



# AGENDA

## INFRASTRUCTURE, PLANNING AND ENVIRONMENT COMMITTEE

### 14 SEPTEMBER 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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<b>IPEC23/36 ACKNOWLEDGEMENT OF COUNTRY (ID23/1221)</b>	
<b>IPEC23/37 LEAVE OF ABSENCE (ID23/1237)</b>	
<b>IPEC23/38 CONFLICTS OF INTEREST (ID23/1225)</b> In accordance with their Oath/Affirmation under the Act, and Council's Code of Conduct, Councillors must disclose the nature of any pecuniary or non-pecuniary interest which may arise during the meeting, and manage such interests accordingly.	
<b>IPEC23/39 REPORT OF THE CLIMATE CHANGE AND RESILIENCE COMMITTEE - MEETING 29 AUGUST 2023 (ID23/2154)</b> The Committee had before it the report of the Climate Change and Resilience Committee meeting held 29 August 2023.	3
<b>IPEC23/40 BUILDING SUMMARY - AUGUST 2023 (ID23/2047)</b> The Committee had before it the report dated 31 August 2023 from the Director Development and Environment regarding Building Summary - August 2023.	6
<b>IPEC23/41 RESPONSE TO NOTICE OF MOTION - DROUGHT SECURITY PROJECTS (ID23/1902)</b> The Committee had before it the report dated 28 August 2023 from the Manager Strategy Water Supply and Sewerage regarding Response to Notice of Motion - Drought Security Projects.	22

- IPEC23/42 DUKE OF WELLINGTON BRIDGE - FLOOD DAMAGE TREATMENT OPTIONS (ID23/1751)** 69
- The Committee had before it the report dated 10 July 2023 from the Manager Infrastructure Delivery regarding Duke of Wellington Bridge - Flood Damage Treatment Options.
- IPEC23/43 SOUTH BRIDGE STRATEGIC CONCEPTS - UPDATE AND NEXT STEPS (ID23/2204)** 74
- The Committee had before it the report dated 1 September 2023 from the Manager Infrastructure Strategy and Design regarding South Bridge Strategic Concepts - Update and Next Steps.



**DUBBO REGIONAL  
COUNCIL**

## **Report of the Climate Change and Resilience Committee - meeting 29 August 2023**

**AUTHOR: Governance Officer**  
**REPORT DATE: 29 August 2023**

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The Council had before it the report of the Climate Change and Resilience Committee meeting held 29 August 2023.

### **RECOMMENDATION**

**That the report of the Climate Change and Resilience Committee meeting held on 29 August 2023, be adopted.**



**REPORT  
CLIMATE CHANGE AND RESILIENCE  
COMMITTEE  
29 AUGUST 2023**

**PRESENT:** Councillors M Wright, R Ivey, the Director Development and Environment, the Manager Resource Recovery and Efficiency, P Duggan (Community Representative), M Gray (Community Representative), S Ellis (Community Representative), M McDonald (Community Representative), J Rice-Ward (Community Representative) and J Parker (Community Representative).

**ALSO IN ATTENDANCE:** The Organisational Sustainability Coordinator, the Executive Officer (Development and Environment) and the Co-Chief Executive Officer 100% Renewables.

Councillor M Wright assumed the Chair of the meeting.

The proceedings of the meeting commenced at 4.05 pm.

**CCAR23/15 ACKNOWLEDGEMENT OF COUNTRY (ID23/1163)**

Councillor M Wright delivered an Acknowledgement of Country.

**CCAR23/16 LEAVE OF ABSENCE (ID23/1165)**

There were requests for leave of absence received from Councillor M Dickerson, the Chief Executive Officer and J Karki (Community Representative).

Councillor R Ivey joined the meeting at 4.33 pm via Audio-Visual Link.

**CCAR23/17 CONFLICT OF INTEREST (ID23/1167)**

There were no Conflicts of Interest declared.

**CCAR23/18 REPORT OF THE CLIMATE CHANGE AND RESILIENCE COMMITTEE - MEETING  
30 MAY 2023 (ID23/2059)**

The Committee had before it the report of the Climate Change and Resilience Committee meeting held 30 May 2023.

**OUTCOME**

**That the report of the Climate Change and Resilience Committee meeting held on 30 May**

**2023, be noted.**

At this juncture Patrick Denvir, Co-Chief Executive Officer 100% Renewables entered the meeting via Audio-Visual Link.

**CCAR23/19 DUBBO REGIONAL COUNCIL NETZERO FRAMEWORK – PRESENTATION BY CONSULTANT 100% RENEWABLES AND THE ORGANISATIONAL SUSTAINABILITY COORDINATOR (ID23/2060)**

The Committee was addressed by the Consultant 100% Renewables and the Organisational Sustainability Coordinator regarding this item.

**OUTCOME**

**That the address by the Consultant 100% Renewables and the Organisational Sustainability Coordinator be noted.**

The meeting closed at 5.28pm.

.....  
CHAIRPERSON



## REPORT: Building Summary - August 2023

**DIVISION:** Development and Environment  
**REPORT DATE:** 31 August 2023  
**TRIM REFERENCE:** ID23/2047

### EXECUTIVE SUMMARY

<b>Purpose</b>	Provide review and update	
<b>Issue</b>	<ul style="list-style-type: none"> <li>Statistical overview of the number and type of development approvals for the Dubbo Regional Local Government Area (LGA) for the Financial Year 2023/2024.</li> <li>The 'total number of dwellings' approved in August was 34 including 23 single dwellings and 11 'other' dwellings.</li> <li>Total value of development applications determined in August was in excess of \$19.5M, down from \$34M in July.</li> <li>The volume of development applications approved for the financial year to date compared to the same period last year is down 24%.</li> <li>The value of development applications approved for the financial year to date compared to the same period last year is up 78%.</li> </ul>	
<b>Reasoning</b>	<ul style="list-style-type: none"> <li>Provide data relating to approved Development Applications.</li> <li>Provide specific statistics of the number of dwellings and other residential development approved.</li> <li>Provide comparative data for corresponding period.</li> </ul>	
<b>Financial Implications</b>	Budget Area	There are no financial implications arising from this report.
<b>Policy Implications</b>	Policy Title	There are no policy implications arising from this report.

### STRATEGIC DIRECTION

The Towards 2040 Community Strategic Plan is a vision for the development of the region out to the year 2040. The Plan includes six principle themes and a number of objectives and strategies. This report is aligned to:

Theme: 1 Housing

CSP Objective: 1.1 Housing meets the current and future needs of our community

Delivery Program Strategy: 1.1.1 A variety of housing types and densities are located close to appropriate services and facilities

Theme:	3 Economy
CSP Objective:	3.3 A strategic framework is in place to maximise the realisation of economic development opportunities for the region
Delivery Program Strategy:	3.3.1 Land is suitably zoned, sized and located to facilitate a variety of development and employment generating activities

**RECOMMENDATION**

**That the report of the Director Development and Environment, dated 31 August 2023, be noted.**

*Stephen Wallace*  
Director Development and Environment

*SW*  
Director Development and Environment

**REPORT**

**Consultation**

DRC’s Statutory Planning and Building and Development Certification staff assess Development Applications in accordance with Section 4.15 of the *Environmental Planning and Assessment Act 1979* and consult in accordance with Council’s adopted Community Participation Plan.

**Resourcing Implications**

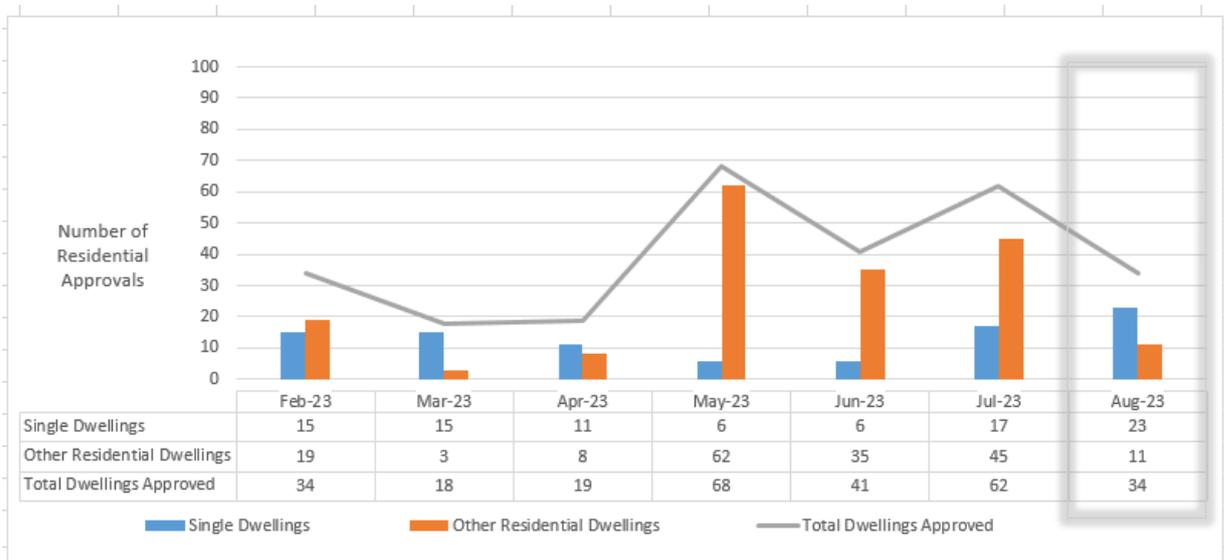
Council employ staff to receipt, lodge, assess, determine and monitor compliance of the determinations referred to in this report.

**Building Summary**

Provided, for information, are the latest statistics (as at the time of production of this report) for development and complying development approvals for Dubbo Regional Council.

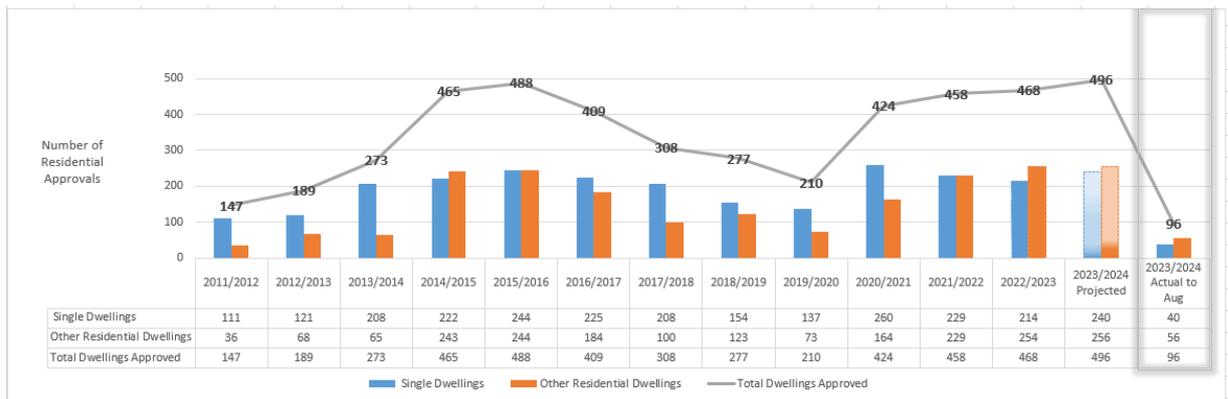
**Residential Building Summary**

Dwellings and other residential developments approved during August 2023, and for comparison purposes, the six month prior are shown in graph 1.



**Graph 1:** Residential Approvals Summary – February 2023 to August 2023

A summary of residential approvals for financial years from 2013-2014 are shown in graph 2. The graph also includes both an actual and a projected figure for the financial year to date.



**Graph 2:** Residential Approvals Summary – Comparative Financial Years

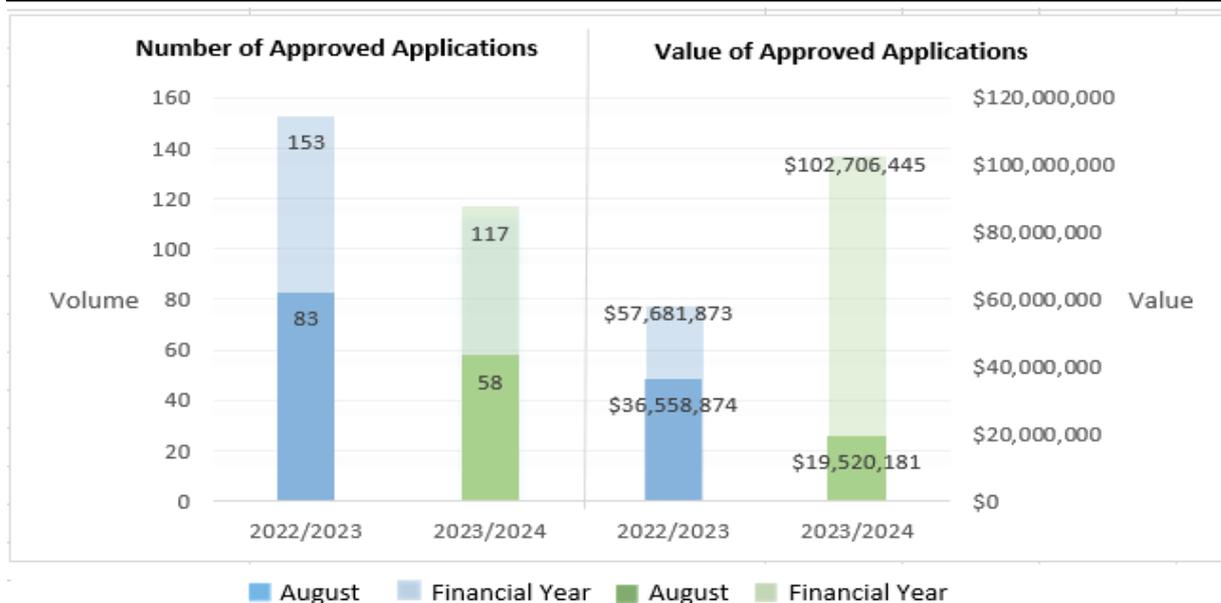
For consistency with land use definitions included in the Local Environmental Plan (LEP), residential development has been separated into ‘Single Dwellings’ (defined in the LEP as ‘dwelling house’) and ‘Other residential development’ (comprising ‘dual occupancies’, ‘secondary dwellings’, ‘multi dwelling housing’, ‘seniors housing’, ‘shop top housing’ and ‘residential flat buildings’).

These figures include development applications approved by private certifying authorities (in the form of Complying Development Certificates).

A numerical summary of residential approvals for the former Dubbo City Council area since 2013-2014 is included in **Appendix 1**. However, it should be noted that the figures from July 2017 onwards include the approvals within the former Wellington Local Government Area as a consequence of the commencement of the merged application system.

### Approved Development Applications

The total number of approved Development Applications (including Complying Development Certificates) for August 2023, and a comparison with figures 12 months prior and the total for the respective financial years to date, are as follows:



A summary breakdown of the figures is included in **Appendices 2-5**.

### Online Application Tracking

All development applications, construction certificates and complying development certificates are tracked online and can be accessed at any time. A link is available on Councillor iPads for assistance (<https://planning.dubbo.nsw.gov.au/Home/Disclaimer>).

What information is available:

- All development applications, construction certificates and complying development certificates submitted from 1 November 2015 will provide access to submitted plans and supporting documents as well as tracking details of the progress of the application.
- More limited information is provided for applications submitted from 1 January 2001 to 31 October 2015.
- Occupation certificates (where issued) are provided from 2010.

What information is not available:

- Application forms.
- Documentation associated with privately certified applications.
- Internal assessment reports.

The information included in this report is provided for notation.

### APPENDICES:

- [1](#) Building Summary - August 2023
- [2](#) Approved Applications - 1 August 2023 to 31 August 2023
- [3](#) Approved Applications - 1 August 2022 to 31 August 2022
- [4](#) Approved Applications - 1 July 2023 to 31 August 2023

5↓ Approved Applications - 1 July 2022 to 31 August 2022

## STATISTICAL INFORMATION ON SINGLE DWELLINGS AND OTHER RESIDENTIAL DEVELOPMENTS

	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
<b>2013/2014</b>													
Single Dwellings	23	17	25	20	14	15	19	10	18	14	19	14	<b>208</b>
Other Residential Developments	0	1	1	0	0	1	4	2	1	2	0	3	<b>15</b>
(No of units)	0	2	2	0	0	2	46	1	2	4	0	6	<b>65</b>
<b>2014/2015</b>													
Single Dwellings	19	34	19	21	13	16	14	12	20	19	15	20	<b>222</b>
Other Residential Developments	3	1	6	5	6	12	0	4	2	1	9	5	<b>54</b>
(No of units)	6	2	31	50	6	21	0	87	4	1	25	10	<b>243</b>
<b>2015/2016</b>													
Single Dwellings	27	20	26	19	21	26	19	14	16	17	17	22	<b>244</b>
Other Residential Developments	6	8	8	4	1	3	3	3	3	5	3	8	<b>55</b>
(No of units)	50	98	12	7	2	5	18	4	5	14	6	23	<b>244</b>
<b>2016/2017</b>													
Single Dwellings	24	13	17	18	12	21	16	18	18	14	18	36	<b>225</b>
Other Residential Developments	8	5	7	4	6	5	3	2	1	5	4	7	<b>57</b>
(No of units)	10	10	13	7	10	16	6	75	2	8	13	14	<b>184</b>
<b>2017/2018</b>													
Single Dwellings	26	21	13	12	16	19	4	22	16	21	22	16	<b>208</b>
Other Residential Developments	6	9	2	1	9	1	5	5	11	1	3	5	<b>58</b>
(No of units)	11	16	3	2	16	2	8	5	23	2	3	9	<b>100</b>
<b>2018/2019</b>													
Single Dwellings	15	26	13	7	17	8	19	5	8	11	19	6	<b>154</b>
Other Residential Developments	3	4	3	0	6	2	2	1	5	7	9	5	<b>47</b>
(No of units)	4	7	5	0	11	29	4	1	12	25	15	10	<b>123</b>
<b>2019/2020</b>													
Single Dwellings	16	11	8	18	27	14	4	5	10	8	8	8	<b>137</b>
Other Residential Developments	4	4	3	4	11	6	1	4	2	1	1	1	<b>42</b>
(No of units)	8	7	6	7	19	10	2	7	2	2	2	1	<b>73</b>

	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
<b>2020/2021</b>													
Single Dwellings	7	17	21	12	20	46	18	25	30	27	17	20	<b>260</b>
Other Residential Developments	5	2	5	6	3	15	2	6	5	5	7	9	<b>70</b>
(No of units)	7	4	11	10	4	35	5	10	8	9	47	14	<b>164</b>
<b>2021/2022</b>													
Single Dwellings	31	17	17	13	16	40	9	17	23	14	19	13	<b>229</b>
Other Residential Developments	9	7	3	4	5	8	9	9	7		3	4	<b>68</b>
(No of units)	84	63	5	6	13	12	12	16	9		4	5	<b>229</b>
<b>2022/2023</b>													
Single Dwellings	15	32	46	8	28	13	19	15	15	11	6	6	<b>214</b>
Other Residential Developments	4	3	3	4	9	4	7	13	2	6	5	4	<b>64</b>
(No of units)	7	3	5	6	84	8	14	19	3	8	62	35	<b>254</b>
<b>2023/2024</b>													
Single Dwellings	17	23											<b>40</b>
Other Residential Developments	5	6											<b>11</b>
(No of units)	45	11											<b>56</b>

Note 1. Single Dwellings = Single 'Dwelling House'

Note 2. Other Residential Developments = Dual occupancies, secondary dwellings, multi dwelling housing, seniors housing, shop top housing and residential flat buildings



