



AGENDA

INFRASTRUCTURE, PLANNING AND ENVIRONMENT COMMITTEE

7 MARCH 2024

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 5.30 pm.

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IPEC24/1	ACKNOWLEDGEMENT OF COUNTRY (ID24/46)	
IPEC24/2	LEAVE OF ABSENCE (ID24/47)	
IPEC24/3	CONFLICTS OF INTEREST (ID24/48) 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.	
IPEC24/4	REPORT OF THE CLIMATE CHANGE AND RESILIENCE COMMITTEE - MEETING 27 FEBRUARY 2024 (ID24/430) The Committee had before it the report of the Climate Change and Resilience Committee meeting held 27 February 2024.	4
IPEC24/5	BUILDING SUMMARY - FEBRUARY 2024 (ID24/251) The Committee had before it the report dated 23 February 2024 from the Director Development and Environment regarding Building Summary - February 2024.	7

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|------------------|--|-----------|
| IPEC24/6 | REPLACEMENT OF FLUORIDE DOSING SYSTEM AT JOHN GILBERT WATER TREATMENT PLANT (JGWTP) - PROJECT UPDATE (ID24/306) | 21 |
| | <p>The Committee had before it the report dated 19 February 2024 from the Manager Strategy Water Supply and Sewerage regarding Replacement of Fluoride Dosing System at John Gilbert Water Treatment Plant (JGWTP) - Project Update.</p> | |
| IPEC24/7 | WATER QUALITY ACTION PLAN UPDATE - ANNUAL REPORT (ID24/262) | 26 |
| | <p>The Committee had before it the report dated 13 February 2024 from the Manager Operations Water and Sewer regarding Water Quality Action Plan Update - Annual Report.</p> | |
| IPEC24/8 | ANNUAL REVIEW OF ENERGY STRATEGY AND IMPLEMENTATION PLAN (ID24/377) | 35 |
| | <p>The Committee had before it the report dated 22 February 2024 from the Organisational Sustainability Coordinator regarding Annual Review of Energy Strategy and Implementation Plan.</p> | |
| IPEC24/9 | RESULTS OF INGROUND PARKING SENSOR AND LICENSE PLATE RECOGNITION CAMERA TRIALS (ID23/2645) | 48 |
| | <p>The Committee had before it the report dated 21 February 2024 from the Manager Environmental Compliance regarding Results of Inground Parking Sensor and License Plate Recognition Camera Trials.</p> | |
| IPEC24/10 | NAMING OF ROAD IN SUBDIVISION - 2 SPITFIRE DRIVE, DUBBO - LOT 6 DP 1267441 (ID24/294) | 55 |
| | <p>The Committee had before it the report dated 21 February 2024 from the Land & Information Services Officer regarding Naming of Road in Subdivision - 2 Spitfire Drive, Dubbo - Lot 6 DP 1267441.</p> | |

CONFIDENTIAL

**IPEC24/11 TENDER FOR THE DESIGN AND CONSTRUCTION OF SAXA ROAD
COMOBELLA CAUSEWAY BRIDGE (ID24/5)**

The Committee had before it the report dated 9 January 2024 from the Manager Infrastructure Delivery regarding Tender for the Design and Construction of Saxa Road Comobella Causeway Bridge.

In accordance with the provisions of Section 9 (2A) of the Local Government Act 1993 the Chief Executive Officer is of the opinion that consideration of this item is likely to take place when the meeting is closed to the public for the following reason: information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business (Section 10A(2)(c)).



DUBBO REGIONAL
COUNCIL

Report of the Climate Change and Resilience Committee - meeting 27 February 2024

AUTHOR: Governance Team Leader
REPORT DATE: 29 February 2024

The Council had before it the report of the Climate Change and Resilience Committee meeting held 27 February 2024.

RECOMMENDATION

That the report of the Climate Change and Resilience Committee meeting held on 27 February 2024, be noted.



REPORT
CLIMATE CHANGE AND RESILIENCE
COMMITTEE
27 FEBRUARY 2024

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

ALSO IN ATTENDANCE:

The Organisation Sustainability Coordinator and the Senior Administration Officer (Development and Environment).

Councillor M Wright assumed the Chair of the meeting.

The proceedings of the meeting commenced at 4:05pm

CCAR24/1 ACKNOWLEDGEMENT OF COUNTRY (ID24/368)

Councillor M Wright delivered an Acknowledgement of Country.

CCAR24/2 APOLOGIES (ID24/367)

There were requests for leave of absence received from Councillor M Dickerson, the Chief Executive Officer, G Avery (Community Representative), Y Aubusson-Foley (Community Representative) and M Gray (Community Representative).

Councillor R Ivey and S Ellis (Community Representative) joined the meeting via Audio-Visual Link.

CCAR24/3 CONFLICTS OF INTEREST (ID24/366)

There were no Conflicts of Interest declared.

CCAR24/4 REPORT OF THE CLIMATE CHANGE AND RESILIENCE COMMITTEE - MEETING 29 AUGUST 2023 (ID24/370)

The Committee 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.

CCAR24/5 REVIEW OF COMMITTEE PURPOSE AND TERMS OF REFERENCE (ID24/371)

The Committee was addressed by Director Development & Environment regarding this item.

OUTCOME

That the address by the Director Development and Environment be noted.

The meeting closed at 4.39 pm.

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CHAIRPERSON



DUBBO REGIONAL
COUNCIL

REPORT: Building Summary - February 2024

DIVISION: Development and Environment

REPORT DATE: 23 February 2024

TRIM REFERENCE: ID24/251

EXECUTIVE SUMMARY

Purpose	<ul style="list-style-type: none"> Provide review and update 	
Issue	<ul style="list-style-type: none"> Statistical overview of the number and type of development approvals for the Dubbo Regional Local Government Area (LGA) for the Financial Year 2023/2024. Due to the timing of the generation of the report, the quoted monthly statistics for the current month of February comprise only a three (3) week period, being 1 February to 22 February 2024. The 'total number of dwellings' approved over the three (3) week period of 1 February to 22 February 2024, was three (3). Whilst not directly representative of the full month of February, this does present a comparative slowing against data for the same period in years previous and continues the slowing trend from the previous two (2) months. The projected number of residential approvals for the full Financial Year is still a strong expectation of 417 dwellings. The value of development applications approved for the financial year to date is over \$227M. The three (3) week period of 1 February to 22 February 2024 included approval of: <ul style="list-style-type: none"> D2023-604 Centre based childcare facility, 2 Spitfire Drive Dubbo, valued at \$3.17M. D2023-618 Light industrial building, 13 McGuinn Crescent Dubbo, valued at \$1.46M. CD23-74 Alterations and additions to primary school, 25A Wheelers Lane Dubbo - valued at \$1.5M 	
Reasoning	<ul style="list-style-type: none"> Provide data relating to approved Development Applications. Provide specific statistics of the number of dwellings and other residential development approved. Provide comparative data for corresponding period. 	
Financial Implications	Budget Area	There are no financial implications arising from this report.
Policy Implications	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 23 February 2024, be noted.

