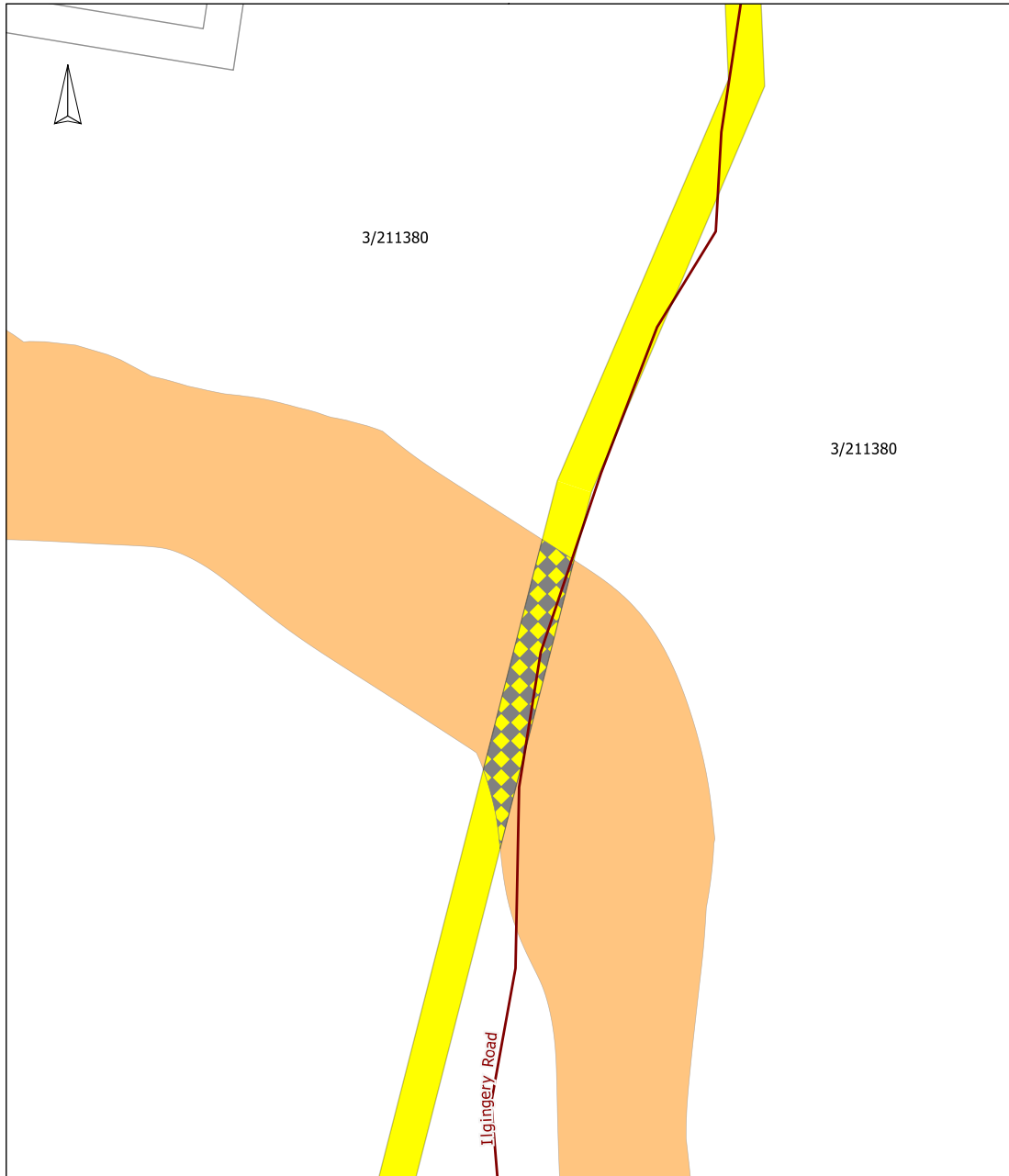
**LEGEND**

- Dwelling
- Area of Road for Easement
- Road Corridor
- Cadastral Lots
- Public Road
- Wind farm infrastructure Electrical Cable Corridor (UG)
- Electrical Cable Corridor (OH)
- Existing powerlines 132kV
- Existing powerlines 330kV