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Print Date: 31/08/2023

Print Time: 4:38:03PM

**Approved Development & Complying Development Applications  
 by Dubbo Regional Council and Private Certifiers-Period 1/08/2023 - 31/08/2023**

Development Type	Number of Applications	Est. \$	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwellings	New Lots
Alterations and additions to commercial	3	177,878			3	177,878		
Alterations and additions to industrial	1	145,000			1	145,000		
Alterations and additions to residential	3	560,578			3	560,578		
Balconies, decks patios terraces or ve	6	168,525	6	168,525				
Demolition	1	0	1					
Dual occupancy	3	2,774,886	3	2,774,886			8	
Dwelling	23	11,822,668	23	11,822,668			23	
Earthworks / change in levels	1	440,000	1	440,000				
Garages carports and car parking spaces	5	29,600	5	29,600				
Industrial development	1	583,787	1	583,787				
Other	2	1,685,000	2	1,685,000				
Pools / decks / fencing	4	127,455	4	127,455				
Secondary dwelling	3	799,100	3	799,100			3	
Shed	7	138,704	7	138,704				
Signage	1	22,000	1	22,000				
Subdivision of land	5	45,000						15
Change of use	1	0			1			
<b>Totals for Development Types</b>	<b>70</b>	<b>19,520,181</b>						

**Total Number of Applications for this period: 58**

\*\*\* Note: There may be more than one Development Type per Development Application  
 Statistics include applications by Private Certifiers

Approved Development & Complying Development Applications  
by Dubbo Regional Council and Private Certifiers-Period 1/08/2023 - 31/08/2023

Development Type	Number of Applications	Est. \$	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwellings	New Lots
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 ABN 53 539 070 928

Print Date: 31/08/2023

Print Time: 4:39:29PM

**Approved Development & Complying Development Applications  
 by Dubbo Regional Council and Private Certifiers-Period 1/08/2022 - 31/08/2022**

Development Type	Number of Applications	Est. \$	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwellings	New Lots
Alterations and additions to commercial	5	2,442,029			5	2,442,029		
Alterations and additions to residential	7	789,320			7	789,320		
Balconies, decks patios terraces or ve	5	106,773	5	106,773				
Centre based childcare	1	2,280,346	1	2,280,346				
Demolition	3	35,000	3	35,000				
Dwelling	32	14,015,227	32	14,015,227			32	
Farm buildings	1	140,000	1	140,000				
Garages carports and car parking spaces	2	60,000	2	60,000				
Health services facilities	1	90,000	1	90,000				
Other	1	8,667,599	1	8,667,599				
Pools / decks / fencing	9	390,785	9	390,785				
Secondary dwelling	3	501,000	3	501,000			3	
Shed	14	639,795	14	639,795				
Signage	1	30,000	1	30,000				
Subdivision of land	4	5,366,000	2	3,540,000				63
Retail Premises	1	1,000,000	1	1,000,000				
Change of Use	1	5,000	1	5,000				
<b>Totals for Development Types</b>	<b>91</b>	<b>36,558,874</b>						

**Total Number of Applications for this period: 83**

\*\*\* Note: There may be more than one Development Type per Development Application  
 Statistics include applications by Private Certifiers

Approved Development & Complying Development Applications  
by Dubbo Regional Council and Private Certifiers-Period 1/08/2022 - 31/08/2022

Development Type	Number of Applications	Est. \$	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwellings	New Lots
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----- End of Report -----



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Print Date: 31/08/2023

Print Time: 4:27:14PM

**Approved Development & Complying Development Applications  
by Dubbo Regional Council and Private Certifiers-Period 1/07/2023 - 31/08/2023**

Development Type	Number of Applications	Est. \$	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwellings	New Lots
Alterations and additions to commercial	3	177,878			3	177,878		
Alterations and additions to industrial	1	145,000			1	145,000		
Alterations and additions to residential	10	1,107,108			10	1,107,108		
Balconies, decks patios terraces or ve	7	169,725	7	169,725				
Demolition	1	0	1					
Dual occupancy	4	3,024,886	4	3,024,886			9	
Dwelling	40	20,976,558	40	20,976,558			40	
Earthworks / change in levels	1	440,000	1	440,000				
Garages carports and car parking spaces	8	90,216	8	90,216				
Health services facilities	1	878,000	1	878,000				
Industrial development	3	4,224,284	3	4,224,284				
Mixed use development	1	65,265,000	1	65,265,000			41	
Other	2	1,685,000	2	1,685,000				
Pools / decks / fencing	15	674,413	15	674,413				
Restaurant or cafe	1	60,000	1	60,000				
Secondary dwelling	6	1,264,100	6	1,264,100			6	
Shed	16	360,127	16	360,127				
Signage	2	57,500	2	57,500				
Stratum / community title subdivision	1	0	1					3
Subdivision of land	9	1,863,650						53
Telecommunications and communication fac	1	243,000	1	243,000				
Business Premises	1	0	1					

**Approved Development & Complying Development Applications  
by Dubbo Regional Council and Private Certifiers-Period 1/07/2023 - 31/08/2023**

Development Type	Number of Applications	Est. \$	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwellings	New Lots
Change of use	1	0			1			
<b>Totals for Development Types</b>	135	102,706,445						

**Total Number of Applications for this period: 117**

\*\*\* Note: There may be more than one Development Type per Development Application  
Statistics include applications by Private Certifiers

----- End of Report -----



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ABN 53 539 070 928

Print Date: 31/08/2023

Print Time: 4:36:52PM

**Approved Development & Complying Development Applications  
by Dubbo Regional Council and Private Certifiers-Period 1/07/2022 - 31/08/2022**

Development Type	Number of Applications	Est. \$	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwellings	New Lots
Retail Building	1	80,000			1	80,000		
Alterations and additions to commercial	5	2,442,029			5	2,442,029		
Alterations and additions to industrial	1	300,000			1	300,000		
Alterations and additions to residential	14	2,353,534			14	2,353,534		
Balconies, decks patios terraces or ve	9	158,358	9	158,358				
Centre based childcare	3	6,727,991	3	6,727,991				
Demolition	5	978,257	5	978,257				
Dual occupancy	2	855,000	2	855,000			3	
Dwelling	47	20,735,848	47	20,735,848			47	
Earthworks / change in levels	3	102,960	3	102,960				
Farm buildings	1	140,000	1	140,000				
Garages carports and car parking spaces	5	113,500	5	113,500				
Health services facilities	2	812,203	2	812,203				2
Mixed use development	1	390,000	1	390,000				
Multi-dwelling housing	1	495,000	1	495,000			3	5
Other	1	8,667,599	1	8,667,599				
Pools / decks / fencing	22	960,715	22	960,715				
Retaining walls, protection of trees"	1	0	1					
Secondary dwelling	4	790,690	4	790,690			4	
Shed	28	1,121,635	28	1,121,635				
Signage	1	30,000	1	30,000				
Subdivision of land	9	5,458,000	4	3,585,000				69

**Approved Development & Complying Development Applications  
by Dubbo Regional Council and Private Certifiers-Period 1/07/2022 - 31/08/2022**

Development Type	Number of Applications	Est. \$	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwellings	New Lots
Telecommunications and communication fac	1	2,963,554	1	2,963,554				
Retail Premises	1	1,000,000	1	1,000,000				
Change of Use	1	5,000	1	5,000				
<b>Totals for Development Types</b>	<b>169</b>	<b>57,681,873</b>						

**Total Number of Applications for this period: 153**

\*\*\* Note: There may be more than one Development Type per Development Application  
Statistics include applications by Private Certifiers

----- End of Report -----



DUBBO REGIONAL  
COUNCIL

## REPORT: Response to Notice of Motion - Drought Security Projects

**DIVISION:** Infrastructure  
**REPORT DATE:** 28 August 2023  
**TRIM REFERENCE:** ID23/1902

### EXECUTIVE SUMMARY

<b>Purpose</b>	The following report outlines projects being undertaken by Council with funding provided by the Department of Planning and Environment (DPE) to increase the resilience of potable water supplies in Dubbo, Geurie and Wellington during times of severe drought.	
<b>Issue</b>	<ul style="list-style-type: none"> <li>• Periods of significant drought increase the risk of the Macquarie-Wambuul River ceasing to flow. Currently, such an event would result in loss of viable potable water supplies in Geurie, Dubbo and Wellington.</li> <li>• Drought security projects being undertaken by Council focus on increasing access to groundwater as a means of providing a more secure potable water supply for communities in times of severe drought.</li> </ul>	
<b>Reasoning</b>	To supply Dubbo, Geurie and Wellington with a safe and reliable source of potable water in times of severe drought with water restrictions applied.	
<b>Financial Implications</b>	Budget Area	Infrastructure – Water Fund
	Funding Source	DWS025 – <i>Dubbo Drought Groundwater Infrastructure Project</i>
	Proposed Cost	\$30,000,000
	Ongoing Costs	To be determined

### STRATEGIC DIRECTION

The Towards 2040 Community Strategic Plan is a vision for the development of the region out to the year 2040. The Plan includes six principle themes and a number of objectives and strategies. This report is aligned to:

Theme:	2 Infrastructure
CSP Objective:	2.2 Infrastructure meets the current and future needs of our community
Delivery Program Strategy:	2.2.1 Water and sewer infrastructure and services meet the needs of the community
Theme:	2 Infrastructure
CSP Objective:	2.2 Infrastructure meets the current and future needs of our

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	community
Delivery Program Strategy:	2.2.5 Council maintains infrastructure and delivers services at the adopted service levels as agreed with the community
Theme:	6 Environmental Sustainability
CSP Objective:	6.2 We recognise, plan for and respond to the impacts of climate change
Delivery Program Strategy:	6.2.2 Water supply is provided efficiently and sustainably to our community

**RECOMMENDATION**

- 1. That the Manager Strategy Water Supply and Sewerage report be noted.**

*Luke Ryan*  
Director Infrastructure

*CG*  
Manager Strategy Water  
Supply and Sewerage

## BACKGROUND

### Previous Resolutions of Council

22 June 2023  CCL23/155	<ol style="list-style-type: none"><li>1. <i>That the Chief Executive Officer provide a report to Council that sets out strategies implemented, infrastructure projects completed by Council which will provide greater resilience for our region should it move back into drought conditions.</i></li><li>2. <i>That to also be included in this report any other strategies or projects which are being considered or should be considered to further enhance the drought resilience within our Local Government Area.</i></li></ol>
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### The Upper Macquarie Alluvial Ground Water Source

The following information has been taken from the Department of Planning and Environment *Upper Macquarie Alluvial Groundwater Source – Groundwater Annual Report 2022* (attached as **Appendix 1**).

The Upper Macquarie Alluvial Groundwater Source (UMAA), (or Aquifer), depicted in **Figure 1** below occupies a narrow valley, extending northwest from Wellington to approximately 10km beyond Dubbo and then west-southwest until it reaches the Lower Macquarie Alluvial Groundwater Source, 10km east of Narromine.

The UMAA comprises unconsolidated clay, silt, sand and gravel deposited within a narrow valley by the Macquarie-Wambool River.

The UMAA is managed by the rules defined within the *Water Sharing Plan for the Macquarie-Castlereagh Groundwater Sources Order 2020*, under the *Water Management Act 2000*.

The extraction limit for the UMAA is 17,935 ML/year. Extraction within the groundwater source is not compliant if the five year average annual extraction value is more than 110% of the extraction limit (known as the compliance trigger). If the average extraction exceeds the compliance trigger, the available water determination made for the aquifer access licences for the following water year (July to June) may be reduced by an amount that would return subsequent total water extraction to the extraction limit. Compliance against the extraction limit for the UMAA is shown in **Figure 2** below:

Between January 2017 and December 2019, the Dubbo Local Government Area (LGA) experienced the worst drought over the historical record from the 1890s until present. The amount of groundwater extracted in the 2019/2020 water year was 19,621 ML in aquifer licences and 3,052 ML in local water utility licences, totalling 22,673 ML. Council is the sole holder of local water utility licences within the UMAA.

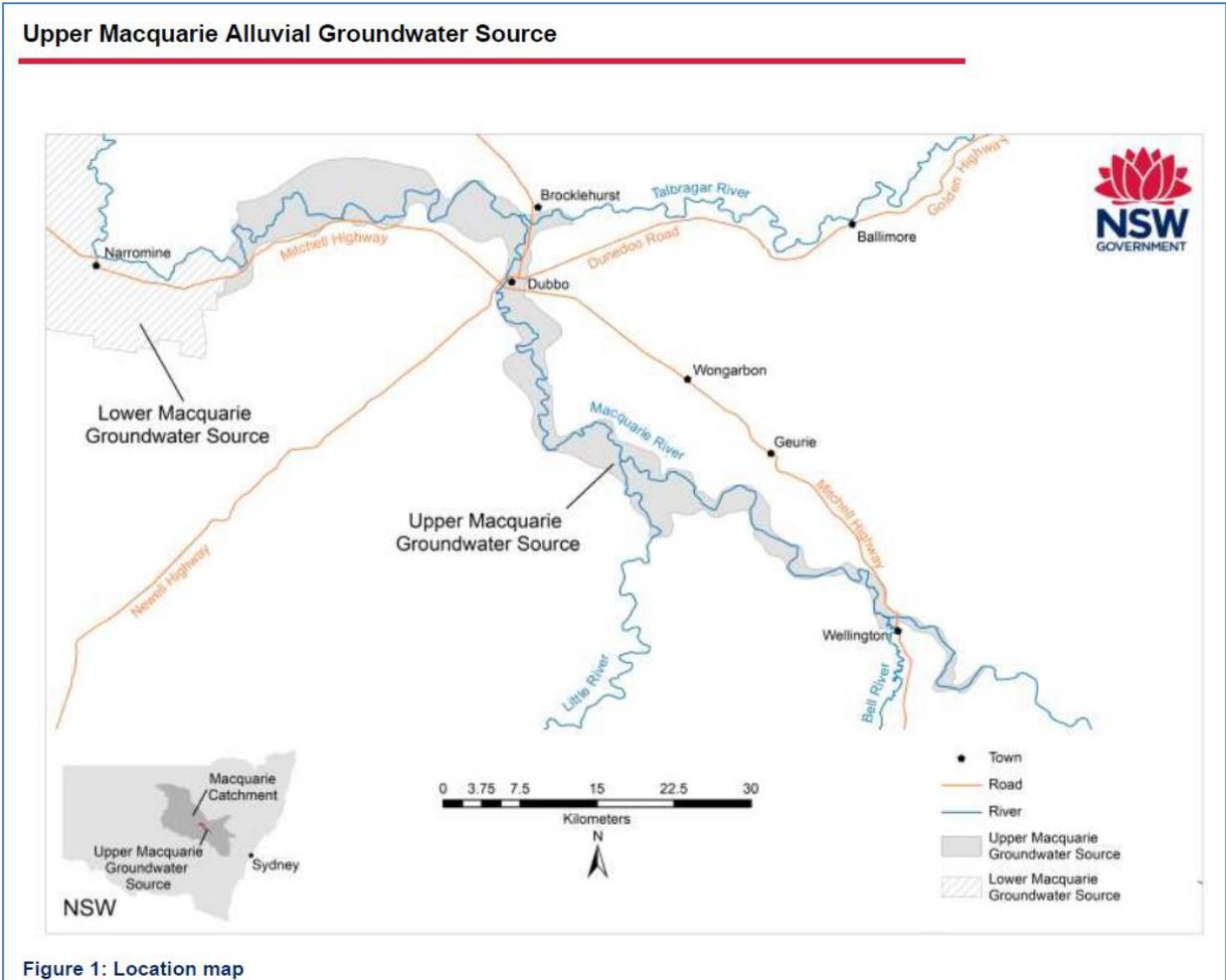


Figure 1 – Location of the Upper Macquarie Alluvial Groundwater

**2022-2023 Water Year**

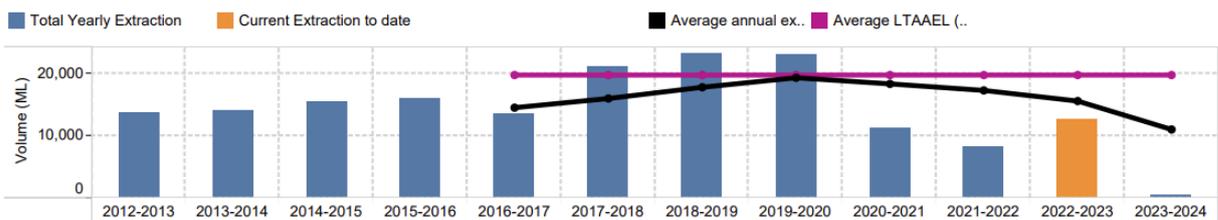
Balance Available	Minimum extraction for LTAAEL exceedance (incl BLR)	Volume remaining before exceedance
32,249	33,360	20,844

Likelihood of compliance being triggered in the 2022-2023 Water Year:

**UNLIKELY**

**Extraction compared to the compliance trigger over time:**

This graph shows yearly and average extraction over five years and compares them to the compliance trigger. If the 5 year average extraction goes above the compliance trigger, then access to groundwater may be reduced in the next water year.



- The 2022-2023 water year is still open and only reflects the extraction to date (including basic land holder rights (BLR)). The current year extraction data comes from BLR estimates, meter reads and unverified IWAS entries.
- Not all meter readings are finalised prior to 1 July. Reduced available water determinations may be announced even though metered extraction shown in the graph has not exceeded the compliance trigger.
- The extraction data is finalised by October, the available water determination is reviewed at this time and may be increased if the final data indicates an increase is appropriate.