Stephen Wallace
Director Development and Environment

SW
Director Development and Environment

REPORT

Consultation

Council’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

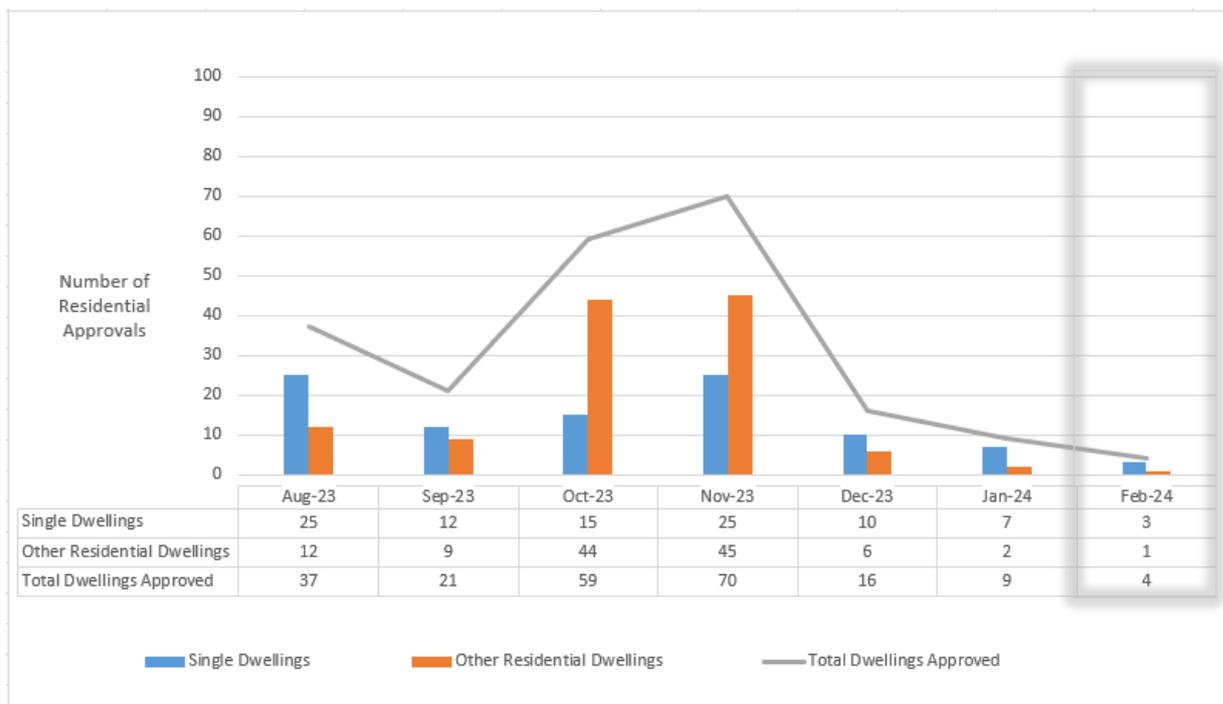
Council employ staff to receipt, lodge, assess, determine and monitor compliance of the determinations referred to in this report.

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.

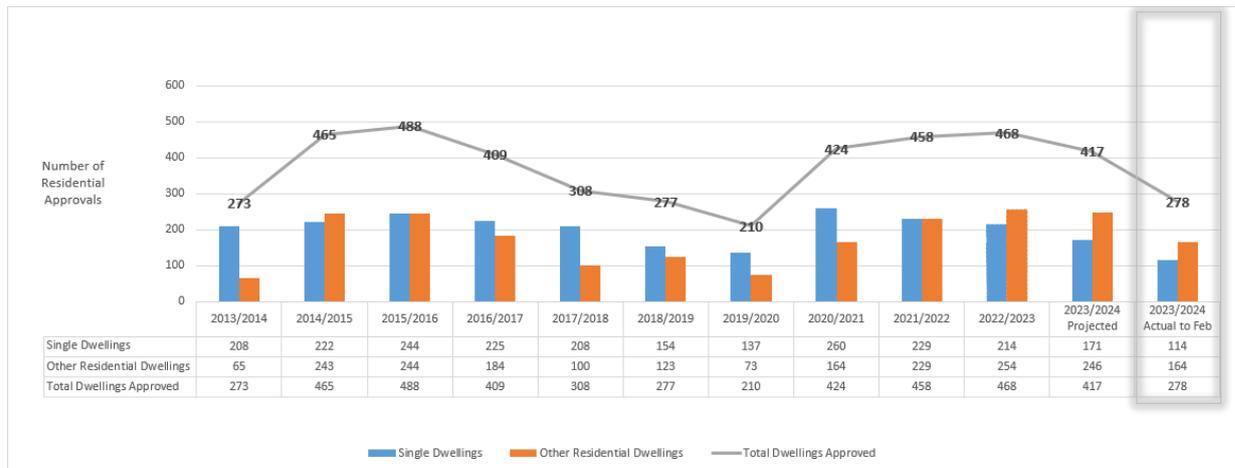
Residential Building Summary

Dwellings and other residential developments approved during the three (3) week period of 1 February to 22 February 2024, and for comparison purposes, the six month prior are shown in graph 1.