SCALE BAR: 0 to 200 m

COMPANY		UUNGULA WIND FARM PTY LTD			
TITLE					
Council Road Crossing – Plan 2: Uungula Road					
DATE	SCALE	DWG NO	REV	VER	
22/02/2023	1:4300	UWF-167	B	1	
DRAWN BY	CHECKED BY	SHEET	JOB NO	SIZE	
B KRONENBERG	M FLOWER	2 OF 4	110247	A3	





<b>LEGEND</b> 	<b>COMPANY</b> UUNGULA WIND FARM PTY LTD				
	<b>TITLE</b> Council Road Crossing – Plan 3: Ilgingery Road				
<b>SCALE BAR</b> 0 ————— 200 m	<b>DATE</b> 22/02/2023	<b>SCALE</b> 1:2000	<b>DWG NO</b> UWF-167	<b>REV</b> B	<b>VER</b> 1
	<b>DRAWN BY</b> B KRONENBERG	<b>CHECKED BY</b> M FLOWER	<b>SHEET</b> 3 OF 4	<b>JOB NO</b> 110247	<b>SIZE</b> A3

**CCL23/86      Bodangora Wind Farm Community Benefit Fund 2022/2023**

**Attachment 1:** Guidelines - Bodangora Wind Farm Community  
Benefit Fund - Version 3 .....427



## **BODANGORA WIND FARM COMMUNITY BENEFIT FUND Eligibility Criteria and Submission Guidelines**

The Bodangora Wind Farm Community Benefit Fund has been created from Development Contributions arising from the Planning Agreement between Dubbo Regional Council and Bodangora Wind Farm Pty Ltd which remains a wholly owned subsidiary of Iberdrola Australia Ltd.

### **Applications for programs/projects will be rated on the following criteria:**

- Deliver social, cultural, economic or environmental benefits to local communities of the Wellington district.
- Address an identified community priority.
- Demonstrate that any ongoing or recurrent costs of the project can be met by the community group once grant funding has been expensed
- The organisation must demonstrate the capacity to manage funds and deliver the project.
- Is the proposed project activity based within the Wellington and district community?

### **Eligibility**

- Community groups must be based in the Dubbo Regional LGA / Wellington District
- The project / program must be undertaken in Wellington District
- Community groups must be incorporated NFP

### **Important Information**

The maximum grant allocation available per program/project nomination is \$10,000.

Only one application per organisation per round.

Late or incomplete applications will not be considered.

Acquittal reporting on all funded requirements will be a requirement of grant acceptance. Community groups with outstanding project updates or acquittal forms from any previous Council funding, may not be eligible for consideration.

Community groups with outstanding application for extension or which have not expended their funds from previous rounds of the Bodangora Wind Farm Community Benefit Fund within 12 months of provision, may not be eligible for consideration.

The Assessment Panel reserve the right not to approve funding if the program/project:

- is salary, remuneration or profit based
- is for a single person
- is religious or political in nature
- requires ongoing funding for continuity
- supports beauty pageants or similar contests
- provides gambling or games of chance
- does not reflect community standards
- denigrates, excludes or offends minority groups
- degrades the natural environment
- applicant is a NSW or Federal Government department or enterprise funded by Government grants
- applicant has previously received funding from this fund or Council over the past 12 months
- applicant has not satisfied all guidelines or requirements of previous Council funding provisions, particularly the submission of fund acquittals

**How are the projects to be assessed?**

The Bodangora Wind Farm Community Consultative Committee shall use the fund criteria to review, assess and rate applications.