Figure 2 – UMAA extraction volumes compared to the extraction limit compliance trigger. The purple line represents the compliance trigger limit

**Dubbo City Water Supply Annual Demands**

The John Gilbert Water Treatment Plant (JGWTP), located on Macquarie Street in South Dubbo, supplies potable water to the population centres of Ballimore, Brocklehurst, Dubbo City, including Richmond and Firgrove estates, Eumungerie, Mogriguy and Wongarbron. The historical annual demand of the water supply is shown in **Figure 3** below:

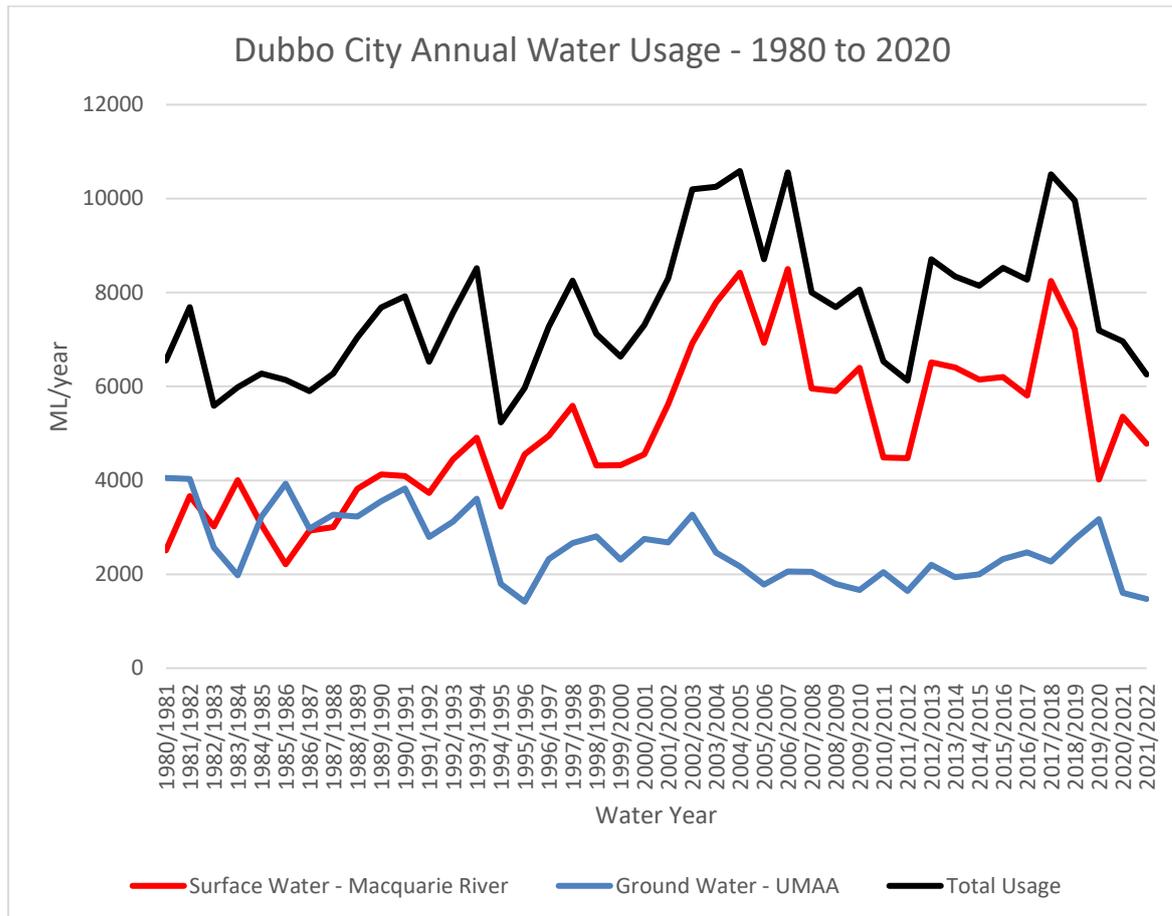


Figure 3 – Dubbo total annual extraction from both the Macquarie River and UMAA between 1980 and 2020

Maximum annual demand occurs in hot dry years when there is less rainfall. The maximum recorded annual demands over the last 40 years are listed below:

- 10,587 ML – 2004/2005
- 10,557 ML – 2006/2007
- 10,519 ML – 2017/2018
- 10,254 ML – 2003/2004
- 10,195 ML – 2002/2003

Minimum annual demand occurs in cool wet years. These are La Niña years. A cool wet summer significantly reduces the total demand with flooding often occurring in the Macquarie-Wambuil River during these years. The minimum recorded annual demands over the last 40 years are listed below.

- 6,124 ML – 2011/2012
- 6,257 ML – 2021/2022
- 6,533 ML – 2010/2011
- 6,962 ML – 2020/2021

In consideration of the population growth that has occurred in Dubbo over the past 40 years, the average maximum and minimum demands can be considered to be approximately 10,500ML and 6,500 ML respectively.

#### **Dubbo City Water Supply Annual Demands**

Drought demand occurs in hot, dry summer periods with little to no rainfall and at times when Burrendong Dam is experiencing low water levels. Such circumstances lead to reductions in water allocations, as well as the implementation of community water supply restrictions. In the case of Dubbo, Level 5 restrictions were applied in the 2019/2020 water year. Within this year, an annual demand of 7,191 ML was recorded and through further analysis, a figure of 7,500 ML per water year was adopted as a suitable target volume to supply Dubbo and its current population during Level 5 restrictions.

Burrendong Dam reached a volume of 1.5% on 8 February 2020, sparking very real fears that the Macquarie-Wambuil River would run dry and that Dubbo would have to rely solely on groundwater to supply the community. A detailed groundwater model was prepared and used to assess the capability of the UMAA. The model has been developed and refined over the last two and a half years, and is being used to examine production bore pumping scenarios.

The modelled area shown in **Figure 4** below is a subsection of the UMAA, comprising approximately one third of the total aquifer when compared with **Figure 1**. The modelled area has dimensions of approximately 30 km north to south and 19 km east to west, extending from west of Geurie to just upstream of Whylandra Crossing. The model area includes the existing Dubbo production bores and prospective areas to the north and south of the City. Within the modelled area, the UMAA lies beneath the generally flat floodplain of the Macquarie River. Outside the urban area of Dubbo, land use is a mixture of pastoral and arable. A range of crops are grown, including cotton, canola and cereals as well as fodder crops. Market gardening, viticulture and orcharding also occur. Much, but not all of the cropping area is irrigated.



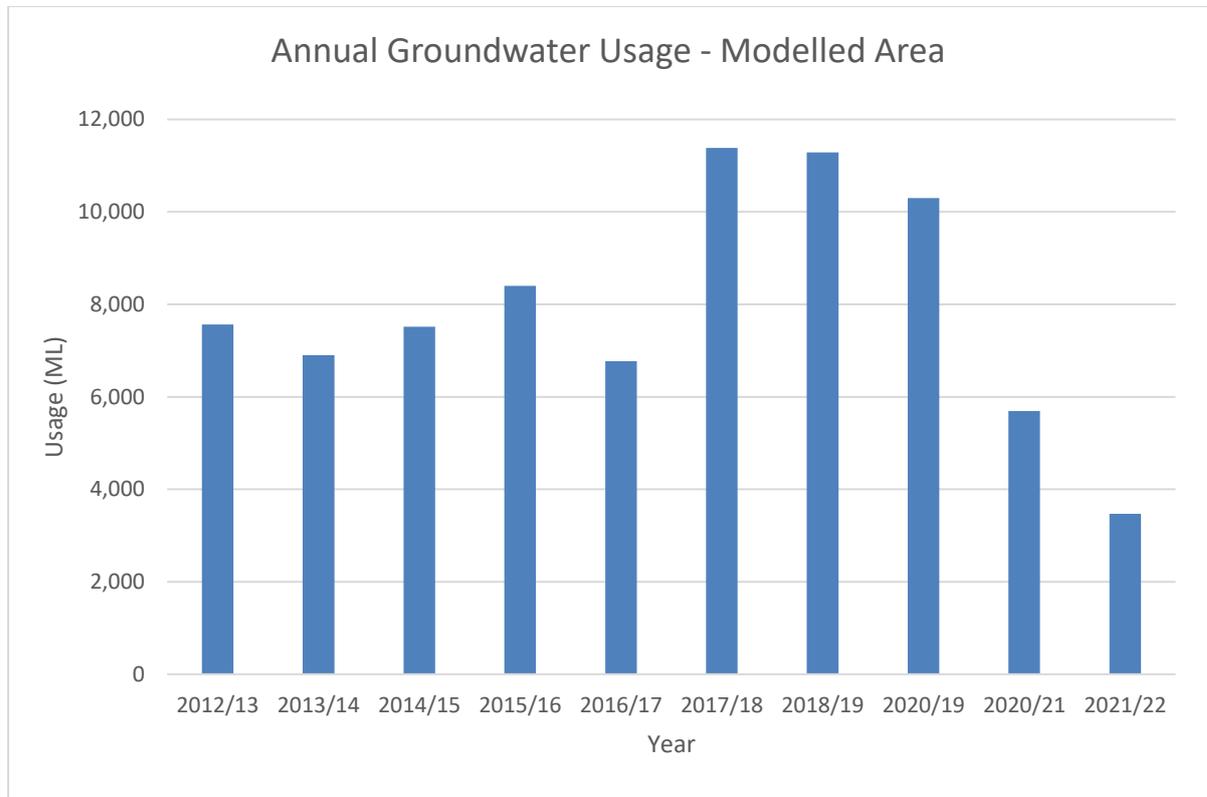


Figure 5 – UMAA annual groundwater usage within modelled area

Historically, the Dubbo production bore network has accounted for about 30% of total groundwater extraction within the modelled area between the 2012/2013 and 2021/2022 water years. This is represented in **Figure 6** below:

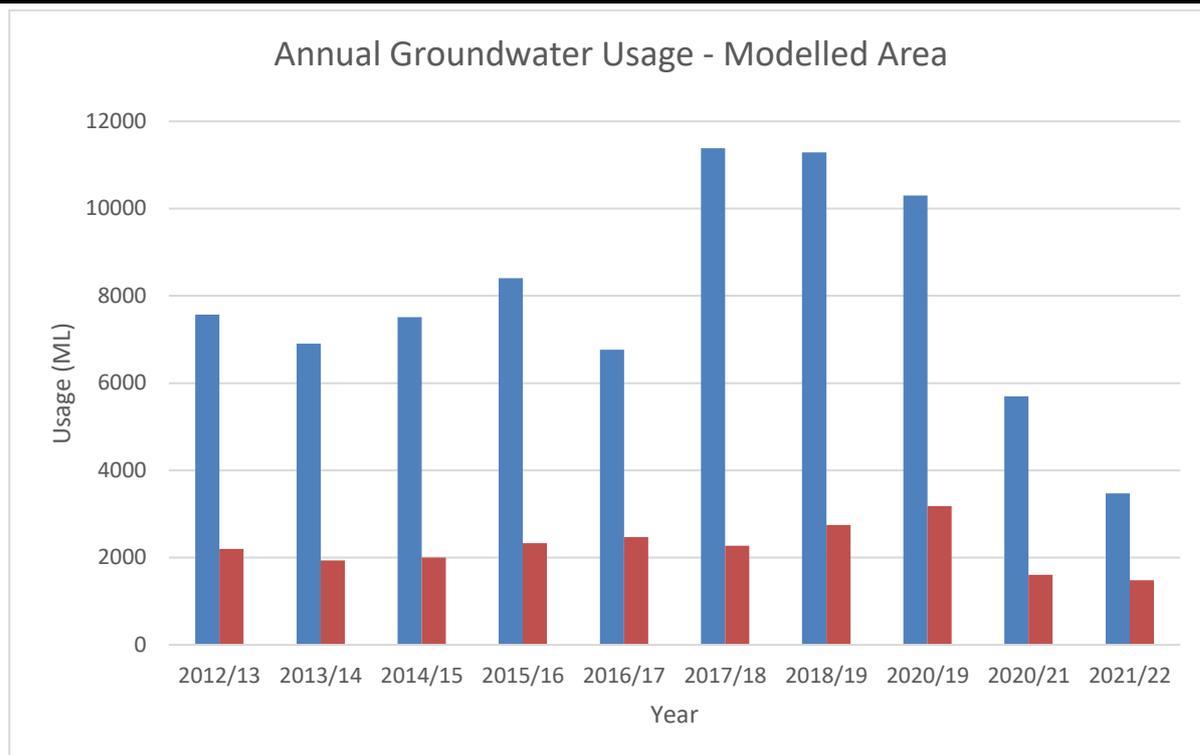


Figure 6 – UMAA vs. Dubbo annual groundwater usage within modelled area

### Supplying Dubbo during Severe Drought

Based on the analysis provided above, a figure of 7,500 ML per water year has been adopted as a suitable target volume to supply the JGWTP and current population during Level 5 restrictions.

Historic groundwater extraction records show that the modelled area presented in **Figure 4** above is physically capable of supplying enough groundwater to maintain the water supply of Dubbo in times of severe drought. That is, if it were possible to make the administrative, social and infrastructure arrangements needed there would not be a need to evacuate Dubbo, and those supplied by the JGWTP should Burrendong Dam go dry.

### Supplying Geurie during Severe Drought

Council provides potable water services to Geurie, a rural village with a population of about 850 people. Raw water for Geurie is sourced from the Macquarie River under a licence with a share component of 300 ML for town water supply purposes. Council also holds a groundwater licence with a share component of 120 ML from the UMAA for town water supply purposes.

Analysis has shown that the current unrestricted demand for the Geurie water supply system is around 190 ML/year with the expected demand under Level 4 water restrictions being around 100 ML/year.

### Supplying Wellington during Severe Drought

Council provides water services to Wellington, a rural town with a population of about 5,000 people. Raw water for Wellington is currently sourced from the Macquarie River under a licence with a share component of 1,855 ML for town water supply purposes. Council also holds a groundwater licence with a share component of 350 ML from the UMAA for town water supply purposes.

Analysis has shown that the current unrestricted demand for the Wellington water supply system is around 1,250 ML/year and the expected demand under Level 4 water restrictions is around 900 ML/year.

### **Macquarie-Wambuul River Cessation of Flow Scenario**

Periods of significant drought increase the risk of the Macquarie-Wambuul River ceasing to flow. Currently, such an event would result in a complete loss of potable water supplies in Geurie, Dubbo and Wellington. Drought security projects being undertaken by Council are focused on increasing access to groundwater as a means of providing a more secure potable water supply for these communities in times of severe drought. In such an event, Council proposes that groundwater become the primary raw water source for Dubbo, Geurie and Wellington.

## **REPORT**

Council continues to deliver drought security projects within the LGA in accordance with the \$30M Department of Planning and Environment Funding Deed DWS025 – *Dubbo Drought Groundwater Infrastructure Project*, first entered into by Council on 20 December 2019 and attached as **Appendix 2** of this report.

Funds are acquitted in accordance with ‘Schedule A’ (the Schedule) of the Deed. Since first entered into, the Schedule has been modified three times to better reflect work undertaken and the evolution of some projects and their scopes. Approval of any modification to the Schedule is at the discretion of DPE and is undertaken in full consultation with DPE and Council officers.

The latest variation to the Funding Deed and associated Schedule occurred 28 February 2023. Acquittal of all funds was originally required by 30 June 2023. Council wrote to DPE on 23 May 2023 requesting a 12 month time extension to the Funding Deed, citing project complexities, delays due to the COVID-19 pandemic, and the focusing of staff resources on flooding emergencies as cause for such a request. Although formal correspondence is yet to be received by Council, DPE officers have verbally advised Council that this extension of time has been granted.

Since entering into the Funding Deed, Council has dramatically increased its access to groundwater in Dubbo, Geurie and Wellington.

### **Funding Deed DWS025 Projects**

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**Dubbo Non-potable and Bore Water Pipeline – Total Spent: \$10,711,535**

The Dubbo Non-potable and Bore Water Pipeline project is predominately a dual pipeline design, consisting of 14.20 km of non-potable pipeline and 14.43 km of bore water pipelines. Pipe sizes are predominately 375 mm diameter and 450 mm diameter, with smaller 200 mm diameter pipelines in some locations.

The non-potable pipeline, shown in **Figure 7** below, extends between the Dubbo Sewerage Treatment Plant (STP) on Boothenba Road and the Taronga Western Plains Zoo river pump station, located on the southern side of the Macquarie-Wambuul River near the Shibble pedestrian and Molong to Dubbo railway bridges. The pipeline follows the alignment of Bligh Street and the eastern side of the River. Crossing of the River was achieved via underbored pipeline.

The bore water pipeline extends between Council's 20R Bunglegumbie Road property in West Dubbo and the JGWTP on Macquarie Street. All production bores supplying the JGWTP, including existing Council production bores, will utilise the pipeline as a means of conveying bore water for treatment purposes. The establishment of the new pipeline allowed Council to simultaneously abandon 1.42 km of existing cast iron and asbestos cement bore water pipelines, dramatically improving the hydraulic efficiency and life expectancy of the overall bore water delivery system.

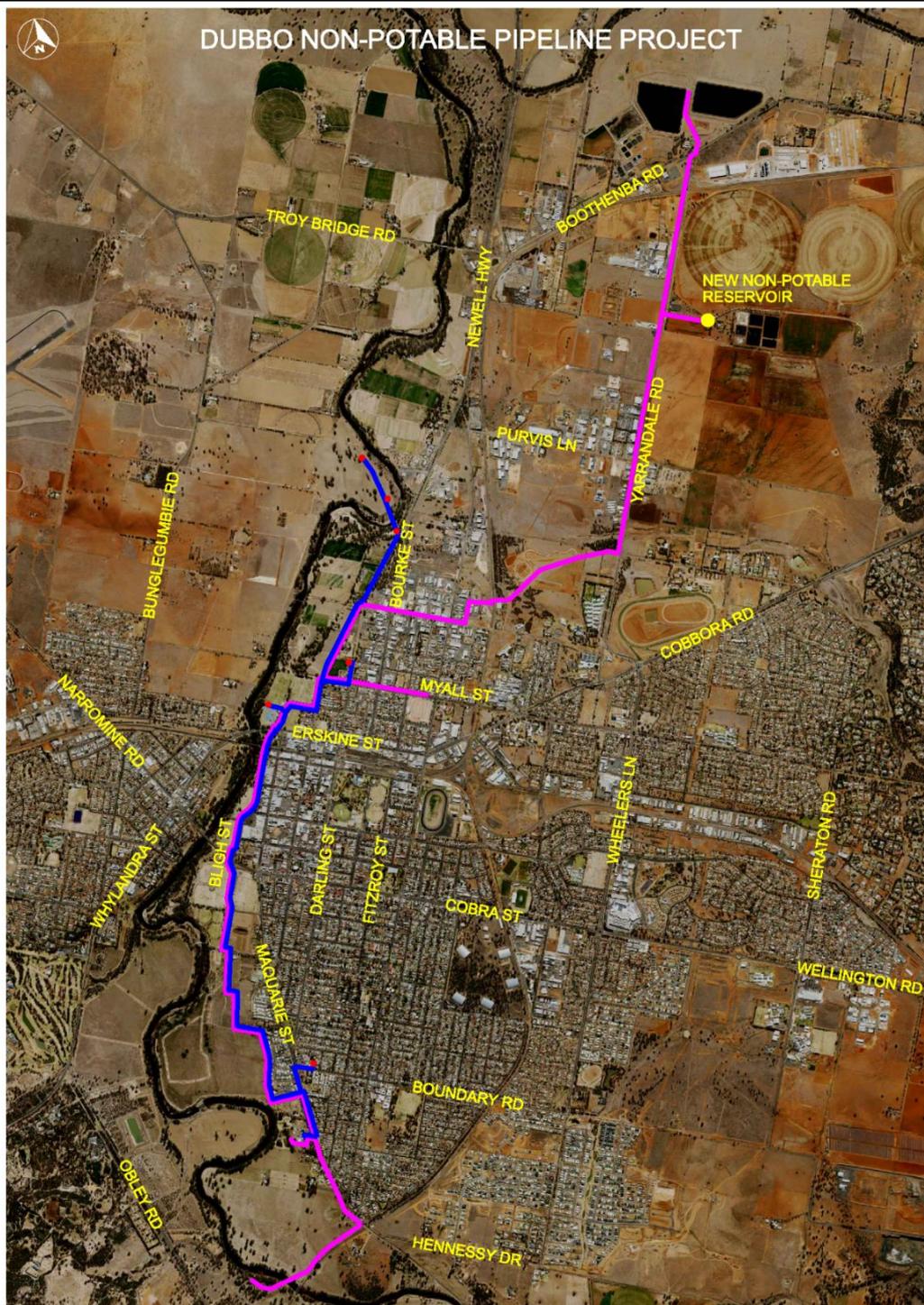


Figure 7 – Dubbo non-potable and bore water pipeline routes. The magenta line represents the non-potable pipeline while the blue line represents the bore water pipeline. Crossing of the Macquarie-Wambool River at Devils Hole Reserve is yet to be constructed, however is being actively investigated and designed

As a future project, not forming part of the Funding Deed, Council intends to utilise the pipeline as a means of conveying alternate water sources to irrigate sporting facilities along the eastern bank of the River and supplying the Zoo in times of severe drought. Establishing pumping and treatment infrastructure to perform this task is still being investigated by Council. Further, Council continues to investigate the implementation of an advanced waste water treatment facility, utilising effluent from the Dubbo STP and the Non-potable Pipeline as means of providing potable water in times of severe drought.