Graph 1: Residential Approvals Summary – August 2023 to February 2024

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

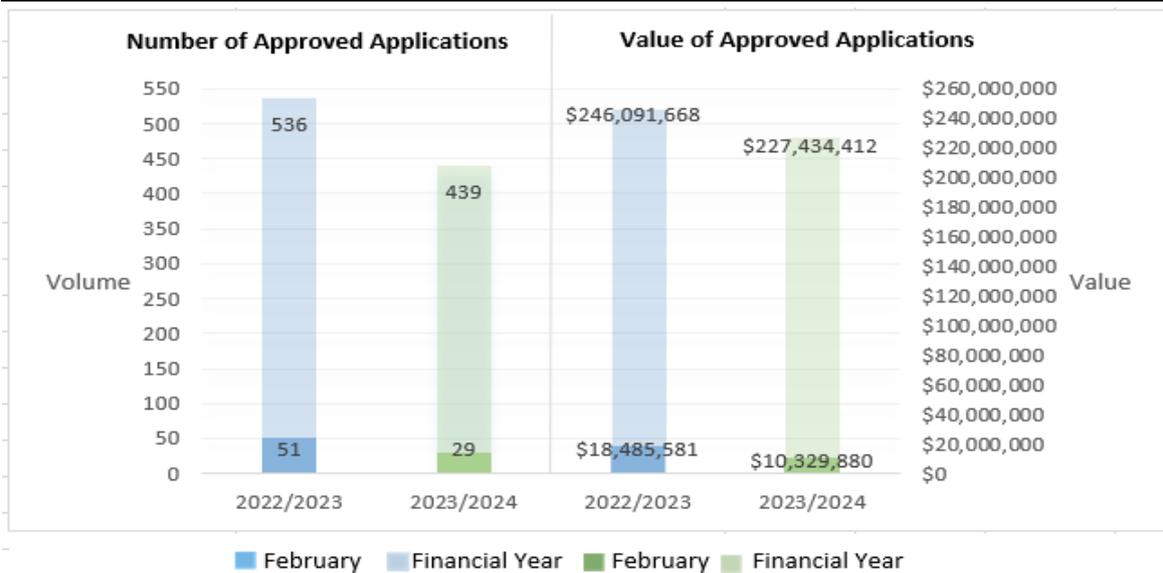
For consistency with land use definitions included in the Local Environmental Plan (LEP), residential development has been separated into ‘Single Dwellings’ (defined in the LEP as ‘dwelling house’) and ‘Other residential development’ (comprising ‘dual occupancies’, ‘secondary dwellings’, ‘multi dwelling 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 the three (3) week period of 1 February to 22 February 2024, a comparison with figures 12 months prior, together with 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 - February 2024
- 2 [↓](#) Approved Applications - 1 February 2024 to 23 February 2024
- 3 [↓](#) Approved Applications - 1 February 2023 to 28 February 2023
- 4 [↓](#) Approved Applications - 1 July 2023 to 23 February 2024
- 5 [↓](#) Approved Applications - 1 July 2022 to 28 February 2023

STATISTICAL INFORMATION ON SINGLE DWELLINGS AND OTHER RESIDENTIAL DEVELOPMENTS

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

	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2020/2021													
Single Dwellings	7	17	21	12	20	46	18	25	30	27	17	20	260
Other Residential Developments	5	2	5	6	3	15	2	6	5	5	7	9	70
(No of units)	7	4	11	10	4	35	5	10	8	9	47	14	164
2021/2022													
Single Dwellings	31	17	17	13	16	40	9	17	23	14	19	13	229
Other Residential Developments	9	7	3	4	5	8	9	9	7		3	4	68
(No of units)	84	63	5	6	13	12	12	16	9		4	5	229
2022/2023													
Single Dwellings	15	32	46	8	28	13	19	15	15	11	6	6	214
Other Residential Developments	4	3	3	4	9	4	7	13	2	6	5	4	64
(No of units)	7	3	5	6	84	8	14	19	3	8	62	35	254
2023/2024													
Single Dwellings	17	25	12	15	25	10	7	3					114
Other Residential Developments	5	7	5	5	19	4	2	1					48
(No of units)	45	12	9	44	45	6	2	1					164

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



Approved Development and Complying Development Applications by Dubbo Regional Council and Private
Certifiers - Period 1/2/2024 - 23/2/2024

Development Type	Number Of Applications	Estimate \$	Developments	Estimate \$	Additions And Alterations	Estimate \$	New Dwellings	New Lots
Balconies, decks patios terraces or verandah	3	228,458	3	228,458	0	0	0	0
Centre based childcare	1	3,175,000	1	3,175,004	0	0	0	0
Dwelling House	4	1,920,559	4	1,920,559	1	0	3	0
Educational establishment	1	1,500,000	1	1,500,000	0	0	0	0
Garages carports and car parking spaces	1	35,000	1	35,000	0	0	0	0
Health services facilities	2	355,000	2	355,000	0	0	0	0
Industrial Development	2	2,189,600	2	2,189,600	0	0	0	0
Office Premises	1	230,683	1	230,683	0	0	0	0
Other	1	0	1	0	0	0	0	0
Pools / decks / fencing	5	244,795	5	244,795	0	0	0	0
Secondary Dwelling	1	268,462	1	268,462	0	0	1	0
Shed	6	162,000	6	162,000	0	0	0	0
Signage	2	20,323	2	20,323	0	0	0	0
Total Value		10,329,880						

Total Number of Applications for this period: 29

23/2/2024



Approved Development and Complying Development Applications by Dubbo Regional Council and Private Certifiers - Period 1/2/2023 - 28/2/2023

Development Type	Number Of Applications	Estimate \$	Developments	Estimate \$	Additions And Alterations	Estimate \$	New Dwellings	New Lots
Alterations and additions to commercial	4	2,295,543	4	0	4	2,295,543	0	0
Balconies, decks patios terraces or verandah	1	26,475	1	26,475	0	0	0	0
Change of Use	1	1,000	1	1,000	0	0	0	0
Dual Occupancy	5	2,837,900	5	2,837,900	0	0	10	0
Dwelling House	16	6,720,937	15	6,720,937	1	0	15	2
Educational establishment	1	0	1	0	0	0	0	0
Garages carports and car parking spaces	1	19,500	1	19,500	0	0	0	0
Industrial Development	1	490,000	1	490,000	0	0	0	0
Pools / decks / fencing	4	196,151	4	196,151	0	0	0	0
Secondary Dwelling	7	2,204,865	7	2,204,865	0	0	7	0
Shed	6	166,810	6	166,810	0	0	0	0
Shop top housing	1	2,490,400	1	2,490,400	0	0	2	2
Signage	1	8,000	1	8,000	0	0	0	0
Subdivision of land	10	1,028,000	10	1,028,000	0	0	0	52
Total Value		18,485,581						

Total Number of Applications for this period: 51

23/2/2024



Approved Development and Complying Development Applications by Dubbo Regional Council and Private Certifiers - Period 1/7/2023 - 23/2/2024