Bodangora Wind Farm Community Consultative Committee shall provide a recommendation report to Council for consideration.

A Council report shall be tabled at Culture and Community Committee/Ordinary Council for final consideration and ratification. The Council report will take full account of the recommendations of the Bodangora Wind Farm Community Consultative Committee.

**Grant Management Guidelines Project Scope**

As part of your grant application you provided a project scope. The scope must be achieved by the end of the project. It is not acceptable, without written consent of Council to change the scope of the project.

Any change of scope that is not approved by Council's Chief Executive Officer may result in the original grant amount being reduced or cancelled, requiring funds to be returned to Council.

**Auspice**

Projects may be auspiced through incorporated NFP organisations. If the grant will be managed through an auspice arrangement then relevant information must be submitted with the application and detailed within the funding application.

### **Use of Grant Funds**

Grant funds may be used to leverage grants external to Council. The Bodangora Wind Farm Community Benefit Fund monies cannot be used in conjunction with existing or future Council grants.

### **Project Finances**

Project finances are to be managed to ensure that the project is completed within the budget proposed. Any project costs above the budget provided in the application are the responsibility of the recipient organisation.

Council shall not provide additional funds towards the project other than the grant provided. Grant funds that are not expended on the project shall be returned to Council.

GST is to be treated in accordance with Australian Taxation Office rules.

Project grants are to be expended within 12 months of the grant being provided. Failure to do so without formal request to Council and approval, may result in the original grant amount being reduced or cancelled requiring funds to be returned to Council.

Council reserves the right to conduct a financial audit of the project either during the project or on completion of the project.

### **Recognition**

Recipient organisations are required to recognise Council and Iberdrola as the funding source on all media, promotional material and project signage. The text to be used is as follows:

“Bodangora Wind Farm Community Benefit Fund: Dubbo Regional Council and Iberdrola Australia.”

### **Project Reporting and Acquittal**

The recipient community group is to report on the project to Council on a six monthly schedule via [ccp.admin@dubbo.nsw.gov.au](mailto:ccp.admin@dubbo.nsw.gov.au). The report should address:

1. Progress
2. Expenditure
3. Issues
4. Photographs showing progress/ completion of the project.

If there is no progress, then a simple email to [ccp.admin@dubbo.nsw.gov.au](mailto:ccp.admin@dubbo.nsw.gov.au) identifying no progress and the reason, is sufficient.

At the end of the project, the community group is to complete the project acquittal form within 4 weeks of completion and provide it along with copies of receipts and photos to Council. Where the project is via an auspice arrangement, the auspice organisation must

provide the acquittal for each individual project. All receipts relating to the project grant must be provided with the project acquittal.

Expenditure should match funding at the end of the project. Where it doesn't comments must be provided on the acquittal as to why expenditure is less than or more than the original project budget.

#### **Liability**

Council and its officers, Iberdrola Australia and its officers, members of the Bodangora Wind Farm Community Consultation Committee and other members of the Fund Assessment Panel shall not be responsible for any liabilities incurred or entered into by the recipient community group as a result of, or arising out of that organisation's responsibilities under the Funding Agreement.

The recipient organisation shall indemnify the Council and its officers, Iberdrola Australia and its officers, members of the Bodangora Wind Farm Community Consultation Committee and other members of the Fund Assessment Panel against any claim, demand, liability suit costs, expenses, action arising out of or in any way connected with the activities of the organisations or agents in consequence of the Funding Agreement except where the claim, demand, liability, costs or action are caused by the Council and its officers, Infigen and its officers, members of the Bodangora Wind Farm Community Consultation Committee and other members of the Fund Assessment Panel.

Public Liability Insurance may have been required for your grant to be approved. If it wasn't submitted within the application then a Certificate of Currency shall be submitted prior to the project commencing.

#### **Future Maintenance or Renewal**

Unless agreed in writing at the time of funding approval Council has no obligations regarding ongoing maintenance or renewal of assets created by the project.