**Bore Drilling, Equipping and connection with the JGWTP – Total Spent: \$5,764,712**

With the acquittal of the Funding Deed, Council will expand production bore sites for Dubbo from seven to 15. The production bore sites are named as follows and are divided over four areas:

Northern Bore Field	North Dubbo Bore Field	South Dubbo Bore Field	Southern Bore Field
Bunglegumbie No. 1	Devils Hole	Driftwells	Shibble No. 1
Bunglegumbie No. 2	Martins	Harpers	Shibble No. 2
Nevadon No. 1	Riverbank	Ronald Street	Wheelers Lane
Nevadon No. 2		Thorby Avenue	
Sunnyside			

Legend:

- Blue – to be constructed
- Orange – constructed
- Green – operational

The above figures account for the construction of five new production bore sites, highlighted in orange, in addition to further test drilling that was conducted within northern, central and southern areas of Dubbo to gain a better understanding of the UMAA in these locations. All production bore sites have been designed with electrical infrastructure positioned at the Flood Planning Level, considered to be a 1% Annual Exceedance Probability (AEP) flood with 500 mm of freeboard. All bores have been equipped with flow meters to measure water volumes taken from the UMAA, level sensors to monitor the standing water level of the aquifer, variable speed pumps for adjustment of flow rate, security fencing and bore water sampling points. A typical flood proof production bore site is shown in **Figure 8** below:



*Figure 8 – Bunglegumbie No. 1 production bore site prior to construction of palisade fencing and surrounding concrete hard stands. All electrical infrastructure, contained within the grey switchboard atop the platform has been positioned at the Flood Planning Level, considered to be a 1% AEP flood with 500 mm of freeboard. The production bore and associated pipework is visible in the lower left of the photo, complete with stainless steel sealed bore head*

Establishment of a connection between the Dubbo non-potable and bore water pipelines, and the JGWTP was performed, with works undertaken in accordance with the plan shown in **Figure 9** below. A new 500 mm diameter bore water pipeline was constructed, replacing the existing 375 mm diameter connection to the existing aeration tower within the treatment facility. New flow metering equipment was also installed. The works conducted replaced aging infrastructure and allow for a greater volume of bore water to enter the JGWTP for treatment.

The JGWTP lacks the capacity to treat solely bore water for public consumption, instead relying on a shandy mixture of bore and river water to operate effectively. Council has engaged the services of a specialised consultant to assist with determining what modification works need to be undertaken to the facility to operate on both a shandy, as well as purely bore water. This body of work will result in the preparation of a detailed specification document that will be used to call tenders for modification works.

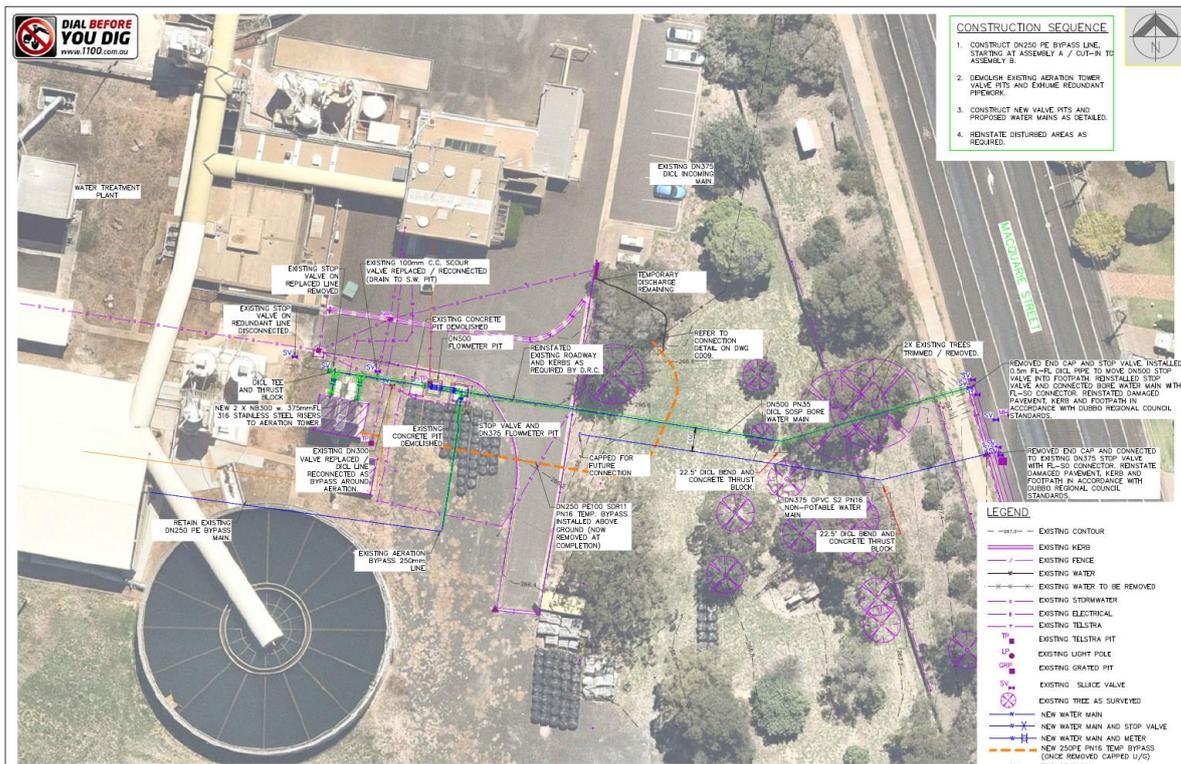


Figure 9 – Works undertaken within the JGWTP. The highlighted green line shows the alignment of the bore water pipeline between Macquarie Street and the existing aeration tower

### Wellington Production Bores and Pipeline Works – Total Spent: \$4,207,854

The Wellington Bore Water Pipeline consists of 5.01 km of predominately 300 mm diameter pipe, connecting two bores located in Montefiores with the Wellington Water Treatment Plant (WTP) on Falls Road. Crossing of the Macquarie-Wambuul River to the north of the WTP and thrust boring of the Main Western Railway Line are yet to occur, however are actively being planned and designed.

Two new production bores, known as Bicentennial and Montefiores have been constructed within Montefiores, north of the Macquarie-Wambuul River. Both bores have been equipped with flow meters to measure water volumes taken from the UMAA, level sensors to monitor the standing water level of the aquifer, variable speed pumps for adjustment of flow rate, security fencing, and water sampling points. Both bores are located in naturally flood free areas of Montefiores. As such, all electrical infrastructure has been placed at ground level. A typical production bore head installation is shown in **Figure 10** below:



*Figure 10 – Bicentennial production bore site, prior to construction of palisade fencing and installation of water sampling point*

The Wellington WTP lacks the capacity to treat bore water for public consumption, sourcing water solely from the Macquarie-Wambuul River. Council has engaged the services of a specialised consultant to assist with determining what modification works need to be undertaken to the facility to operate on both a shandy, as well as purely bore water. This body of work will result in the preparation of a detailed specification document that will be used to call tenders for modification works.

**Geurie Production Bores and Pipeline Works – Total Spent: \$628,782**

The Geurie bore water pipeline consists of 1.17 km of predominately 125 mm diameter pipe, connecting two production bores located on Arthurville Road, south of the Scabbing Flat Bridge with the Geurie WTP, also located on Arthurville Road, but north of the Scabbing Flat Bridge, atop Bald Hill. Crossing of the Macquarie-Wambuul River was achieved via underbored pipeline. **Figure 11** below shows the location of the project.

Two new production bores, known as Arthurville No. 1 and No. 2, have been designed with electrical infrastructure positioned at the Flood Planning Level, considered to be a 1% AEP flood with 500 mm of freeboard and have been equipped with flow meters to measure water volumes taken from the UMAA, level sensors to monitor the standing water level of the aquifer, variable speed pumps for adjustment of flow rate and water sampling points.

The Geurie WTP lacks the capacity to treat bore water for public consumption, sourcing water solely from the Macquarie-Wambuil River. Council plans to engage the services of a specialised consultant to assist with determining what modification works need to be undertaken to the facility to operate on both a shandy, as well as purely bore water. This body of work will result in the preparation of a detailed specification document that will be used to call tenders for modification works. Council is also planning modification works to the Geurie river water pump station that services the Geurie WTP currently, to further facilitate delivering a shandy water mixture to the Geurie WTP.

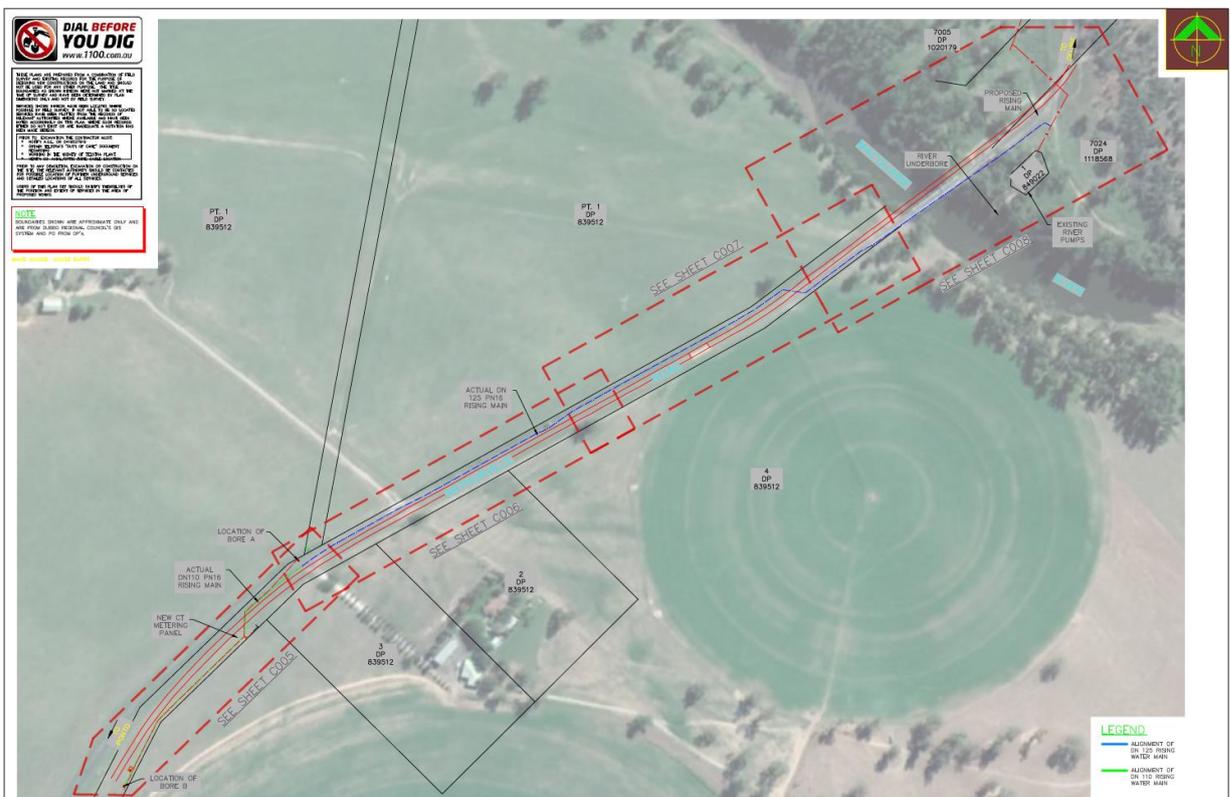


Figure 11 – Location of Geurie production bore sites and associated pipeline. The Scabbing Flat Bridge is located to the north east of the image

### The Dubbo Northern Bore Field – Total Spent: \$3,798,127

The Northern Bore Field Pipeline consists of 9.01 km of pipeline. The pipeline ranges in size from 200 mm diameter to 375 mm diameter. The pipeline will connect with three proposed production bores, the locations of which are shown in **Figure 12** below. The Funding Deed will cover the cost of the construction of the production bores, yet to be constructed but with drilling works imminent as of the time of writing.

The Northern Bore Field Pipeline will connect with the northern-most terminus of the existing bore water pipeline, constructed as part of the Dubbo non-potable and bore water pipeline project. Crossing of the Macquarie-Wambuul River will be performed adjacent to Devils Hole reserve with this body of work being actively investigated and designed.



Figure 12 – Location of the Northern Bore Field Pipeline Project. The pipeline will be constructed within the road reserves of Bunglegumbie, Troy Bridge and Nulla roads as well as across Council owned land. From left to right, the names of the proposed production bores are Nevadon No. 2, Nevadon No. 1 and Sunnyside

### Remaining Funds - \$3,417,763

The remaining portion of the Funding Deed is allocated to tasks within Schedule A yet to be completed. Works to be undertaken include:

- Construction of three new bores in the Northern Bore Field;
- Macquarie-Wambuul River crossing near Devil’s Hole Reserve;
- Underboring of the Macquarie-Wambuul River in Wellington;
- Finalisation of the UMAA model; and
- Final project reporting to the DPE.

### Other strategies for drought resilience

Since 2019, Council has been focussed on delivering under the DPE Funding Deed. Now that works are nearing completion, Council staff have commenced discussions with other Local Water Utilities to share ideas on other means of drought resilience.

These are early discussions and some of the shared ideas have been stormwater harvesting and the reuse of treated effluent. There have been no commitments to date but these are likely to be explored as alternate sources of water.

### Consultation

Council staff have consulted closely with numerous businesses, DPE, consultants and members of the public over the course of Funding Deed acquittal. Meetings with key DPE staff are held on a fortnightly basis to provide project updates and record progress against the Funding Deed Schedule. Council has also consulted with and engaged the services of numerous businesses over the course of the broader project.

### Resourcing Implications

A comprehensive summary of both funds acquitted and remaining has been tabulated below.

<b>Project Component</b>	<b>Total Spent to Date</b>
Dubbo Non-potable and Bore Water Pipeline	\$10,711,535
Bore Drilling, Equipping and connection with the JGWTP	\$5,764,712
Wellington Production Bores and Pipeline Works	\$4,207,854
Geurie Production Bores and Pipeline Works	\$628,782
The Dubbo Northern Bore Field	\$3,798,127
Council Operational Fees	\$1,471,227
<b>Grand Total Spent to Date</b>	<b>\$26,582,237</b>
<b>Remaining Funds to be Acquitted</b>	<b>\$3,417,763</b>

### APPENDICES:

- 1 [↓](#) Upper Macquarie Alluvial Groundwater Source - Groundwater Annual Report 2022
- 2 [↓](#) Dubbo Drought Groundwater - Executed Funding Deed

# Upper Macquarie Alluvial Groundwater Source

## Groundwater annual report 2022

### Introduction

This report is a summary of water accounts, volume pumped and groundwater levels for the Upper Macquarie Alluvial Groundwater Source for the period 1 July 2021 to 30 June 2022 including the start of year water account volumes for the 2022/2023 water year. It will be updated on a regular basis.

For detailed information of the hydrogeology, management and past long-term water level behaviour of this water source refer to the Groundwater Resource Description Report for the Macquarie Alluvium Water Sources:

[www.industry.nsw.gov.au/\\_data/assets/pdf\\_file/0017/192221/macquarie-castlereagh-alluvium-appendix-a-water-resource-description.pdf](http://www.industry.nsw.gov.au/_data/assets/pdf_file/0017/192221/macquarie-castlereagh-alluvium-appendix-a-water-resource-description.pdf)

### Description

The Upper Macquarie Alluvial Groundwater Source occupies a narrow valley which extends northwest from Wellington to approximately 10 km beyond Dubbo and then west-southwest until it reaches the Lower Macquarie Alluvial Groundwater Source at 10 km east of Narromine (**Figure 1**).

The Upper Macquarie Alluvial Groundwater Source comprises unconsolidated clay, silt, sand and gravel deposited within a narrow valley by the Macquarie River.

### Water resource management

#### Water sharing plan

The Upper Macquarie Alluvial Groundwater Source is managed by the rules defined in the Water Sharing Plan for the Macquarie-Castlereagh Alluvial Groundwater Sources 2020.

These water sharing plans are available for viewing on the Department of Planning and Environment Water website at: [www.industry.nsw.gov.au/water/plans-programs/water-sharing-plans/status/macquarie-castlereagh-region](http://www.industry.nsw.gov.au/water/plans-programs/water-sharing-plans/status/macquarie-castlereagh-region)

#### Basic rights

Basic landholder rights are available in this groundwater source for domestic and stock watering requirements. While landholders don't need an access licence to take water for domestic and stock purposes from groundwater below their property, the bore must be authorised by WaterNSW.

The volume of water set aside in the water sharing plan for basic landholder rights is 304 megalitres (ML).

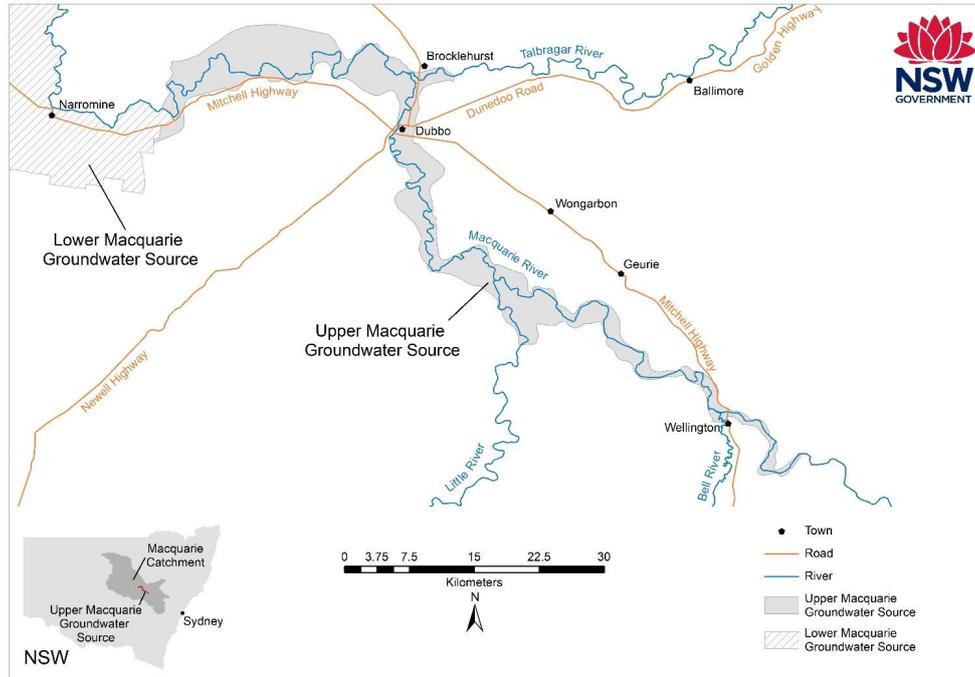
An approval holder is responsible for monitoring water quality from the bore to ensure it is suitable for its intended purpose for the duration of the approval. Inherent water quality and land use activities may make the water in some areas unsuitable for use. Water from the groundwater

Upper Macquarie Alluvial Groundwater Source



sources should not be used without first being tested and, if necessary, appropriately treated to ensure it is fit for purpose. Such testing and treatment are the responsibility of the water user.

Figure 1: Location map



**Groundwater access licences**

Groundwater access licence share components to 30 June 2022 are presented in **Table 1**.

Table 1: Upper Macquarie Alluvial Groundwater Source share component 30 June 2022

Access Licence Category	Number of Licences	Total Volume
Local Water Utility <sup>1</sup>	4	4,470
Domestic and Stock <sup>1</sup>	2	4
Aquifer <sup>2</sup>	138	27,332

<sup>1</sup> Megalitres/year (ML)

<sup>2</sup> Megalitres per unit share

Upper Macquarie Alluvial Groundwater Source



### Extraction limit

All groundwater sharing plans have rules to manage extraction in a water source to the long-term average annual extraction limit.