Development Type	Number Of Applications	Estimate \$	Developments	Estimate \$	Additions And Alterations	Estimate \$	New Dwellings	New Lots
Alterations and additions to commercial	7	5,817,878	7	0	7	5,817,878	0	0
Alterations and additions to industrial	1	145,000	1	0	1	145,000	0	0
Ancillary Structures	5	334,680	5	334,680	0	0	0	0
Balconies, decks patios terraces or verandah	25	804,643	25	804,643	0	0	0	0
Business Premises	5	1,825,694	5	1,825,694	0	0	0	0
Centre based childcare	1	3,175,000	1	3,175,000	0	0	0	0
Change of Use	5	52,000	5	52,000	0	0	0	0
Civic Infrastructure	1	35,200	1	35,200	0	0	0	0
Demolition	5	0	5	0	0	0	0	0
Dual Occupancy	20	13,024,717	20	13,024,717	0	0	40	10
Dwelling House	138	66,413,197	138	30,583,922	28	0	110	0
Earthworks / change in levels	1	440,000	1	440,000	0	0	0	0
Educational establishment	4	10,911,272	4	10,911,272	0	0	0	0
Food and drink premises	2	4,409,928	2	4,409,928	0	0	0	0
Garages carports and car parking spaces	19	401,586	19	401,586	0	0	0	0
Group homes	1	1,760,000	1	1,760,000	0	0	3	0
Health services facilities	4	1,233,000	4	1,233,000	0	0	0	0
Industrial Development	14	17,082,384	14	17,082,384	0	0	0	0
Mixed use development	1	65,265,000	1	65,265,000	0	0	41	0
Multi-dwelling housing	3	10,075,000	3	10,075,000	0	0	52	0
Office Premises	4	1,318,801	4	1,318,801	0	0	0	0
Other	3	1,685,000	3	1,685,000	0	0	0	0
Pools / decks / fencing	74	3,526,385	74	3,526,385	0	0	0	0
Recreational uses	1	20,000	1	20,000	0	0	0	0
Restaurant or cafe	2	160,000	2	160,000	0	0	0	0
Retail Premises	10	2,537,981	10	2,537,981	0	0	0	0
Retaining walls, protection of trees	1	0	1	0	0	0	0	0
Secondary Dwelling	22	3,923,173	22	3,923,173	0	0	22	0
Seniors housing	1	1,584,066	1	1,584,066	0	0	6	0
Shed	75	2,063,858	75	2,063,858	0	0	0	0
Signage	9	678,857	9	678,857	0	0	0	0
Stratum / community title subdivision	3	1,355,463	3	1,355,463	0	0	0	13

APPENDIX NO: 4 - APPROVED APPLICATIONS - 1 JULY 2023 TO 23 FEBRUARY						ITEM NO: IPEC24/5		
2024	Subdivision - Strata	1	0	1	0	0	0	6
	Subdivision - Torrens	14	70,000	14	70,000	0	0	26
	Subdivision of land	23	4,103,650	23	4,103,650	0	0	146
	Take-away food and drink premises	1	9,999	1	9,999	0	0	0
	Telecommunications and communication facility	5	1,193,000	5	1,193,000	0	0	0
	Total Value		227,434,412					

Total Number of Applications for this period: 439

23/2/2024



Approved Development and Complying Development Applications by Dubbo Regional Council and Private Certifiers - Period 1/7/2022 - 28/2/2023

Development Type	Number Of Applications	Estimate \$	Developments	Estimate \$	Additions And Alterations	Estimate \$	New Dwellings	New Lots
Alterations and additions to commercial	16	18,518,967	16	0	16	18,518,967	0	2
Alterations and additions to industrial	2	700,000	2	0	2	700,000	0	0
Balconies, decks patios terraces or verandah	28	745,632	28	745,632	0	0	0	0
Business Premises	1	500,000	1	500,000	0	0	0	0
Centre based childcare	3	6,727,991	3	6,727,991	0	0	0	0
Change of Use	4	6,001	4	6,001	0	0	0	0
Demolition	10	1,043,702	10	1,043,702	0	0	0	0
Dual Occupancy	24	13,002,647	24	13,002,647	0	0	45	0
Dwelling House	215	85,637,365	177	85,637,365	38	0	177	2
Earthworks / change in levels	8	274,560	8	274,560	0	0	0	0
Educational establishment	7	10,849,903	7	10,849,903	0	0	0	0
Emergency services facility and bush fir	1	165,000	1	165,000	0	0	0	0
Farm buildings	1	140,000	1	140,000	0	0	0	0
Food and drink premises	2	40,500	2	40,500	0	0	0	0
Garages carports and car parking spaces	20	502,266	20	502,266	0	0	0	0
Health services facilities	2	812,203	2	812,203	0	0	0	2
Industrial Development	10	9,537,300	10	9,537,300	0	0	0	0
Mixed use development	1	390,000	1	390,000	0	0	0	0
Multi-dwelling housing	3	20,627,000	3	20,627,000	0	0	80	5
Office Premises	1	7,150,000	1	7,150,000	0	0	0	0
Other	5	11,019,024	5	11,019,024	0	0	0	0
Pools / decks / fencing	75	3,370,473	75	3,370,473	0	0	0	0
Recreational uses	1	27,632,657	1	27,632,657	0	0	0	0
Retail Premises	6	2,608,311	6	2,608,311	0	0	0	0
Retaining walls, protection of trees	3	12,320	3	12,320	0	0	0	0
Secondary Dwelling	18	4,235,826	18	4,235,826	0	0	18	0
Shed	75	3,233,171	75	3,233,171	0	0	0	0
Shop top housing	2	2,590,400	2	2,590,400	0	0	3	2
Signage	6	664,250	6	664,250	0	0	0	0
Stratum / community title subdivision	3	0	3	0	0	0	0	94
Subdivision of land	40	6,753,000	40	6,753,000	0	0	0	255

APPENDIX NO: 5 - APPROVED APPLICATIONS - 1 JULY 2022 TO 28 FEBRUARY 2023						ITEM NO: IPEC24/5		
Take-away food and drink premises	3	3,607,645	3	3,607,645	0	0	0	0
Telecommunications and communication facility	3	3,023,554	3	3,023,554	0	0	0	0
Total Value		246,091,668						

Total Number of Applications for this period: 536

23/2/2024



REPORT: Replacement of Fluoride Dosing System at John Gilbert Water Treatment Plant (JGWTP) - Project Update

DIVISION: Infrastructure
REPORT DATE: 19 February 2024
TRIM REFERENCE: ID24/306

EXECUTIVE SUMMARY

Purpose	<ul style="list-style-type: none"> Provide an update 	
Issue	<ul style="list-style-type: none"> Replacement of existing liquid-based fluoro silicic acid dosing system at JGWTP with powder-based sodium fluorosilicate system. 	
Reasoning	<ul style="list-style-type: none"> Fluoridation of public water supply, improving dental health for water consumers. 	
Financial Implications	Budget Area	Infrastructure
	Funding Source	Water Fund
	Proposed Cost	N/A
	Ongoing Costs	N/A
Policy Implications	Policy Title	There are not policy implications arising from this report.
	Impact on Policy	N/A

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: 4 Leadership
- CSP Objective: 4.1 Council provides transparent, fair and accountable leadership and governance
- Delivery Program Strategy: 4.1.2 Council's decision-making processes are open, transparent and accountable

RECOMMENDATION

That the report of the Manager Strategy Water Supply and Sewerage be noted.