The extraction limit for Upper Macquarie Alluvial Groundwater Source is 17,935 ML/year. Extraction in the groundwater source is not compliant if the 5 years average annual extraction is more than 110% of the extraction limit (known as the compliance trigger). If average extraction exceeds the compliance trigger, then the available water determination made for aquifer access licences for the following water year, may be reduced by an amount that would return subsequent total water extraction to the extraction limit.

Information on tracking groundwater extraction against extraction limit for the groundwater source including the likelihood of compliance being triggered in the current water year can be found at: [www.industry.nsw.gov.au/water/allocations-availability/tracking-groundwater](http://www.industry.nsw.gov.au/water/allocations-availability/tracking-groundwater)

For each inland groundwater source, the dashboard shows for the current water year:

- volume that if extracted will reach the compliance trigger (in ML, calculated annually)
- volume remaining to be extracted before reaching the compliance trigger (in ML, calculated throughout the year)
- the likelihood that access to groundwater may be reduced in the next water year

Note: the information on the dashboard is limited by the extraction data available at the time.

### Available water

Carryover of unused account water from one water year to the next is not available in the Upper Macquarie Groundwater Source. Total water availability in a water year is controlled by the available water determinations credited to an access licence account.

The maximum amount of water that can be debited from an aquifer access licence account in a water year can't exceed the available water determination (AWD), plus any allocation transferred in (temporary trade), and minus any allocation transferred out. This means that metered extraction plus transfers out cannot exceed the AWD, unless water is transferred in.

Total account water for period 2012/2013 to 2022/2023 is displayed in **Figure 2**, showing the proportion available for use and what is not available for use in a year. Total yearly extraction is also displayed. Note: all access licence categories have been combined in **Figure 2**.

There has been no reduction in the AWD for aquifer access licences in the Upper Macquarie Alluvial Groundwater Source since the water sharing plan first started in 2012.

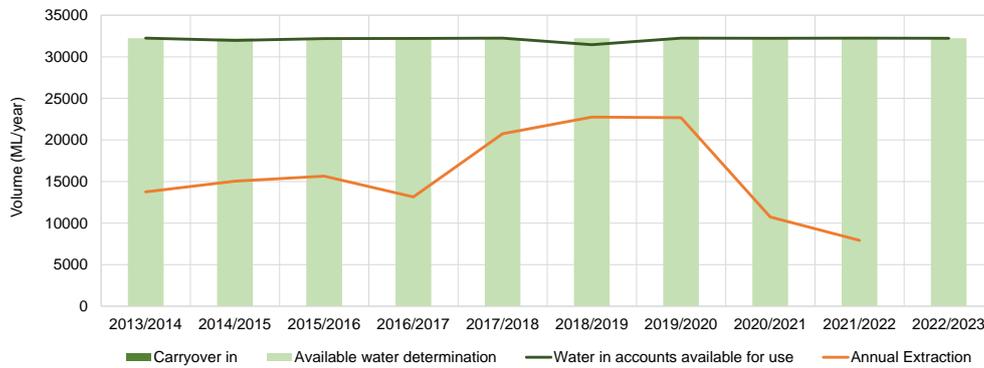
The access licence account information for the Upper Macquarie Alluvial Groundwater Source on 1 July 2022 is summarised below:

- Carryover in: 0 ML
- Available water determination: 32,249 ML
- Total water in account: 32,249 ML
- Total water available for use: 32,249 ML

Upper Macquarie Alluvial Groundwater Source



Figure 2: Account water availability and usage summary for Upper Macquarie Alluvial Groundwater Source



**Groundwater trading**

Trades are permitted within but not between Upper Macquarie Alluvial Groundwater Source and any other groundwater source.

**Allocation assignments (temporary trade)**

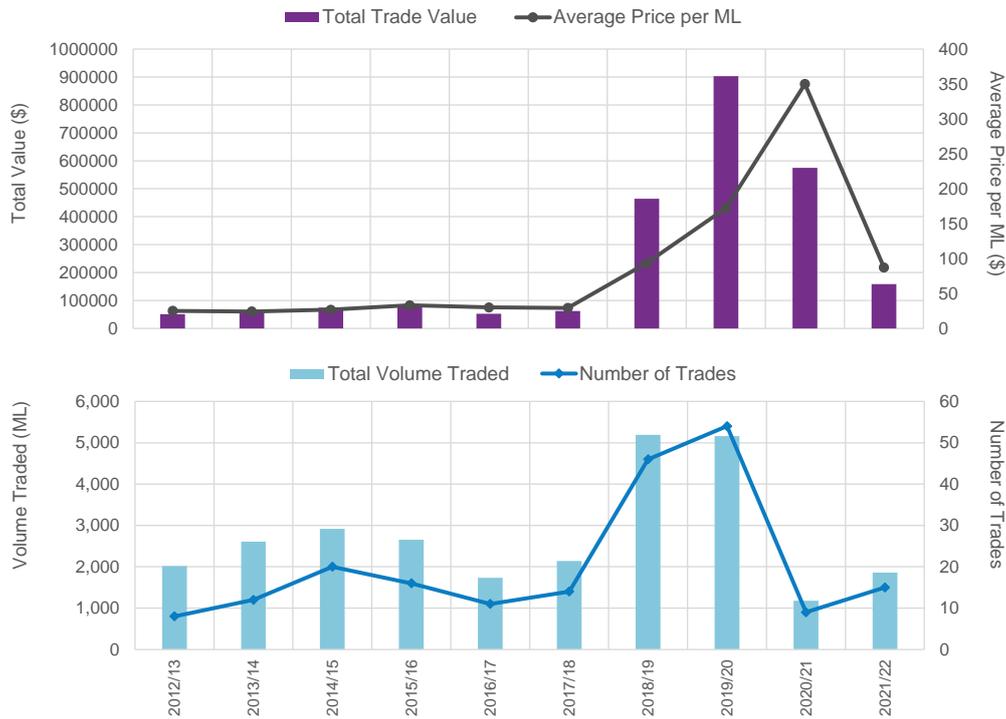
Trading statistics for the Upper Macquarie Groundwater Sources are illustrated in **Figure 3**, excludes trades for less than \$1 per megalitre. The average value paid per megalitre in 2021-22 was \$87, while the maximum value was \$150 per megalitre.

Further information on water licences, approvals, water trade and water dealings and other matters related to water entitlements in NSW can be found on the NSW Water Register at:

[waterregister.waternsw.com.au/water-register-frame](http://waterregister.waternsw.com.au/water-register-frame)



Figure 3: Upper Macquarie Alluvial Groundwater Source temporary trade statistics



## Bores

There are approximately 702 registered bores across the Upper Macquarie Alluvial Groundwater Source (**Figure 4**). The majority of these bores are used for stock and domestic purposes (Basic Landholder Rights). There is also significant use of groundwater for irrigation (**Table 2**).

Production bores are scattered throughout the Upper Macquarie Alluvial Groundwater Source with a notably higher density of bore locations near Dubbo. The majority of production bores in the Upper Macquarie Alluvial Groundwater Source can supply up to 500 ML/year (**Figure 5**).

Table 2: Approximate number of licensed bores in Upper Macquarie Alluvial Groundwater Source (2022)

Groundwater Source	Registered Bore Purpose		
	Basic Landholder Rights	Production	Local Water Utility
Upper Macquarie Alluvial	477	209	16

Upper Macquarie Alluvial Groundwater Source



**Water level monitoring**

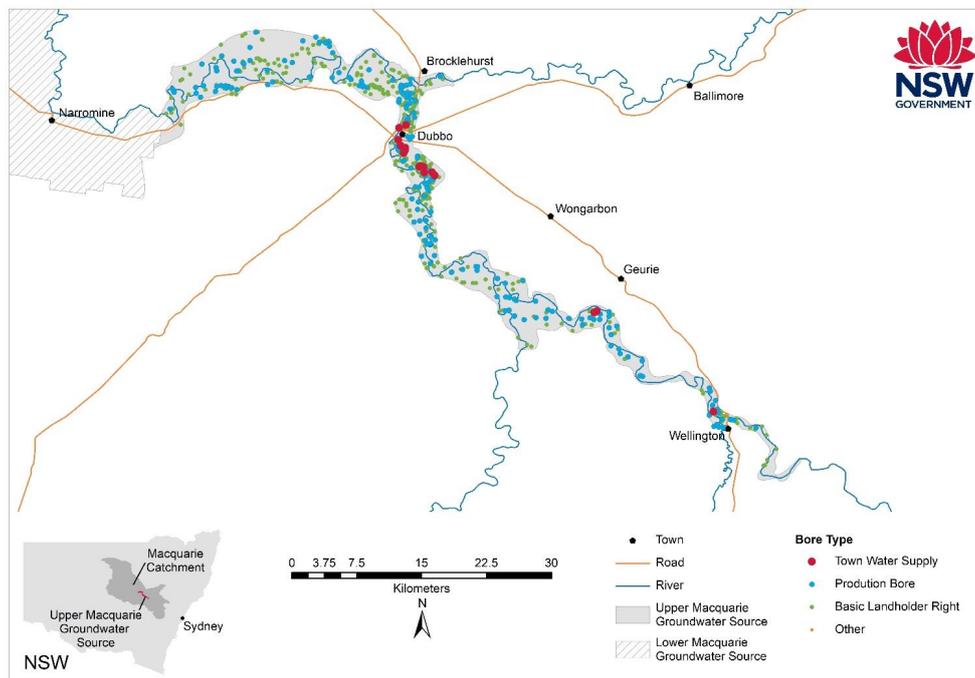
WaterNSW monitors groundwater levels at 55 monitoring bores at 45 sites in the Upper Macquarie Alluvial Groundwater Source (**Figure 6**). At most monitoring sites there are two or more pipes monitoring different depths. The depth monitored by each pipe reflects the depth where the casing is slotted to allow groundwater entry into the pipe.

A hydrograph is a plot of groundwater level or pressure from a monitoring bore over time. A representative sample of hydrographs from monitoring bores have been selected and are presented in **Figure 7 to Figure 11**.

Data for the monitored bores as well as private bore information can be obtained from the WaterNSW real time data portal at: [realtimedata.watarnsw.com.au/](http://realtimedata.watarnsw.com.au/)

Data is also available for 2 of the groundwater monitoring sites in real-time via telemetry. You can also request information via: [Customer.Helpdesk@watarnsw.com.au](mailto:Customer.Helpdesk@watarnsw.com.au)

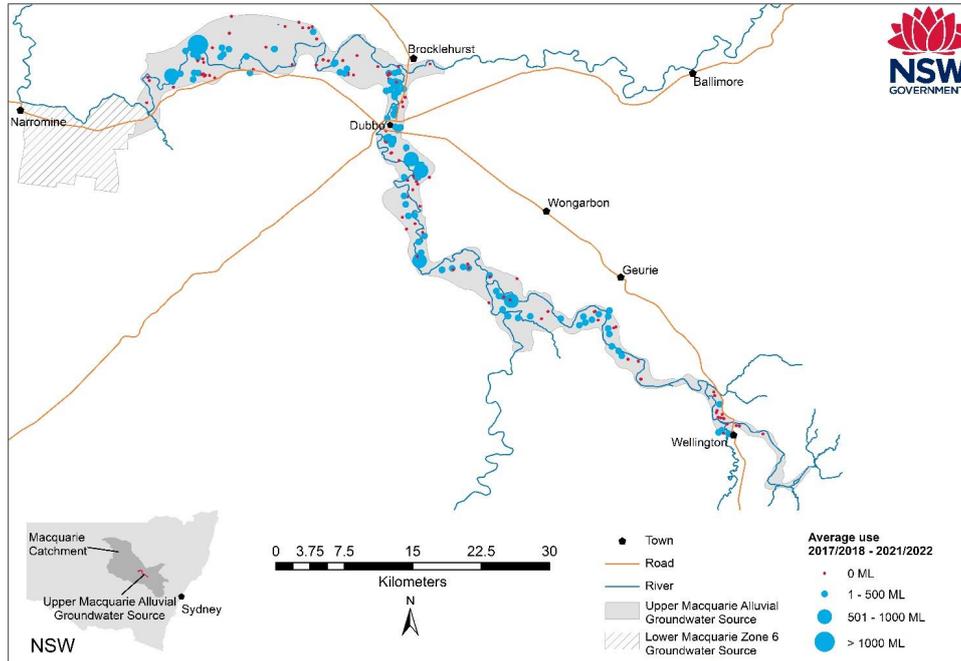
Figure 4: Upper Macquarie Alluvial Groundwater Source registered bores



Upper Macquarie Alluvial Groundwater Source



Figure 5: Upper Macquarie Alluvial Groundwater Source water supply bores and distribution of extraction



Upper Macquarie Alluvial Groundwater Source



Figure 6: Upper Macquarie Alluvial Groundwater Source monitoring bore sites

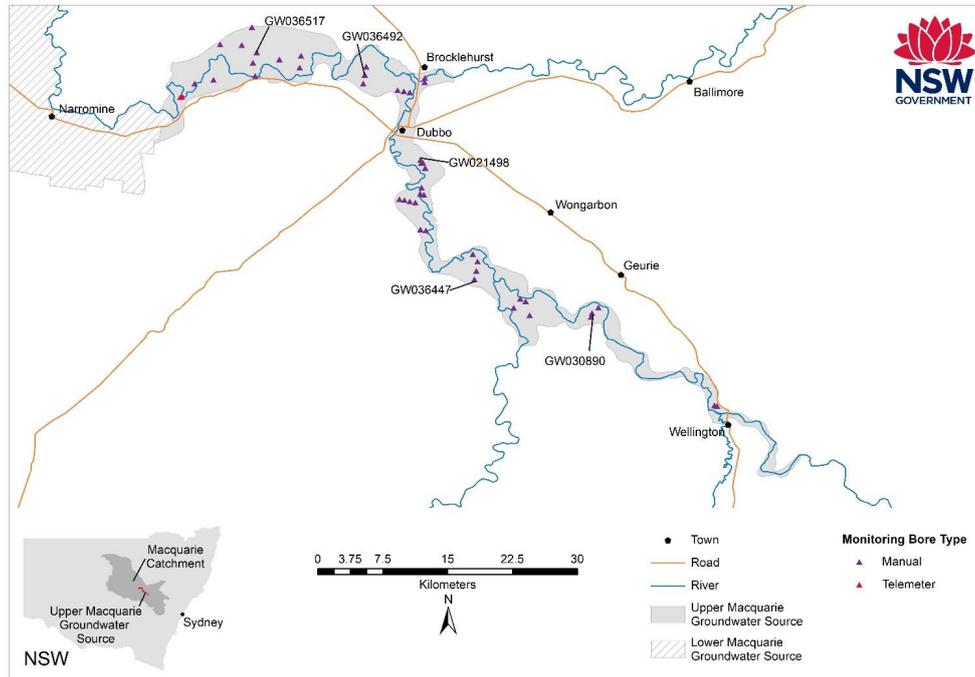
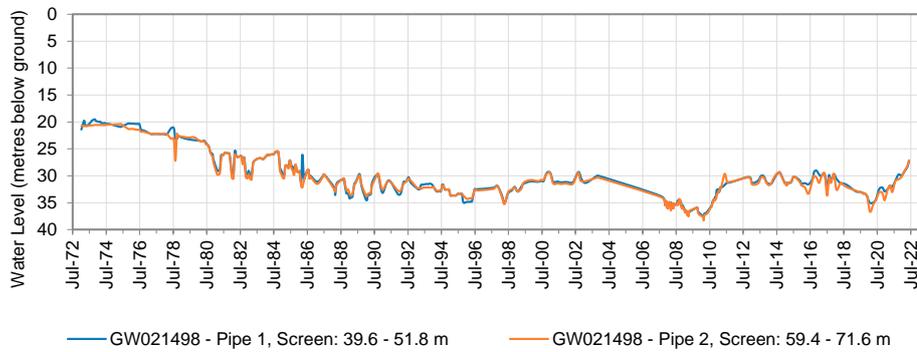


Figure 7: Hydrograph for monitoring bore GW021498



Upper Macquarie Alluvial Groundwater Source



Figure 8: Hydrograph of monitoring bore GW030890

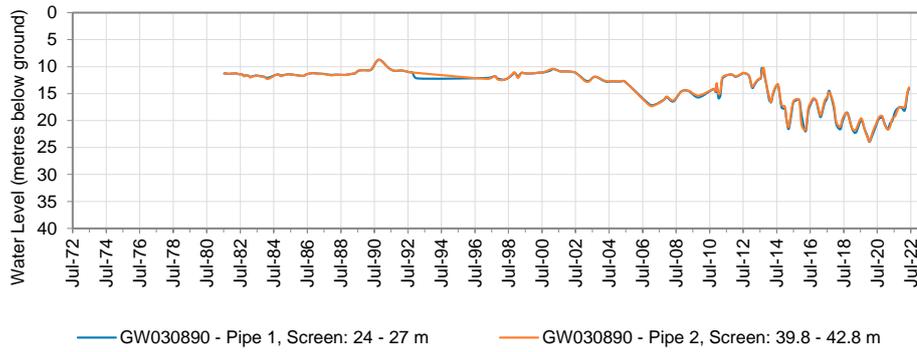


Figure 9: Hydrograph of monitoring bore GW036447

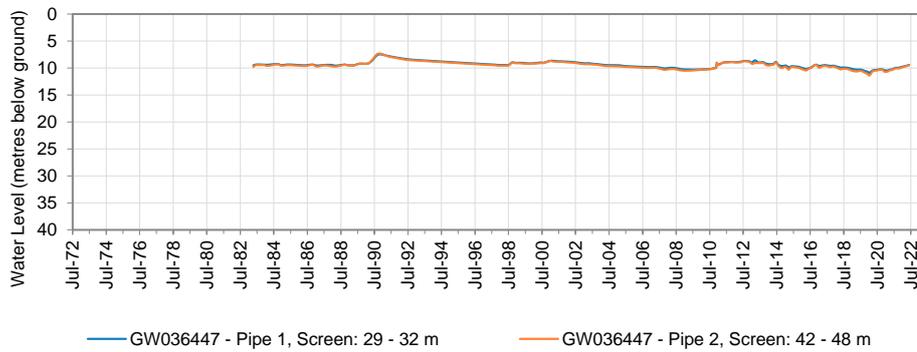
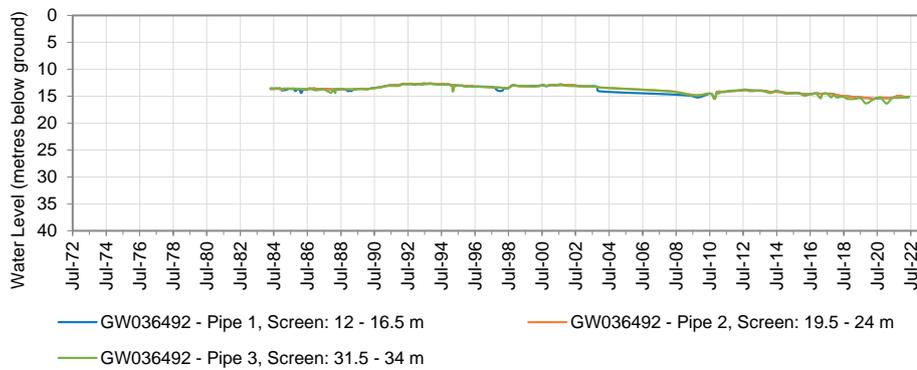