Luke Ryan
Director Infrastructure

CG
Manager Strategy Water
Supply and Sewerage

BACKGROUND

The John Gilbert Water Treatment Plant (JGWTP) supplies drinking water to Dubbo and the villages of Ballimore, Brocklehurst, Eumungerie, Mogriguy and Wongarboon. Previously, Council operated a liquid-based fluoro silicic acid dosing system at the JGWTP for the purpose of fluoridating the water supply, improving dental health of water consumers. In more recent times, the system had shown signs of further leaks and deterioration of the bunding floor, caused by the severely corrosive nature of fluoro silicic acid. In addition, it was identified that there were other areas of the system that needed upgrading. In 2019, Council carried out an audit of the fluoride dosing system for compliance against AS 3780 - *The storage and handling of corrosive substances*, and NSW Code.

The audit identified a significant number of non-compliances with the dosing system and recommended its replacement. Responding to the outcome of the audit, Council suspended the operation of fluoride dosing system. The JGWTP has not had an operational fluoride dosing system since January 2019.

Council engaged NSW Public Works to provide technical advice, project management and contract administration for the tendering, construction, and commissioning of a new fluoride dosing system. Tender documentation was prepared for the design and construction of a new dosing system with tenders closing 28 February 2023. The tender was subsequently awarded to TWS Evolution Pty Ltd on 13 April 2023.

Previous Resolutions of Council

13 April 2023 – Confidential Report: Award of the tender for Fluoride Dosing System at John Gilbert Water Treatment Plant (JGWTP)	<ol style="list-style-type: none">1. <i>That TWS Evolution be engaged for Contract CD22/5066 - New fluoride dosing system at the John Gilbert Water Treatment Plant at the tendered amount of \$1,192,101 (including GST) subject to the final assessment documentation from NSW Public Works and concurrence from Department of Planning and Industry.</i>2. <i>That all documentation in relation to this matter remain confidential to Council.</i>3. <i>That all documentation in relation to this matter be signed under the Common Seal of Council.</i>
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REPORT

Council is progressing with the design and construction of the new fluoride dosing system at the JGWTP in Dubbo. The project is complex and has a strong focus on increased safety to operators to meet our workplace safety obligations, ease of plant operation and site security.

Previously, fluoride dosing was performed through a liquid-based fluoro silicic acid system. The replacement system is entirely different and will be a powder-based sodium fluorosilicate system. The powder will be delivered to the JGWTP on pallets in 1,000 kg bulk bags and stored in a customised room equipped with pallet racking within the new fluoride dosing

building. The building will have the ability to store four bulk bags, plus a fifth loaded into the actual dosing machinery. An internal gantry crane has been incorporated into the building design to safely load the bulk bags into the dosing machinery and remove the need of a forklift.

The building has been designed with a significant level of dust suppression and control, with all handling of the chemical occurring behind closed doors. In addition to the segregation of the staff change and shower rooms, bulk storage room, and dosing equipment room, the building features two computer-controlled air extraction systems; one within the staff change and shower rooms, and another larger system within the dosing equipment room. The larger system will also feature wet scrubbing to appropriately clean extracted air before discharge to the outside atmosphere.

Dust suppression and treatment is paramount when handling sodium fluorosilicate in the event it becomes airborne, as the chemical is highly corrosive and can severely irritate the eyes, nose, throat and lungs, with the potential risk of severe medical conditions developing in cases of long-term exposure. The building will also feature a high level of security. Swipe card access will prevent those staff who do not possess an accreditation to operate the fluoride dosing system or handle the chemical from entering the bulk storage and dosing equipment rooms.

There has been significant complexity and delays in determining how to accurately measure the flow of water moving between the six existing filter beds and clear water tanks within the JGWTP and has required input from multiple engineering specialists. An accurate measure of flow is essential to determine exactly how much fluoride should be dosed into the City's water supply and meet drinking water guidelines. In addition, signoff from the Department of Planning and Environment (DPE) is required as part of the design process.

Control measures on the dosing of fluoride are very tight, with the targeted fluoride concentration ranging from 1.0mg/L to 1.05mg/L. The fluoride dosing equipment must be capable of maintaining this target range, whilst simultaneously adjusting to suit the instantaneous clear water output of the JGWTP, ranging anywhere between 25ML and 80ML per day, dependent on consumer demand.

Council staff have been in close consultation with the Department of Health throughout this process to ensure that we meet our requirements in the supply of water in accordance with the Australian Drinking Water Guidelines. This will be ongoing throughout the project through to commissioning of the fluoride dosing system.

The principal contractor has advised that fabrication of the dosing equipment and machinery is now underway with Factory Acceptance Testing to occur late March to early April 2024. Establishment of the construction site will commence in early March 2024 with construction to commence late March 2024. Completion of the project is expected to occur by the end of September 2024.

Timeframe

Key Date	Explanation
Early March 2024	Site establishment. Media release
Late March 2024	Construction commencement.
Late September 2024	Project completion.



DUBBO REGIONAL
COUNCIL

REPORT: Water Quality Action Plan Update - Annual Report

DIVISION: Infrastructure
REPORT DATE: 13 February 2024
TRIM REFERENCE: ID24/262

EXECUTIVE SUMMARY

Purpose	<ul style="list-style-type: none"> Provide review or update 	
Issue	<ul style="list-style-type: none"> To provide an update on the Water Quality Action Plan covering the reporting period January to December 2023. 	
Reasoning	<ul style="list-style-type: none"> Update on the recommendations and action of the Water Quality Action Plan. 	
Financial Implications	Budget Area	Water Fund
	Funding Source	N/A
	Proposed Cost	N/A
	Ongoing Costs	N/A
Policy Implications	Policy Title	There are no policy implications arising from this report.
	Impact on Policy	Nil

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

RECOMMENDATION

That the report of the Manager Operations Water Supply and Sewerage dated 13 February 2024 be noted.