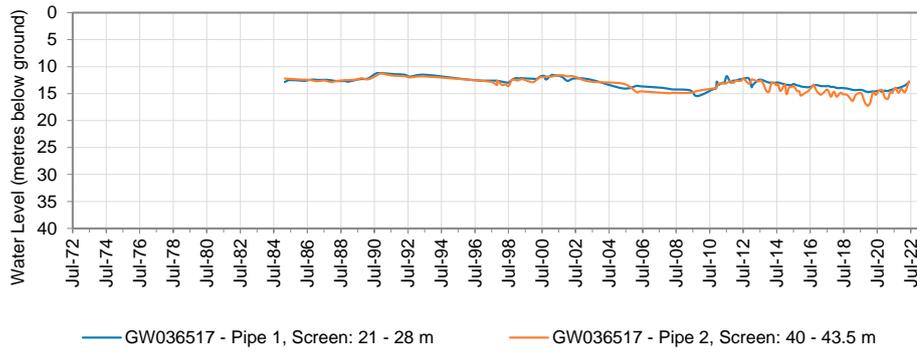
Figure 10: Hydrograph of monitoring bore GW036492



Upper Macquarie Alluvial Groundwater Source



Figure 11: Hydrograph of monitoring bore GW036517





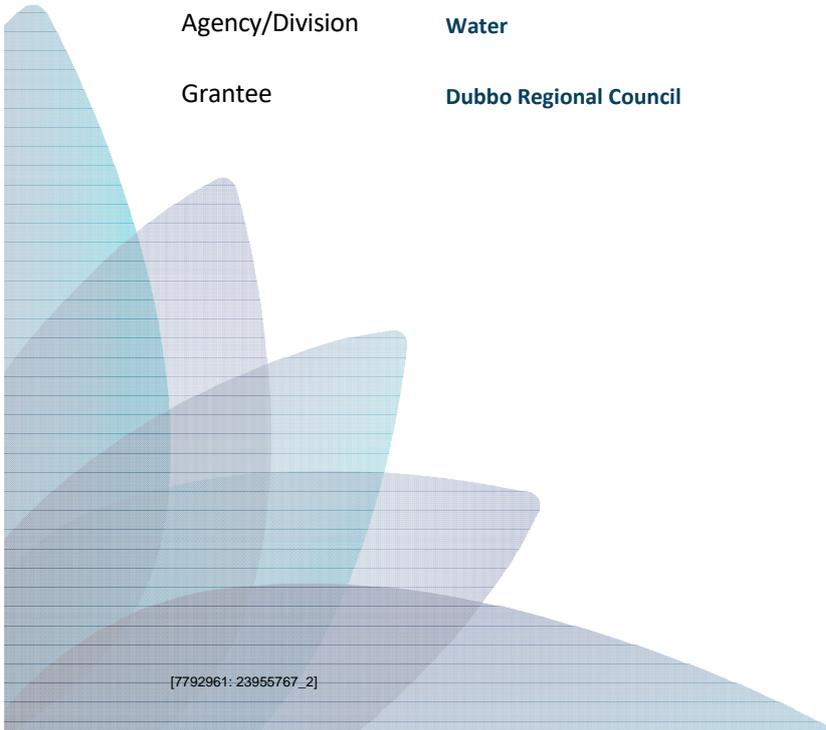
Planning,  
Industry &  
Environment

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## Funding Deed – Dubbo Drought Groundwater Infrastructure Project

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Project Reference	<b>DWS025</b>
Department	<b>Department of Planning, Industry and Environment</b>
Agency/Division	<b>Water</b>
Grantee	<b>Dubbo Regional Council</b>



[7792961: 23955767\_2]

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## Details

<b>Department</b>	Name	The Crown in right of the State of New South Wales acting through the Department of Planning, Industry and Environment (ABN 20 770 707 468).
	Agency/ Division	Water
	Address	10 Valentine Street, Parramatta NSW 2150
<b>Department Authorised Officer</b> <i>(refer to clause 19 - Notices)</i>	Name	Nige Deacon
	Position	Manager, Safe and Secure Water Program
	Address	PO Box 717 Dubbo NSW 2830
	Telephone	02 6841 7416
	E-mail	nige.deacon@industry.nsw.gov.au
<b>Grantee ('You')</b>	Name	Dubbo Regional Council
	Address	PO Box 81 Dubbo NSW 2830
	ABN	53 539 070 928
<b>Your Authorised Officer</b> <i>(refer to clause 21 - Notices)</i>	Name	Michael McMahon
	Position	Chief Executive Officer
	Address	PO Box 81 Dubbo NSW 2830
	Telephone	02 6801 4000
	E-mail	council@dubbo.nsw.gov.au
<b>Project</b>	Dubbo Drought Groundwater Infrastructure Works	
<b>Grant</b>	A maximum total amount of \$30 000 000 (GST exclusive), payable in Instalments based on up to 100% of evidenced actual expenditure.	
<b>Commencement Date</b> <i>(refer to clause 2- Commencement)</i>	The Commencement Date is the date that this Deed is executed by the parties (or the last date that a party executes this Deed, if executed on different dates).	

### Additional Insurance Policies required to be maintained by the Grantee

Types of Insurances	Minimum Sum Insured	Tick if Required
Professional Indemnity	\$1million in respect of any one claim	✓

## Special Conditions

You acknowledge and agree that:

- (a) the Project must be carried out in accordance with the approved Project Plan / Business Cases;
- (b) You have consulted with the community and other stakeholders and confirmed their support for the Project;
- (c) You must use the Grant in accordance with the Project Plan / Business Case;
- (d) the Grant is the only amount to be paid by the Department in connection with the Project;
- (e) if the Project requires any additional funding, You are responsible for providing or obtaining such additional funding, without reference to the Department;
- (f) You are responsible (at Your own cost and expense) for the ongoing maintenance, support, running and other matters in connection with the works to be completed, including following completion of the works; and
- (g) the Department has a strategic commitment to bring "Every person home safe every day" and that You are responsible for ensuring that You deliver on this commitment throughout the delivery of the Project in relation to Your Personnel. You must provide the Department with sufficient detail relating to Your compliance with this Special Condition in the WHS report required to be provided under Schedule B.

## Terms

### Definitions and Commencement

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#### Definitions and Interpretation

##### 1. Interpretation

1.1 Unless the context requires otherwise, in this Deed:

- (a) the terms set out in the left hand column of the Details have the meaning ascribed to them in the right hand column of the Details;
- (b) where any time limit pursuant to this Deed falls on a day which is not a Business Day then the time limit will be deemed to have expired on the next Business Day;
- (c) a reference to a statute, regulation, ordinance or by-law will be deemed to include a reference to all statutes, regulations, ordinances or by-laws amending, consolidating or replacing same from time to time;
- (d) the meaning of general words is not limited by specific examples introduced by “including” or “for example” or similar expressions;
- (e) references to persons include bodies corporate, government agencies and vice versa;
- (f) references to the parties include references to respective directors, officers, employees and agents of the parties;
- (g) nothing in this Deed is to be interpreted against a party solely on the ground that the party put forward this Deed or any part of it; and
- (h) where an expression is defined, any other grammatical form of that expression has a corresponding meaning.

1.2 Definitions

**Activity** means the activity(s) described in **Schedule A – Project Milestones and Assurance**, which aim to fulfil one or more of the Objectives of the Project.

**Activity Period** means the period specified in **Schedule A – Project Milestones and Assurance** during which the Activity must be completed.

**Assurance** requirements are reports, materials or other evidence as specified in Schedule A that are required to be provided to the Department by you before payment of the amount applicable to the corresponding Milestone.

**Project Plan / Business Case** means the document titled Dubbo Water Projects – Project Plan, dated 6/11/2019 and provided by You to the Department.

**Business Day** means any day other than a Saturday, Sunday or public holiday in New South Wales.

**Capital Equipment & Assets** means any item of tangible property, purchased, leased, created or otherwise brought into existence wholly, or in part, with the use of the Grant, which has at that time a value of over \$5,000 inclusive of GST, but does not include Project Material.

**Claim** means any cost, expense, loss, damage, claim, action, proceeding or other liability (whether in contract, tort or otherwise), however arising and includes legal costs on a full indemnity basis.

**Confidential Information** of a party means all trade secrets, financial information and other commercially or scientifically valuable information of whatever description and in whatever form (whether written or oral, visible or invisible) which:

- (a) is by its nature confidential;
- (a) has been designated as confidential by a party;
- (b) is capable of protection at common law or equity as confidential information; or
- (c) is derived or produced partly from the information in paragraphs (a), (b) or (c) above

but does not include information that:

- (d) is in the public domain; or
- (e) is independently known or developed by the party receiving the information other than as a result of a breach of this Deed or any other obligation of confidentiality owed by or to any other person.

**Correctly Rendered Invoice** means an invoice rendered in accordance with the Department's Fact Sheet.

**Deed** means this funding deed document and includes the Details, Terms, Schedule A – Project Milestones and Assurance, and any other schedules, annexures or other documents cross-referenced in this deed.

**Grant** means funds released by the Department as specified in the Details section above.

**GST Law** means *A New Tax System (Goods and Services Tax) Act 1999*.

**Instalments** means that part of the Grant which the Department pays to you in the amounts and on the dates set out in Schedule A.

**Intellectual Property or IP** includes:

- (a) all rights in relation to copyright, inventions, plant varieties, trademarks, designs, patents; and
- (b) all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields including trade secrets and know-how,

but does not include Moral Rights.

**Milestone and Funding Deed Milestone** is the **Activity(s)** described in **Schedule A – Project Milestones and Assurance**, which aim to fulfil one or more of the Objectives of the Project.

**Moral Rights** has the same meaning as in the *Copyright Act 1968 (Cth)*.

**Notice** means any approvals, consents, instructions, orders, directions, statements, requests and certificates, or other communication one party gives to another party in writing under this Deed.

**Objectives** means the objectives of the Activities described in the Schedule A – Project Milestones and Assurance, which are the agreed results you must achieve and ensure your subcontractors achieve.

**Personal Information** has the same meaning as in the *Privacy and Personal Information Protection Act 1998 (NSW)*.

**Personnel** includes, in relation to a party, that party's: officers, employees and agents; affiliates, advisers, consultants and sub-contractors; affiliates', advisers', consultants' and sub-contractors' officers, employees and agents; and any other persons under that party's direction or control.

**Project Material** means material created as part of or in performance of the Project including any documents or data.

**Special Conditions** means the Special Conditions (if any) set out in that section of this Deed.

## 2. Commencement

2.1 This Deed will commence on the Commencement Date.

## What you must do

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### 3. Your obligations

3.1 You must:

- (a) ensure the Grant or any Instalment is used only for the approved Project;
- (b) ensure each Activity is completed within the Activity Period in accordance with this Deed;
- (c) comply with the reporting requirements set out in Schedule B;
- (d) comply with all Commonwealth, State and Local government laws that are relevant to the Project, this Deed, or your registration as an entity; and
- (e) comply with all policies, guidelines and reasonable directions the Department provides to you.

## About the Grant

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### 4. Paying the Grant

4.1 The Department will pay an Instalment for each Activity at the end of the Activity Period on condition that:

- (a) the Department receives a Correctly Rendered Invoice from you that clearly identifies the Instalment you are claiming;
- (b) you have provided the Department's authorised officer and in accordance with Clause 21 with the evidence of compliance required under **clause 9** and the Schedule(s) showing that you have performed the Activities at the times set out in the Schedules and this Deed; and
- (c) the Activities have been performed to the satisfaction of the Department.

4.2 Notwithstanding **clause 4.1**, if the Department pays you an Instalment, this does not constitute an admission that the performance of the Project is in conformity with this Deed and no payment will be deemed to release you from your obligations under this Deed.

4.3 Subject to the terms and conditions of this Deed, including this clause 4, the Department will endeavour to pay Correctly Rendered Invoices within 30 days of receipt by the Department.

**5. Withholding, Suspension, Changes to Instalments and Repayment**

- 5.1 The Department may change the amount of the Instalment by issuing you with a Notice setting out the details of the changes.
- 5.2 If you are not complying with this Deed the Department may withhold or suspend payment of an Instalment until you comply with your obligations to the Department's satisfaction.
- 5.3 If the Department withholds or suspends an Instalment you must continue to perform your obligations under this Deed.
- 5.4 You must repay within 28 days of a demand being sent:
  - (a) any Instalment spent in breach of this Deed;
  - (b) all unspent Instalments;
  - (c) any overpayment
  - (d) any interest earned on any Instalment required to be repaid.
- 5.5 Where you have failed to comply with this Deed, the Department will calculate the amount of repayment you must make with regard to the extent you have failed to complete the Activities of the Project.
- 5.6 The Department may set off the amount of any overpayment or claim for repayment against any future Instalment due.
- 5.7 Any repayment the Department claims from you under this **clause 5** will be a debt due and owing by you to the Department.

**6. Holding of Grant**

- 6.1 This **clause 6** applies to the extent that you receive any funds under this Deed prior to incurring costs associated with such funds or prior to completing your obligations which apply to the relevant Instalment.
- 6.2 Each Instalment must be held in trust for the benefit of the Department from the date it is received either:
  - (a) in a separate bank account used solely in connection with the Grant; or
  - (b) into a general bank account provided that sufficient accounting controls are in place to track the expenditure of the Grant.
- 6.3 You must not expend any part of the Grant until the Department has notified you that you may release the specified amount of the Grant for the Project.

**7. Capital Equipment & Assets**

- 7.1 Any Capital Equipment & Assets acquired with the Grant for the purposes of the Project will become your property.
- 7.2 You must not acquire any Capital Equipment & Assets with the Grant unless the Capital Equipment & Assets is specified in the Deed or the Department has provided you with prior written consent to acquiring that Capital Equipment & Assets.

7.3 You must for the term of this Deed:

- (a) use any Capital Equipment & Assets you acquire with the Grant for the Project and in accordance with this Deed;
- (b) not sell, encumber, cease to use or otherwise dispose of any Capital Equipment & Assets acquired with the Grant without first obtaining written consent from the Department;
- (c) at your own expense reinstate any Capital Equipment & Assets acquired with the Grant that is lost, damaged or destroyed;
- (d) hold any Capital Equipment & Assets securely and safeguard them against theft, loss, damage, or unauthorised use;
- (e) maintain all Capital Equipment & Assets in good working order;
- (f) maintain all appropriate insurances for all Capital Equipment & Assets to its full replacement value;
- (g) if required by law, maintain registration and licensing of all Capital Equipment & Assets;
- (h) be fully responsible for, and bear all risks relating to, the use or disposal of all Capital Equipment & Assets; and
- (i) ensure an asset register is maintained at all times and, when requested by the Department, provide copies of the asset register to the Department.

## 8. GST

8.1 Unless otherwise indicated, all consideration for any supply under this Deed is exclusive of any GST imposed in relation to the supply.

8.2 If:

- (a) despite any other provision of this Deed, GST is imposed on a supply you make to the Department under this Deed; and
- (b) the Department is or will be entitled to receive an input tax credit (as defined in the GST Law) in relation to that supply,
- (c) the Department will pay you an additional amount equal to the GST imposed on that supply, at the time and in the manner payment is otherwise payable under this Deed in relation to that supply.

8.3 You must be registered under the GST Law at the time of making any supply under this Deed on which GST is imposed.

8.4 If you are not registered under the GST Law as required under **clause 8.3**, you will not be entitled to receive any additional amount as provided under this **clause 8**.

8.5 If for any reason the Department pays you an amount under this **clause 8** which is more than the GST imposed on the supply, you must repay the excess to the Department on demand or the Department may set off the excess against any other amounts due to you.

## Material and Information

### 9. Reporting Requirements

- 9.1 You agree to provide the Department with written progress Reports at the times and containing the information specified in **Schedule B – Reporting Requirements** (“Progress Reports”).
- 9.2 You must also provide any other information the Department reasonably requires from time to time concerning the Project.
- 9.3 If any Progress Report contains information confidential to you, you should mark the relevant parts of the Report accordingly.
- 9.4 You must provide financial statements of income and expenditure in respect of the Grant (‘the Statements’) to the Department within 60 Business Days after:
- (a) completion of the Activity or any termination of this Deed, whichever is the earliest; and
  - (b) the completion of each Financial Year in which a Grant is made.
- 9.5 The Statements must include a definitive statement as to whether:
- (a) the financial information for the Project represents the financial transactions fairly and is based on proper accounts and records; and
  - (b) the Grant was expended for the Project and in accordance with this Deed.
- 9.6 You must keep financial accounts and records relating to the Project so as to enable:
- (a) all receipts and payments related to the Project to be identified in your accounts and reported in accordance with this Deed;
  - (b) unless notified by the Department, the preparation of financial statements in accordance with Australian Accounting Standards; and
  - (c) generation of an income and expenditure statement for each financial year of the Project with the Budget, including:
    - i. a schedule of the Capital Equipment & Assets acquired, sold, written-off or otherwise disposed of during each financial year; and
    - ii. a comparison of the income and expenditure in each financial year against the Budget; and
    - iii. the audit of those records in accordance with Australian Auditing Standards.

## **10. Intellectual Property**

- 10.1 Intellectual Property in all Project Material vests in you, unless otherwise stated in the Special Conditions.

## **11. Confidential Information**

- 11.1 Each party must maintain the confidentiality of all commercially sensitive information it receives from the other party, including the amount of the Grant, except in accordance with **clause 13** (Public Announcements) or as otherwise agreed in writing.

## **12. Privacy**

- 12.1 You must:

- (a) ensure that Personal Information that is provided by the Department or collected by you under or in connection with this Deed is used only for the purposes of this Deed and is protected against loss, unauthorised access, use, modification and disclosure, or against other misuse;
- (b) not disclose any Personal Information without the written consent of:
  - i. the individual to whom the Personal Information relates; or
  - ii. the Department,unless otherwise required or authorised by law;
- (c) comply with the Information Protection Principles applying to NSW public sector agencies under the Privacy and Personal Information Protection Act 1998 (NSW) when doing any act or engaging in any practice in relation to Personal Information as if you were an agency directly subject to that Act; and
- (d) include equivalent requirements regarding Personal Information (including this clause 12) in any subcontract entered into for the provision of any of the Activities under this Deed.

### **13. Public Announcements and Acknowledgement**

13.1 You must:

- (a) seek the consent of the Department prior to any public announcement about the Project;
- (b) acknowledge the support of the Department, as directed by the Department from time to time:
  - i. in any public statements about the Project;
  - ii. on the home page of any web content established in connection with the Project;
  - iii. on any equipment or other facility funded wholly or in part by the Department;
- (c) You must use the Department's logo when acknowledging the Department's support of the Project in compliance with the [NSW Government Brand Guidelines](#).

13.2 The Department may publish the title and brief description, including outcomes, of the Project and the amount of the Grant.

## **Dealing with Risk**

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### **14. Disclosure of Information**

14.1 You acknowledge that, under the Government Information (Public Access) Act 2009, the Department may be required to publicly disclose information about this Deed at <https://tenders.nsw.gov.au>. None of the disclosure obligations require the disclosure of:

- (a) the commercial-in-confidence provisions of a contract;
- (b) any matter that could reasonably be expected to affect public safety or security; or

- (c) information which would be exempt from disclosure if it were the subject of an application under the Government Information (Public Access) Act 2009.

14.2 You may nominate any items you consider are confidential and why, to assist the Department in determining what items to disclose.

### **15. Insurance**

15.1 You must maintain, during the term of this Deed:

- (a) a broadform public liability policy of insurance to the value of at least \$10 million in respect of each claim and in the aggregate as to the number of occurrences in the policy period;
- (b) workers' compensation insurance as required by all relevant laws of Australia relating to workers compensation;
- (c) the Additional Insurance Policies listed in the Details for the minimum sum provided.

15.2 If specified as being required in the Details, a professional indemnity insurance policy must be maintained for a period of 7 years from the end of the Deed.