Luke Ryan
Director Infrastructure

RE
Manager Operations
Water and Sewer

BACKGROUND

As a result of boil water alerts at Dubbo, Wellington and Geurie Water Treatment Plants (WTPs), a Water Quality Action Plan was developed addressing a number of actions and recommendations identified through the respective boil water incident debriefs.

Previous Resolutions of Council

23 March 2023 CCL23/71	Boil Water Alert review <i>That the report be noted.</i>
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REPORT

The Water Quality Action Plan outlines the description of the action, categorisation (capital upgrades, staff, training and operational), organisational responsibility, high, medium or low priority and an immediate, short term and long term timeframe.

This report aims to provide an update on the progress of the water quality actions.

The Water Quality Action Plan originated with 82 actions in March 2023. A final review and debrief report was completed in October 2023 by City Water Technologies (CWT) for the Geurie Boil Water Alert resulting in a further 20 actions being included.

There are now a total of 102 actions outlined within the Water Quality Action Plan (**Appendix 1**).

As of the date of this report:

- 49 of the 102 actions have been completed
- 43 out of the remaining 53 actions are progressing or are under investigation
- 25 actions are high priority (10 are complete)
- 10 actions involve external stakeholders including NSW Health, Department of Planning and Environment and Water NSW.

The 102 actions are categorised below:

Capital upgrades/strategic planning	34
Procedures/documentation	23
Operational	33
Staff/training	10
Other	2

Table 1: Category of Action

There are a large number of operational and capital upgrade actions for the John Gilbert Water Treatment Plant (JGWTP) which are included as part of the Optimisation Study. Some of these actions are long term solutions that will require investigation and business cases.

The majority of new actions for Geurie Water Treatment Plant (GWTP) are capital upgrades. A revised proposal and scope for upgrades to the GWTP will be undertaken by CWT in 2024.

WATER QUALITY ACTION PLAN

	Total Actions	Total Completed	%	Total Progressed/ Under Investigation	%	Not Yet Commenced	%
January to March 2023	82	31	38%	26	32%	25	30%
April to June 2023	82	35	43%	30	37%	17	21%
July to September 2023	82	44	54%	28	34%	10	12%
October to December 2023 *	102	49	48%	47	46%	6	6%

* Geurie Boil Water Alert debrief report recommendations included

Table 2: Water Quality Action Plan Statistic Overview

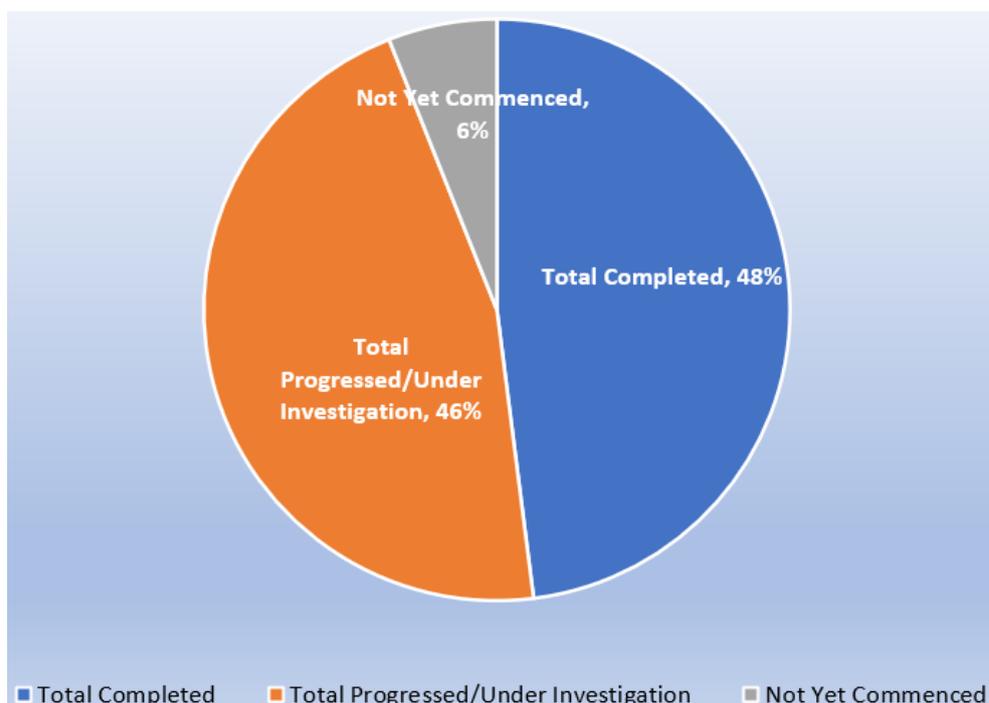


Figure 1: Water Quality Action Plan Statistic Overview

During the reporting period there have been a number of works and projects completed to ensure Council’s infrastructure is fit for purpose and supplying the community with safe quality drinking water. These projects include:

- JGWTP upgrade and refurbishment to Filters 3 and 4
- Wellington Water Filtration Plant installation of ultra violet (UV) treatment
- Inspection and cleaning of all reservoirs in the Local Government Area (LGA)
- Flushing of water supply main dead and zone ends across LGA (completed twice yearly)
- Replacement of over 400 metres of water mains in Dubbo due to corroded pipes
- Repairs, cleaning and painting of Clarifier 1 at JGWTP
- Siren Street water main replacement
- Holmwood Drive and Myall Street pressure reducing valve (PRV) upgrade and replacement.

Training has been undertaken by key staff in the Water Supply and Sewerage Team for managing and assessing risks in drinking water systems and drinking water quality auditing.

The following projects are currently in progress or scoping/planning has commenced:

Dubbo

- Public Works NSW engaged for replacement of Clarifier 1 and new chemical dosing systems at JGWTP
- Refurbishment of Filters 1 and 2 at JGWTP to be completed during the winter of 2024
- Upgrade to JGWTP administration building and laboratory
- New fluoride dosing system JGWTP
- Upgrade of chlorine dosing equipment JGWTP.

Wellington

- CWT engaged to undertake assessment of filters at Wellington Water Treatment Plant (WWTP)
- New equipment installed to fluoride dosing system WWTP awaiting DPE and NSW Health approval for commissioning
- Upgrade to fluoride dosing system WWTP.