15.3 You must not do, permit or suffer any act, matter or thing or omission whereby any of the policies referred to in this clause may be vitiated, rendered void or voidable.

15.4 On request by the Department, you must provide a copy of valid and current certificates of currency for each or any of the policies described above.

15.5 Without limitation to **clause 15.1**, each party warrants that it has and will maintain appropriate insurance to cover any liability it may incur in relation to this Deed.

### **16. Indemnities**

16.1 You must indemnify and keep indemnified the Department, the Crown in right of the State of New South Wales and their officers, employees and agents from and against any loss (including legal costs and expenses on a solicitor/own client basis) or liability incurred or suffered by, or made against, any of those indemnified arising directly or indirectly from any Claim by any person as a result of or in connection with:

- (a) the Grant or the use of any outcomes or Capital Equipment & Assets arising from the Project;
- (b) your breach of this Deed;
- (c) any unlawful or negligent act or omission by you, your employees or your subcontractors in connection with this Deed;
- (d) any illness, injury or death of any person you, your employees or your subcontractors cause or contribute to, in connection with this Deed;
- (e) any loss or damage to real or personal property you, your employees or your subcontractors cause or contribute to, in connection with this Deed; or
- (f) any act or omission by you, your employees or your subcontractors in connection with this Deed that is in infringement of any Intellectual Property, or privacy rights of the Department or any third party.

- 16.2 Your liability to indemnify the Department under this clause will be reduced proportionately to the extent that any negligent or unlawful act or omission by the Department, its officers, employees or agents contributed to the relevant loss or liability.
- 16.3 Your liability to indemnify the Department under this clause does not exclude or reduce the liability of, or benefit to, a party that may arise by operation of the common law, statute or the other terms of this Deed.

**17. Risk Management**

- 17.1 Consistent with best practice Project Management, You must prepare and maintain a live risk register and develop appropriate mitigation plans for unacceptable risks which shall be used to manage and report against those risks throughout the project life cycle. You must provide the Department with access to such risk register, mitigation plans and reports.

**18. Work Health and Safety**

- 18.1 You must:
- (a) comply with, and must ensure that all of Your Personnel comply with all applicable laws and regulations, including the *Work Health and Safety Act 2011* (NSW) and the *Work Health and Safety Regulations 2017* (NSW) (**WHS Legislation**) when performing work under this Deed; and
  - (b) so far as is reasonably practicable, consult, co-operate and co-ordinate activities with the Department and any other person who, concurrently with You, has a work health and safety duty under the WHS Legislation in relation to the same matter.
- 18.2 You must ensure, so far as is reasonably practicable, that any Activity or other work performed in connection with this Deed is without risk to the health and safety of persons who may in any way be affected by such Activity or work.
- 18.3 If a Notifiable Incident (as defined in the WHS Legislation) occurs at the Department's premises or involves the Department's Personnel in connection with an Activity or other work carried out under this Deed, You must immediately report the incident to the Department in writing, promptly provide the Department with copies of any notices or other documentation provided to or issued by the relevant government regulator in relation to the Notifiable Incident, and provide the Department with such other information as may be required by the Department to facilitate the notification to or investigation of the Notifiable Incident in accordance with WHS Legislation.

## Terminating the Deed

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### 19. Termination

- 19.1 Unless terminated earlier, this Deed will end once you have completed the Project to the Department's satisfaction and the Department has paid all Instalments due.
- 19.2 Where a party has breached this Deed:
- (a) the other party may give a Notice to that party requiring it to rectify that breach within 30 days of receiving that Notice; and
  - (b) if the party which received the Notice fails to rectify that breach in time, the other party may terminate this Deed immediately by giving a further Notice.
- 19.3 The Department may terminate this Deed immediately by Notice if:
- (a) you breach a provision of this Deed in a manner that, in the Department's opinion, is not capable of remedy;
  - (b) you breach any of the following provisions: **clause 14** (Insurance) or **clause 22.10** (Assignment);
  - (c) you materially breach any of the following provisions: **clause 3** (Your Obligations), **clause 6** (Holding of Grant), or **clause 9** (Reporting Requirements); or
  - (d) you become insolvent, if you are the subject of a debtors or creditors petition under the Bankruptcy Act 1966, or if you resolve to go into administration or liquidation or have a summons for your winding up presented to a Court or enter into any scheme of arrangement with your creditors.
- 19.4 The Department may immediately terminate this Deed by giving you Notice, if any one or more of the following occurs:
- (a) in the Department's opinion you are not carrying out the Project diligently and competently;
  - (b) you have not completed one or more of the Activities by the date they are due to be completed;
  - (c) the Department considers the Project no longer viable;
  - (d) the Department considers that there has been a material change in circumstances in your financial position, your structure or your identity; or
  - (e) you have not made significant progress on the performance of your obligations under this Deed to the satisfaction of the Department by the date that is 6 months after the date of this Deed; or
  - (f) you have not completed a Milestone within 6 months of the due date for that Milestone,

and you have failed to satisfy the Department that such events or circumstances have been alleviated, within 30 days of receiving a Notice from the Department requiring you to do so.

## Other Legal Matters

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### 20. Dispute Resolution

- 20.1 If a dispute arises in relation to this Deed (“a **Dispute**”), a party must comply with this **clause 20** before starting arbitration or court proceedings except proceedings for urgent interlocutory relief.
- 20.2 A party claiming that a dispute has arisen must notify the other party in writing giving details of the dispute (**Dispute Notice**) in accordance with the requirements of **clause 21** (Notices).
- 20.3 Following receipt of a Dispute Notice, each party must refer the Dispute to a senior representative, who:
- (a) does not have prior direct involvement in the Dispute; and
  - (b) has authority to negotiate and settle the Dispute.
- 20.4 If the Dispute is not resolved within 10 Business Days, from the date the Dispute Notice is received by the party to whom the Dispute Notice is given, the party which gave the Dispute Notice under **clause 20.2** must refer the Dispute for mediation by the Australian Disputes Centre Limited (ADC) for resolution in accordance with the mediation rules of the ADC.
- 20.5 If the Dispute is not resolved within 40 Business Days after referral to mediation either party may initiate proceedings in court.
- 20.6 Each party must pay its own costs of complying with this clause and split the costs of the mediator evenly.
- 20.7 Each party must pay its own costs of complying with this clause and split the costs of the mediator evenly.

### 21. Notices

- 21.1 Unless otherwise stated in this Deed, all Notices to be given under this Deed must be in writing, and hand-delivered, posted or emailed to the Authorised Officer specified in the Details or as otherwise notified in writing.
- 21.2 The receiving party will be deemed to have received the Notice as follows:
- (a) if hand delivered, on the day on which it is delivered or left at the relevant address;
  - (b) if sent by post within Australia:
    - i. if posted using Express Post, the priority letter service option of regular post, or the priority service option for Registered Mail, on the fourth Business Day after the day on which it is posted;
    - ii. if posted using the regular post option, on the tenth Business Day after the day on which it is posted;
  - (c) if sent by email before 5.00pm on a Business Day, the first of the following occurring:
    - i. when the sender receives an automated message confirming delivery; or

- ii. four hours after the time sent (as recorded on the device from which the sender sent the email) unless the sender receives an automated message that the email has not be delivered.
  - (d) if sent by email after 5.00pm on a Business Day or on a day that is not a Business Day, then it will be deemed to be received on the next Business Day.
- 21.3 Any such mode of service will be in all respects valid notwithstanding that the party on whom service is affected may be in liquidation, bankruptcy or wound up and notwithstanding any other matter or event whatsoever.

## 22. General

- 22.1 **Survival:** The following clauses survive termination or expiry of this Deed: **clause 9** (Reporting Requirements), **clause 11** (Confidential Information), **clause 12** (Privacy), **clause 15** (Insurance), **clause 16** (Indemnities), **clause 19** (Termination), **clause 22.3** (Keeping of records), this **clause 22.1** and any other clause which by its nature is intended to survive this Deed.
- 22.2 **Subcontractors:** You remain fully responsible for the performance of the Project if you subcontract the performance of any part of the Project.
- 22.3 **Keeping of records, audit and rights of access to such records and access to Capital Equipment & Assets:** You:
- (a) must keep complete and accurate records and books of account with respect to your performance of the Project (the "Records"), and must retain such Records for a minimum of seven (7) years after expiry or termination of this Deed;
  - (b) authorise the Department and any State or Commonwealth Government department or agency (and any of their appointed third party service providers authorised to perform audits on their behalf) (the "Auditors") that has provided moneys to the Department for the purposes of the Project, to undertake on-site audits, to examine and inspect, at reasonable times and on reasonable Notice, any facilities, any Capital Equipment & Assets and any records held by you and Records, and allow any such Records to be copied; and
  - (c) provide all reasonable assistance in order for the Auditors to properly carry out the inspections and audits referred to in this clause.
- 22.4 **Conflict of Interest:** You must not carry on or be involved in any capacity in an activity or business, which may conflict with, or adversely affect, your ability to carry out your obligations under this Deed, and you will immediately notify the Department in writing if such a conflict or risk of such a conflict arises. You must take all reasonable efforts to ensure that your staff and contractors abide by this clause.
- 22.5 **Entire Deed:** This Deed states all the express terms agreed by the parties as to the matters referred to in this Deed. It supersedes all prior contracts, obligations, representations, conduct and understandings between the parties relating to the subject matter of this Deed.
- 22.6 **Variation:** This Deed may only be varied by agreement in writing including by an exchange of emails confirming the agreed variation.

22.7 **Inconsistency:** If there is any inconsistency between provisions of this Deed then the order of precedence will be:

- (a) the **Details**; then
- (b) any **Special Conditions**; then
- (c) these **Funding Terms**; then
- (d) any **Schedules**.

22.8 **Negation of employment, partnership or agency**

- (a) This Deed does not create a relationship of agency, partnership, and/or employment between the parties.
- (b) You must not represent yourself as being an employee or agent of the Department or as otherwise able to bind or represent the Department.

22.9 **Waiver**

- (a) If a party fails to exercise any of its rights under this Deed, or delays exercising those rights, that failure or delay will not operate as a waiver of those rights or any future rights or in any respect estop a party from relying on the terms of this Deed to their full force and effect.
- (b) Any waiver by a party of a breach of this Deed must be in writing and will not be construed as a waiver of any further breach of the same or any other provision.

22.10 **Assignment:** You must not assign or novate your obligations or interests under this Deed, without the prior written consent of the Department.

22.11 **Counterparts:** This Deed may be signed in any number of counterparts which taken together will constitute one instrument.

22.12 **Governing Law:** The laws of New South Wales govern this Deed and the parties submit to the non-exclusive jurisdiction of the courts in that State.

**Executed as a deed**

**Department**

Signed, sealed and delivered for and on behalf of the Crown in right of the State of New South Wales acting through the **Department** by its authorised signatory but not so as to incur personal liability:

  
 Signature of Authorised Signatory

  
 Signature of Witness

NIGEL DEACON  
 Name of Authorised Signatory

SEEVARATHNAM HARIDHARAN  
 Name of Witness

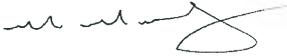
MANAGER SSWP  
 Position of Authorised Signatory

  
  
 20/12/19  
 Date

**You (Authorised Signatory)**

By entering into this Deed the signatory warrants that the signatory is duly authorised to execute this Deed on behalf of **Dubbo Regional Council (ABN 53 539 070 928)**

Signed, sealed and delivered for and on behalf of **Dubbo Regional Council (ABN 53 539 070 928)** by its authorised signatory:

  
 Signature of authorised signatory

  
 Signature of Witness

Michael McMahon  
 Name of authorised signatory

Natalie Nissen  
 Name of Witness

Chief Executive Officer  
 Position of authorised signatory

  
 20/12/2019  
 Date



## REPORT: Duke of Wellington Bridge - Flood Damage Treatment Options

**DIVISION:** Infrastructure  
**REPORT DATE:** 10 July 2023  
**TRIM REFERENCE:** ID23/1751

### EXECUTIVE SUMMARY

<b>Purpose</b>	Seek direction or decision	
<b>Issue</b>	<ul style="list-style-type: none"> <li>Flood damage to Gobolion Street including the road formation, pavement, kerb and gutter, stormwater assets and the Bell River bank on which these Council assets were constructed.</li> <li>The Duke of Wellington Bridge suffered damage to steel guardrail and scour to a bridge abutment in the same flood event.</li> <li>The bridge and approximately 60 metres of Gobolion Street remain impassable and closed to traffic.</li> <li>Reconstruction of Council's road and drainage assets will require extensive riverbank stabilisation.</li> </ul>	
<b>Reasoning</b>	<ul style="list-style-type: none"> <li>The overall estimated cost to rehabilitate Council's road, stormwater and bridge assets is currently unfunded and outside Council's financial capacity.</li> <li>Without a financial commitment from the State and/or Federal funding sources the reinstatement of the damaged Council assets cannot proceed.</li> </ul>	
<b>Financial Implications</b>	Budget Area	Infrastructure
	Funding Source	Currently unfunded. Repairs can only be undertaken with State and/or Federal assistance via Disaster Recovery Funding Arrangements
	Proposed Cost	\$21,600,000
	Ongoing Costs	Not applicable
<b>Policy Implications</b>	Policy Title	Not applicable
	Impact on Policy	Not applicable
<b>Consultation</b>	Internal stakeholders, Wellington Town Committee	Face to face meetings to work through the options Discussion of options considered with the Wellington Town Committee members

## STRATEGIC DIRECTION

The Towards 2040 Community Strategic Plan is a vision for the development of the region out to the year 2040. The Plan includes six principle themes and a number of objectives and strategies. This report is aligned to:

Theme:	2 Infrastructure
CSP Objective:	2.1 The road transportation network is safe, convenient and efficient
Delivery Program Strategy:	2.1.1 Traffic management facilities enhance the safety and efficiency of the road network
Theme:	2 Infrastructure
CSP Objective:	2.2 Infrastructure meets the current and future needs of our community
Delivery Program Strategy:	2.2.5 Council maintains infrastructure and delivers services at the adopted service levels as agreed with the community

## RECOMMENDATION

- 1. That Council target natural disaster funding to undertake reinstatement works on the Bell River riverbank, Duke of Wellington Bridge, Gobolion Street pavement and stormwater drainage.**

*Luke Ryan*  
Director Infrastructure

*RF*  
Manager Infrastructure  
Delivery

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## BACKGROUND

Between October and December 2022, flood events in both the Macquarie and Bell river catchments caused major river bank damage at the confluence of the rivers. Other damage includes sections of Gobolion Street being washed away, and some scouring has occurred around parts of the Duke of Wellington Bridge abutments. The damage is such that the street and bridge are currently impassable to vehicle or pedestrian traffic. The area is currently closed to public access in the interest of community safety.

After the flood events, Council commissioned two technical reports from specialist engineering consultants SMEC Australia Pty Ltd, for the purpose of determining the extent of damage to Council's infrastructure and potential repair options.

These reports are:

- Duke of Wellington Bridge Asset Condition Report - dated May 2023 from SMEC.
- Duke of Wellington Bridge Approach Concept Options Report - dated July 2023 from SMEC.

A summary of the findings from these reports were presented in a briefing workshop to councillors delivered on Thursday 17 August 2023.

## REPORT

The Duke of Wellington Bridge Asset Condition Report dated May 2023 findings determined the bridge structure is in good condition, with some scouring at the southern abutment, and minor damage to a steel railing. Both of these identified defects are reasonably straightforward to repair. In general terms, the bridge is in sound condition and able to meet its serviceability requirements.

The Duke of Wellington Bridge Approach Concept Options Report dated July 2023 presented conceptual solutions to enable reconstruction of the approach road to the bridge.

The report identified that a river training strategy, to relocate the confluence of the Bell and Macquarie rivers further downstream of the bridge and road approaches, should be considered essential to any planned road, bridge and drainage reconstruction. If such strategy is not considered essential, future flood events will almost certainly continue to erode the eastern bank of the Bell River, causing further damage to Gobolion Street, the Duke of Wellington Bridge and potentially to the Macquarie riverbanks.

Therefore, local treatment only of road, bridge and drainage works without a river training strategy is not considered viable.

The river training strategy involves reinstatement of approximately 200 metres of the Bell River's eastern bank, including construction of scour protection at water level and redirecting the river to meet with the Macquarie River further downstream of the bridge and road approach. Backfill and rock armour behind the scour protection will re-establish the riverbank on which road reconstruction can take place.

Flood damage to Council’s road, bridge and stormwater assets is claimable under the Disaster Recovery Funding Arrangements (DRFA). Council will contend that to effectively rehabilitate the Council assets, the DRFA funding should also target permanent riverbank rehabilitation, including the river training strategy.

**Consultation**

- SMEC Australia Pty Ltd were consulted and provided comment on the post flood condition of the Bridge structure.
- SMEC was also consulted and provided road repair options for Gobolion Street and other flood damaged Council assets.
- Councillors and the Chief Executive Officer were provided with a briefing on this matter on Thursday 17 August 2023.

**Resourcing Implications**

- The Duke of Wellington Bridge flood damage repair budget estimate of \$21.6M is currently unfunded, and outside of Council’s financial capacity.
- Without full financial assistance from State and/or Federal funding sources the repairs cannot proceed.
- Being part of a declared natural disaster, an appropriate external potential funding source is the DRFA. The DRFA is a joint initiative between State and Federal governments set up to help local government to be reimbursed ‘like for like’ on the cost to rehabilitate essential public assets such as roads and bridges.

Total Financial Implications	Current year (\$)	Current year + 1 (\$)	Current year + 2 (\$)	Current year + 3 (\$)	Current year + 4 (\$)	Ongoing (\$)
a. Operating revenue	0	0	0	0	0	0
b. Operating expenses	0	0	0	0	0	0
c. Operating budget impact (a – b)	0	0	0	0	0	0
d. Capital Expenditure	1,000,000	20,600,000	0	0	0	0
e. Total net impact (c – d)	-1,000,000	-20,600,000	0	0	0	0
Does the proposal require ongoing funding?	No					
What is the source of this funding?	Currently unfunded. Recommend an DRFA application					

**Table 1.** Ongoing Financial Implications

**Options Considered**

Option	Description	Estimate
1	Do nothing - bridge remains in place, no structural or stabilisation works.	\$50K
2	Decommission the bridge - remove structure and undertake bank stabilisation work.	\$23.4M
3	Decommission bridge - retain structure and undertake bank stabilisation works.	\$21.4M
4	Reinstate bridge and road access - bank and bridge stabilisation works, road and stormwater reconstruction works.	\$21.6M

**Preferred Option**

Reopening of Council's public assets (bridge, road and stormwater) is the most advantageous outcome for Council. On that basis Option 4 above is the preferred option.