Geurie

- CWT engaged to undertake assessment of filters at Geurie Water Treatment Plant (GWTP)
- CWT engaged for upgrades to GWTP
- Commissioning the UV unit at the GWTP
- Audit of supervisory control and data acquisition (SCADA) system at GWTP.

Mumbil

- Public Works NSW engaged for upgrades to Mumbil Water Treatment Plant.

Consultation

- A quarterly report is presented to Executive Leadership Team to provide regular updates on the Water Quality Action Plan
- The Water Quality Action Plan is included and discussed as part of the agenda at the Council's Internal Water Management Continuity Group meetings. Participants of this Group include the Director Infrastructure, Chief Information Officer, Manager People Culture and Safety, and staff in the Water Supply and Sewerage Team
- The Water Quality Action Plan is included and discussed as part of the quarterly meetings held with Water Supply and Sewerage staff, Chief Executive Officer, Director Infrastructure and representatives from Department of Climate Change, Energy, the Environment and Water; and NSW Health.

Resourcing Implications

- The Action Plan relates predominately to staff within the Water Supply and Sewerage Team with some actions linking to Council's Information Technology Team.
- The resourcing implications will evolve when each of the actions is explored, and a determination made in relation to what is to occur for each action.
- The financial implications are not known until the actions are investigated and a way forward is determined. For some of the actions, these will be incorporated into the Optimisation Study of the JGWTP, and costs determined for the outcomes of the Study.
- The majority of the Action Plan is for staff's time to undertake the investigations and make operational and procedural changes. Any significant funding allocations will be made through the budget processes and communicated to Council.

Planned Communications

- The Action Plan is provided to the relevant staff members and assistance provided to undertake the actions.
- The Action Plan is a living document with regular changes/updates as actions are progressed.

APPENDICES:

- 1 [↓](#) Water Quality Action Plan 2024

Water Quality Action Plan



ACTION	Action Categorisation	Plant Name	Responsibility Organisation	Responsibility - DRC Staff	Priority	Timeframe	Status
1 Reinstate Bores Geurie	Capital Upgrades	GWTP	DRC				Completed
2 Reinstate Bores Wellington	Capital Upgrades	WWTP	DRC	Manager Strategy Water	1. High	Immediate	Progressing
3 Review water quality risk assessment to include bore water quality	Procedures / Documentation	GWTP	DRC				Completed
4 Review water quality risk assessment to include bore water quality	Procedures / Documentation	WWTP	DRC	Manager Strategy Water Supply and Sewerage	1. High	Immediate	Progressing
5 Capture knowledge of treatment setpoints and chemical dose rates for future events	Operational Procedures / Documentation	All WTP's	DPE DRC	Manager Water Sewer			Completed
6 Undertake UVT monitoring of raw water for organics	Operational	GWTP WWTP	DRC				Completed
7 Determine action levels for UVT in raw water	Operational	GWTP WWTP	DRC				Completed
8 Fill vacant position in Wellington/Geurie team	Training / Staff	GWTP WWTP	DRC	Water & Sewer Operations Engineer Treatment	1. High	Long Term Short Term	Completed
9 Interagency discussion between NSW Health, DPIE and Office of Local Government on operator training and appropriate remuneration	Other Training / Staff	All WTP's	DPE NSW Health		1. High	Immediate Long Term Short Term	Completed
10 Engage with senior management and councillors on water safety	Community Engagement/Education Other	All WTP's	NSW Health		3. Low	Long Term	Under Investigation
11 Install online turbidity meters	Capital Upgrades	GWTP	DRC				Completed
12 Modify turbidity meter sample location to ensure representative sample	Operational	All WTP's	DRC				Completed
13 Install debubblers on filter turbidity meters	Capital Upgrades	All WTP's	DRC				Completed
14 Upgrade SCADA to allow remote monitoring of all points	Capital Upgrades Operational	GWTP	DRC				Completed
15 Install aeration of raw water	Capital Upgrades	All WTP's	DRC				Completed
16 Investigate options and undertake major plant upgrade	Capital Upgrades Strategic Planning	GWTP	DRC	Manager Strategy Water	1. High	Short Term	Under
17 Install permanent potassium permanganate dosing	Capital Upgrades	GWTP	DRC	Manager Water Sewer	1. High	Short Term	Under
18 Install UV disinfection	Capital Upgrades	GWTP WWTP	DRC	Manager Water Sewer	1. High	Immediate	Progressing
19 Install UV disinfection	Capital Upgrades	JGWTP	DRC	Manager Strategy Water	3. Low	Long Term	Under
20 Undertake soluble and total manganese testing daily	Operational	All WTP's	DRC				Completed
21 Update monitoring plans to reflect changes to monitoring (Mn, UVT, online turbidity etc)	Operational Procedures / Documentation	All WTP's	DRC	Water & Sewer Operations Engineer Treatment	2. Moderate	Short Term	Progressing
22 complete sedimentation lagoon refurbishment (remove vegetation erosion control)	Capital Upgrades	WWTP	DRC				Completed
23 Divert stormwater from sedimentation lagoons	Capital Upgrades	WWTP	DRC				Completed
24 Assess options to manage sludge (eg clarifiers, mechanical dewatering)	Capital Upgrades	WWTP	DRC	Manager Water Sewer	3. Low	Long Term	Progressing
25 Install new (larger) alum dosing pumps	Capital Upgrades	WWTP	DRC				Completed
26 Investigate separation of dosing points and rapid mixing	Capital Upgrades	WWTP	DRC	Water & Sewer Operations	2. Moderate	Long Term	Under
27 Plan for filter refurbishment	Operational Strategic Planning	WWTP	DRC	Water & Sewer Operations	1. High	Immediate	Progressing
28 Investigate balance tank on backwash return to sedimentation lagoons	Capital Upgrades	WWTP	DRC	Manager Water Sewer	3. Low	Long Term	Under Investigation
29 Upgrade filter valves and actuators	Capital Upgrades	JGWTP	DRC	Water & Sewer Operations	2. Moderate	Short Term	Progressing
30 Respan filter turbidity meters on SCADA to full range of instrument	Operational	JGWTP	DRC				Completed
31 Investigate if bores can yield enough water to supply Level 4 restrictions	Strategic Planning	JGWTP	DRC		1. High	Long Term	Completed
32 Investigate options for plant to treat 100% bore water	Strategic Planning	JGWTP	DRC				Completed
33 Adjust filter backwash setpoints achieve optimum backwash and ripening	Operational	JGWTP	DRC				Completed
34 Install drain at end of filtered water channel (may be part of UV upgrade)	Capital Upgrades	JGWTP	DRC	Manager Strategy Water Supply and Sewerage	3. Low	Long Term	Under Investigation
35 Complete filter refurbishment (media and nozzles)	Capital Upgrades	JGWTP	DRC	Manager Water Sewer	1. High	Long Term	Progressing
36 Adjust chemical reorder levels to account for longer read times	Operational	All WTP's	DRC				Completed
37 Add DPIE notification to CCP procedures	Procedures / Documentation	All WTP's	DRC	Technical Officer Operations	1. High	Immediate	Completed
38 Develop incident reporting template for NSW Health and DPE	Procedures / Documentation	All WTP's	DRC	Technical Officer Operations	2. Moderate	Short Term	Progressing
39 Improve regular engagement between DRC and NSW Health on water safety messaging to community	Community Engagement/Education	All WTP's	DRC NSW Health	Director Infrastructure	2. Moderate	Short Term	Completed
40 Employ new treatment officer	Training / Staff	All WTP's	DRC				Completed