**Breakdown of Preliminary Budget Estimate for Preferred Option:**

Item Description	Estimated Cost
<b>River Training Structure</b> Includes permanent erosion protection, river bed and river bank rehabilitation works	\$14,780,000
<b>Gobolion Street Reconstruction</b> Includes kerb, pavement, stormwater works and minor bridge repairs	\$220,000
<b>Indirect Project Costs</b> Includes project management and regulatory fees/charges	\$2,100,000
<b>Contingency</b>	\$4,500,000
<b>TOTAL</b>	<b>\$21,600,000</b>

This is based on a high level estimate



DUBBO REGIONAL  
COUNCIL

## REPORT: South Bridge Strategic Concepts - Update and Next Steps

**DIVISION:** Infrastructure  
**REPORT DATE:** 1 September 2023  
**TRIM REFERENCE:** ID23/2204

### EXECUTIVE SUMMARY

<b>Purpose</b>	Seek direction or decision	
<b>Issue</b>	<ul style="list-style-type: none"> <li>On 12 July 2021 the Infrastructure and Liveability Committee had before it the report titled 'South Bridge Strategic Concepts – Results of Public Exhibition', which included strategic design details for the four alignment options prepared by GHD, as well as the strategic business case prepared by Balmoral Group Australia.</li> <li>The Committee resolved to not give further consideration to Option 1, which was the alignment through Sandy Beach.</li> <li>Due to the significant impact on Lady Cutler Sporting Ovals, as well as the cost of the curved bridge, it is also proposed that Option 4 not be given further consideration.</li> <li>It is proposed that a detailed business case be prepared for remaining Option 2 and 3.</li> </ul>	
<b>Reasoning</b>	<ul style="list-style-type: none"> <li>The South Bridge Project has been identified in the Dubbo Transportation Strategy 2020 as a significantly important project to ensure continued growth can occur in West Dubbo well into the future.</li> <li>Of the remaining options, Option 4 has the lowest cost-benefit ratio, giving the least net benefit to the community.</li> <li>Significant concerns were raised by the community about the impact Option 4 would have on the Lady Cutler Sporting Ovals.</li> </ul>	
<b>Financial Implications</b>	Budget Area	Infrastructure
	Funding Source	Urban Road Contributions
	Proposed Cost	\$230,000
	Ongoing Costs	None
<b>Policy Implications</b>	Policy Title	N/A
	Impact on Policy	N/A
<b>Consultation</b>	Infrastructure	<ul style="list-style-type: none"> <li>Public exhibition of concept options and strategic business case November 2020 – February 2021.</li> <li>South Bridge report to Infrastructure and Liveability Committee on 21 July 2021 where Option 1 was removed.</li> <li>Proposal to remove Option 4 and proceed with a detailed business case for Option 2 and 3 was presented to ELT on 29 March 2023 and</li> </ul>

		subsequently presented via two Council workshops on 4 May and 25 May 2023.
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## STRATEGIC DIRECTION

The Towards 2040 Community Strategic Plan is a vision for the development of the region out to the year 2040. The Plan includes six principle themes and a number of objectives and strategies. This report is aligned to:

Theme: 2 Infrastructure  
CSP Objective: 2.1 The road transportation network is safe, convenient and efficient  
Delivery Program Strategy: 2.1.1 Traffic management facilities enhance the safety and efficiency of the road network

Theme: 2 Infrastructure  
CSP Objective: 2.1 The road transportation network is safe, convenient and efficient  
Delivery Program Strategy: 2.1.2 The road network meets the needs of the community in terms of traffic capacity, functionality and economic and social connectivity

Theme: 2 Infrastructure  
CSP Objective: 2.2 Infrastructure meets the current and future needs of our community  
Delivery Program Strategy: 2.2.5 Council maintains infrastructure and delivers services at the adopted service levels as agreed with the community

## RECOMMENDATION

- 1. That Option 4, the alignment of which has a curved bridge and severs the Lady Cutler Sporting Ovals, not be given further consideration as an option for the alignment of the South Bridge.**
- 2. That a detailed business case be prepared for South Bridge alignment Option 2 and 3.**

*Luke Ryan*  
Director Infrastructure

*MJ*  
Manager Infrastructure  
Strategy and Design

## BACKGROUND

The June 1998 Traffic Management Study entitled Dubbo Expanded Urban Area Traffic Management and Road Contribution Study, prepared by PPK Environment and Infrastructure, identified that to facilitate the growth of the south western sector of Dubbo, a bridge crossing the Macquarie River would be required south of the existing LH Ford Bridge. The May 2020 draft Dubbo Transportation Strategy 2020, prepared by Stapleton Transportation and Planning, reinforces the need for additional river crossings to support the City's growth with the development of a peripheral road network and distribution of traffic around the City, thereby reducing the demand on the highway corridors.

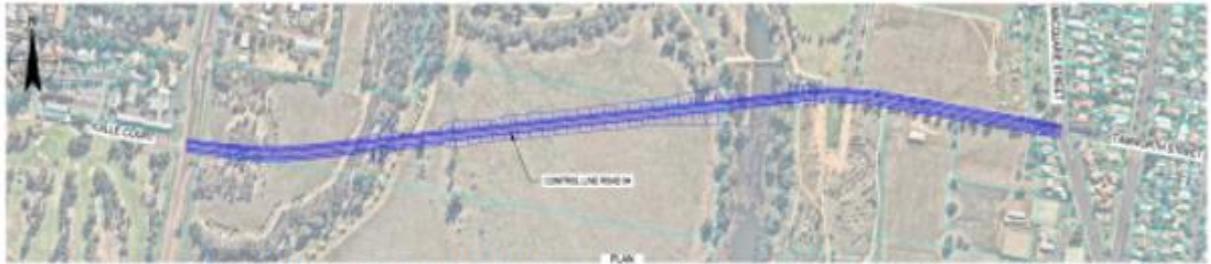
On 23 August 2019, Council received \$100,000 from the NSW Government for the investigation of a southern bridge crossing in Dubbo. Council subsequently engaged GHD to undertake a strategic concept design and options report, entitled Dubbo South New Bridge Strategic Concept Design Report. Four concept designs and alignments were investigated and prepared, including approximate costings based on a preferred construction methodology.



**Figure 1** – Option 1, identified as Option A in the GHD Dubbo South New Bridge Strategic Concept Design Report, attached as **Appendix 3**. Provides a connection from Whylandra Street at the Minore Road intersection on the west, to Macquarie Street at the Bligh Street and Reakes Avenue intersection on the east. Estimated cost \$41,402,300.



**Figure 2** – Option 2, identified as Option C in the GHD Dubbo South New Bridge Strategic Concept Design Report, attached as **Appendix 3**. Provides a connection from Whylandra Street at the Minore Road intersection on the west, to Macquarie Street at the Tamworth Street intersection on the east. Estimated cost \$39,049,900.



**Figure 3** – Option 3, identified as Option D in the GHD *Dubbo South New Bridge Strategic Concept Design Report*, attached as **Appendix 3**. Provides a connection from Whylandra Street at the Dubbo Golf Club driveway on the west, to Macquarie Street at the Tamworth Street intersection on the east. Estimated cost \$32,050,800.



**Figure 4** – Option 4, identified as Option B in the GHD *Dubbo South New Bridge Strategic Concept Design Report*, attached as **Appendix 3**. Provides a connection from Whylandra Street at the Minore Road intersection on the west, to Bligh Street at the South Street and Sandy Beach Road intersection on the east. Estimated cost \$35,693,900.



**Figure 5** – Options 1, 2, 3 & 4 and their comparative alignments. See the GHD *Dubbo South New Bridge Strategic Concept Design Report*, attached as **Appendix 3** for further details.

Item	Option 1	Option 2	Option 3	Option 4
Preliminaries	2,846.8	2,693.4	2,106.9	2,955.4
Roadworks	7,320.2	11,549.7	8,851.9	13,709.1
Bridge	12,816.9	7,146.4	5,694.0	7,526.6
Contingency 30%	6,895.2	6,416.9	4,995.8	7,257.3
Site investigations	896.4	834.2	649.5	943.5
REF and approvals	149.4	139.0	108.2	157.2
Concept and Detailed Design	1,494.0	1,390.3	1,082.4	1,572.4
Contract and Project Management	1,494.0	1,390.3	1,082.4	1,572.4
<b>Total Bridge Costs</b>	<b>33,912.7</b>	<b>31,560.3</b>	<b>24,571.2</b>	<b>35,693.9</b>
Upgrades to the Wider Network	7,489.6	7,489.6	7,489.6	-
<b>TOTAL PROJECT COSTS</b>	<b>41,402.3</b>	<b>39,049.9</b>	<b>32,060.8</b>	<b>35,693.9</b>

**Figure 6** – Strategic costings for each bridge alignment option, values in \$'000s. Source: *New South Dubbo Bridge Strategic Business Case*, Balmoral Group Australia, Table 8, attached as **Appendix 1**.

It should also be noted that while Option 3 has the lowest overall total project costs, it also accounts for the greatest area of land to be quarantined and purchased by Council. The value of land acquisitions is, as yet, unquantified as no estimates of the amount of land required, and the associated compensatory rates are currently available.

Additionally, Council engaged Balmoral Group Australia to prepare a detailed Strategic Business Case, entitled *New South Dubbo Bridge Strategic Business Case*, and assist with the development of an online survey and community engagement strategy to gain feedback from the public on the four concept designs and alignments.

Bridge concept designs and alignments were publicly exhibited via Council's website on 4 November 2020. Initially, two of the four bridge options were made available to the public, with Council deciding that options involving the intersection of Tamworth Street and Macquarie Street in South Dubbo not go on public display.

Balmoral Group Australia's draft Strategic Business Case was made available for public review with consideration given to the two selected bridge options. A 23 question online survey, allowing the public to provide feedback on the two concept designs and alignments, was also facilitated by Balmoral Group Australia.

In addition to the public notification, Council staff along with Balmoral Group Australia, ran an open community information session on 25 November 2020 and stakeholder reference group meetings on 26 and 27 November 2020.

Subsequent to the open community information session and stakeholder focus group meetings, all four bridge concept designs and alignments were made available for public review via Council’s website and the Mayor’s Facebook page on 1 December 2020.

Public submissions for the project closed on 5 February 2021 with Council receiving a total of 195 online survey responses, 56 individual public submissions and 12 submissions on behalf of 11 organisations. Analysing the feedback received, Balmoral Group Australia finalised the Strategic Business Case report to include cost benefit and financial analysis, while also preparing an accompanying report, entitled New South Dubbo Bridge Community Feedback Analysis, summarising all public feedback received and performing sentiment analysis on all four bridge concept designs and alignments.

A Cost Benefit Analysis (CBA), forming part of the New South Dubbo Bridge Strategic Business Case, was prepared by Balmoral Group and was undertaken over a 30 year analysis period, at a 7% discount rate, consistent with NSW Treasury Guidelines. A copy of the BCR table from the Business Case is shown below.

Table 9: Results of the CBA at a 7% discount rate, 30-year analysis period. Values in \$’000s

	Benefits	Costs	NPV	BCR
Option 1	66,969.0	72,369.7	-5,400.7	0.93
Option 2	66,668.5	61,208.3	5,460.2	1.09
Option 3	66,325.7	54,307.4	12,018.3	1.22
Option 4	66,860.3	71,253.9	-4,393.6	0.94

Based on cost benefit and financial metrics, alignment Option 3 was most likely to maximise net benefits over a 30 year analysis period, with an NPV of \$12.0 million (BCR: 1.22). Additionally, alignment Option 2 was also likely to achieve positive Net Benefits, with a NPV of \$5.5 million (BCR: 1.09). However, the costs associated with alignment Option 3 may be understated, since it will potentially quarantine the largest area of land, which has not been valued to date. Therefore, alignment Option 2 and 3 should be shortlisted for future consideration in a detailed business case.

On 12 July 2021 the Infrastructure and Liveability Committee had before it the report titled ‘South Bridge Strategic Concepts – Results of Public Exhibition’, which included strategic design details for the four alignment options prepared by GHD, as well as the strategic business case prepared by Balmoral Group Australia. The Committee resolved to not give further consideration to Option 1, due to the significant impact it would have on Sandy Beach.

### Previous Resolutions of Council

12 July 2021	1. <i>That the report of the Manager Infrastructure Strategy and Design, dated 23 June 2021, be noted.</i>															
(ILC21/20)	2. <i>That Sandy Beach, located on the eastern bank of the Macquarie River, not be given further consideration as a location for a potential new South Dubbo Bridge, and that it be recognised by Council the high value placed on this recreational area by the local community.</i>															
21 July 2021																
(CCL21/153)	<p>3. <i>That, in accordance with public feedback received, any bridge alignment option positioned in the vicinity of the Lady Cutler Oval Sporting Precinct, including areas recognised as Lady Cutler Ovals, Lady Cutler East, Lady Cutler South, Batistelle Land and Pavans Park, duly consider and appropriately address the safety of sporting patrons and children, pedestrian connectivity, traffic volumes, parking availability, noise and visual impacts.</i></p> <p>4. <i>That, with the future adoption of a new South Dubbo Bridge alignment, impacts on the existing Tracker Riley Cycleway be fully mitigated and existing pathway connectivity be maintained.</i></p> <p>5. <i>That, in accordance with the New South Dubbo Bridge Strategic Business Case, prepared by Balmoral Group Australia, it be noted that Cost Benefit Analysis (CBA) performed on the proposed new South Dubbo Bridge alignment Option 1 through 4 has revealed the following Benefit Cost Ratios (BCR) at a 3%, 7% and 10% discount rate:</i></p> <table data-bbox="443 1010 1455 1205"> <thead> <tr> <th><i>At 3% discount rate</i></th> <th><i>At 7% discount rate</i></th> <th><i>At 10% discount rate</i></th> </tr> </thead> <tbody> <tr> <td><i>• Option 1: 1.17</i></td> <td><i>• Option 1: 0.93</i></td> <td><i>• Option 1: 0.79</i></td> </tr> <tr> <td><i>• Option 2: 1.41</i></td> <td><i>• Option 2: 1.09</i></td> <td><i>• Option 2: 0.91</i></td> </tr> <tr> <td><i>• Option 3: 1.54</i></td> <td><i>• Option 3: 1.22</i></td> <td><i>• Option 3: 1.04</i></td> </tr> <tr> <td><i>• Option 4: 1.15</i></td> <td><i>• Option 4: 0.94</i></td> <td><i>• Option 4: 0.81</i></td> </tr> </tbody> </table> <p>6. <i>That, in accordance with the New South Dubbo Bridge Strategic Business Case, prepared by Balmoral Group Australia, it be noted that the new South Dubbo Bridge alignment Options 2 and 3 are most likely to deliver net benefits over a 30 year period with positive net benefits of \$5.5 million (BCR: 1.09) and \$12.0 million (BCR: 1.22) respectively, noting that final costs associated with Option 3 are subject to land acquisition and that a discount rate of 7% was applied in this instance.</i></p> <p>7. <i>That Council investigate the costs associated with progressing detailed investigations including further community consultation, Review of Environmental Factors (REF), Aboriginal cultural heritage assessment, hydraulic, and traffic modelling to further refine new South Dubbo Bridge alignment Options and that full consideration be given to any negative impacts perceived by the local community.</i></p>	<i>At 3% discount rate</i>	<i>At 7% discount rate</i>	<i>At 10% discount rate</i>	<i>• Option 1: 1.17</i>	<i>• Option 1: 0.93</i>	<i>• Option 1: 0.79</i>	<i>• Option 2: 1.41</i>	<i>• Option 2: 1.09</i>	<i>• Option 2: 0.91</i>	<i>• Option 3: 1.54</i>	<i>• Option 3: 1.22</i>	<i>• Option 3: 1.04</i>	<i>• Option 4: 1.15</i>	<i>• Option 4: 0.94</i>	<i>• Option 4: 0.81</i>
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<i>• Option 4: 1.15</i>	<i>• Option 4: 0.94</i>	<i>• Option 4: 0.81</i>														

## REPORT

### Proposal to Remove Option 4

Of the remaining options, Option 4 has the lowest benefit cost ratio, due to the significant impact it has on the Lady Cutler Oval sporting precinct. During public consultation, stakeholders indicated that Option 4, which bisects the Lady Cutler Ovals, would have a particularly detrimental effect. Stakeholders especially noted pedestrian safety concerns as a result of high-speed traffic interfering with sports teams. Option 4 also has the most expensive and complex bridge of the remaining options, as the bridge deck is curved and superelevated. With the above considerations, it is proposed that Option 4 not be given further consideration or analysis.

### Detailed Business Case for Options 2 and 3

With the removal of Option 1 and proposed removal of Option 4, it is proposed that a detailed business case be undertaken for Options 2 and 3. This will include more detailed design, traffic modelling and environmental assessments to better quantify the impacts and benefits of each option.

Options 2 and 3 have the highest benefit cost ratios of 1.09 and 1.22 respectively. Whilst Option 3 is the cheapest option and highest BCR, it also accounts for the greatest area of land to be quarantined and purchased by Council. The value of land acquisitions is, as yet, unquantified as no estimates of the amount of land, and the associated compensatory rates, are currently available.

Option 3 is also likely to experience higher travel times than Option 2 for vehicles commuting to and from Minore Road across the bridge. This is due to the longer travel distance along the alignment, as well as delays incurred by negotiating an additional intersection on the Newell Highway. This will likely increase travel time costs and vehicle operating costs for Option 3 when compared to Option 2. Further detailed traffic modelling of each option will enable these costs to be quantified further.

### Consultation

Bridge concept designs and alignments prepared by GHD were publicly exhibited via Council's website on 4 November 2020. Initially, two of the four bridge options were placed on public exhibition. Balmoral Group Australia's draft Strategic Business Case was also made available for public review with consideration given to the two publically displayed bridge options. A 23 question online survey, allowing the public to provide feedback on the two concept designs and alignments was also facilitated by Balmoral Group Australia.

Council utilised its website, social media platforms, and local media including the Daily Liberal, Photo News and local radio stations to promote the project and seek community feedback. Council staff also remained available for the duration of the project submission period to discuss any questions with interested members of the public.

In addition to the public notification, Council staff, along with Balmoral Group Australia, ran an open community information session on the evening of 25 November 2020, attended by approximately 80 people, and stakeholder focus group meetings on 26 and 27 November 2020.

These groups included:

- Sports and recreation (approximately 20 people in attendance)
- Businesses (approximately 20 people in attendance)
- Traditional owners (approximately 13 people in attendance)
- Emergency services and transport services (approximately 18 people in attendance)
- Internal Council staff (approximately eight people in attendance).

Subsequent to the open community information session and stakeholder reference group meetings, all four bridge concept designs and alignments were made available to the public via Council's website and the Mayor's Facebook page on 1 December 2020.

Public submissions for the project closed on 5 February 2021 with Council receiving a total of 195 online survey responses, 56 individual public submissions and 12 submissions on behalf of 11 organisations. Analysing the feedback received, Balmoral Group Australia finalised the Strategic Business Case report to include cost benefit and financial analysis, while also preparing an accompanying report, entitled New South Dubbo Bridge Community Feedback Analysis, summarising all public feedback received and performing sentiment analysis on all four bridge concept designs and alignments.

On 12 July 2021 the Infrastructure and Liveability Committee had before it the report titled 'South Bridge Strategic Concepts – Results of Public Exhibition', which included strategic design details for the four alignment options prepared by GHD, as well as the strategic business case prepared by Balmoral Group Australia. The Committee resolved to not give further consideration to Option 1, due to the significant impact it would have on Sandy Beach.

On 29 March 2023, ELT were presented with the proposal to not give further consideration to Option 4 and proceed to a detailed business case with Options 2 and 3. Subsequently the same proposal was presented via two council workshops on 4 May 2023 and 25 May 2023.

### Resourcing Implications

The detailed business case will be undertaken by a consultant and managed by internal staff.

Total Financial Implications	Current year (\$)	Current year + 1 (\$)	Current year + 2 (\$)	Current year + 3 (\$)	Current year + 4 (\$)	Ongoing (\$)
a. Operating revenue	0	0	0	0	0	0
b. Operating expenses	0	230,000	0	0	0	0
c. Operating budget impact (a – b)	0	-230,000	0	0	0	0
d. Capital Expenditure	0	0	0	0	0	0
e. Total net impact (c – d)	0	-230,000	0	0	0	0
Does the proposal require ongoing funding?	No					
What is the source of this funding?	Urban Roads Contributions					

**Table 1.** Ongoing Financial Implications

### Next Steps

- Engage consultant to prepare a detailed business case for Option 2 and 3.
- Undertake further community consultation as part of the finalisation of the detailed business case.