ACTION	Action Categorisation	Plant Name	Responsibility Organisation	Responsibility - DRC Staff	Priority	Timeframe	Status
41	Operational	All WTP's	DPE DRC NSW Health	Manager Water Sewer	2. Moderate	Long Term	Progressing
42	Capital Upgrades Operational	All WTP's	DRC	Manager Strategy Water Supply and Sewerage	2. Moderate	Long Term	Under Investigation
43	Capital Upgrades	WWTP	DRC	Manager Water Sewer	2. Moderate	Long Term	Under Investigation
44	Capital Upgrades	WWTP	DRC	Manager Strategy Water Supply and Sewerage	2. Moderate	Short Term	Progressing
45	Procedures / Documentation	WWTP	DRC				Completed
46	Operational	WWTP	DRC	Water & Sewer Operations Engineer Treatment	1. High	Immediate	Completed
47	Training / Staff	WWTP	DRC	Water & Sewer Operations Engineer Treatment	1. High	Immediate	Completed
48	Procedures / Documentation	All WTP's	DRC	Manager Water Sewer	1. High	Immediate	Completed
49	Procedures / Documentation	All WTP's	DRC	Manager Water Sewer	2. Moderate	Short Term	Completed
50	Procedures / Documentation	All WTP's	DRC	Water & Sewer Operations Engineer Treatment	2. Moderate	Short Term	Progressing
51	Procedures / Documentation	All WTP's	DRC	Manager Water Sewer	2. Moderate	Short Term	Completed
52	Operational	All WTP's	DRC NSW Health	Manager Water Sewer	2. Moderate	Short Term	Completed
53	Other Procedures / Documentation	All WTP's	DRC	Water & Sewer Operations Engineer Treatment	3. Low	Long Term	Under Investigation
54	Operational	All WTP's	DRC Water NSW	Manager Water Sewer	3. Low	Long Term	Completed
55	Procedures / Documentation	All WTP's	DRC				Completed
56	Procedures / Documentation	All WTP's	DRC				Completed
57	Operational	All WTP's	DRC	Manager Information Technology	3. Low	Short Term	Completed
58	Training / Staff	All WTP's	DRC	Director Infrastructure	2. Moderate	Short Term	Progressing
59	Training / Staff	All WTP's	DRC	Manager Water Sewer	3. Low	Long Term	Completed
60	Procedures / Documentation	All WTP's	DRC	Manager Water Sewer	2. Moderate	Short Term	Completed
61	Operational	All WTP's	DRC	Manager Water Sewer	1. High	Immediate	Completed
62	Procedures / Documentation	All WTP's	DRC NSW Health	Manager Water Sewer	2. Moderate	Short Term	Completed
63	Procedures / Documentation	All WTP's	DRC	Water & Sewer Client Services Coordinator	2. Moderate	Long Term	Completed
64	Procedures / Documentation	All WTP's	DRC	Manager Water Sewer	2. Moderate	Short Term	Progressing
65	Operational	All WTP's	NSW Health				Completed
66	Training / Staff	All WTP's	DRC	Manager Water Sewer	2. Moderate	Short Term	Completed
67	Operational	All WTP's	DRC	Director Infrastructure	2. Moderate	Short Term	Under Investigation

ACTION	Action Categorisation	Plant Name	Responsibility Organisation	Responsibility - DRC Staff	Priority	Timeframe	Status	
68	There is a current gap in a resource responsible for water quality management oversight i.e. a drinking water quality compliance officer role	Operational	All WTP's	DRC	Manager Water Sewer	1. High	Short Term	Progressing
69	Review each reservoir and zone to determine how water pressure can be managed more flexibly e.g. set target and critical limits for levels. Some reservoirs may have drop dead levels that cannot be compromised.	Operational	JGWTP	DRC	Water & Sewer Operations Engineer Treatment	2. Moderate	Long Term	Completed
70	Consider reviewing the hydraulic model of reticulation network to improve understanding of water flows	Operational	JGWTP	DRC	Manager Strategy Water Supply and Sewerage	2. Moderate	Short Term	Progressing
71	Review whether / if the plant can be run in manual mode.	Operational	JGWTP	DRC	Water & Sewer Operations	2. Moderate	Short Term	Completed
72	Consider the likely data provision requirements to allow faster assessment of dilution.	Operational	JGWTP	DRC	Manager Water Sewer	2. Moderate	Short Term	Not yet commenced
73	Review if the plant can be run only on bore water	Capital Upgrades Operational	JGWTP	DRC	Manager Strategy Water	2. Moderate	Short Term	Progressing
74	Develop DRC in-house capability to run root cause analyses as part of continuous improvement/incident response (DPE / external organisation can assist with this).	Procedures / Documentation	All WTP's	DPE DRC	Manager Water Sewer	3. Low	Long Term	Progressing
75	Investigate how to backwash without sending the non-conforming water to town.	Capital Upgrades	JGWTP	DRC	Manager Strategy Water Supply and Sewerage	2. Moderate	Short Term	Under Investigation
76	Investigate filter to waste for current set-up (only one filter backwash volume is available at a time so plant needs to keep producing water for multiple backwashes, and CWT cannot be easily isolated from the network (only one filter backwash volume is available at a time so plant needs to keep producing water for multiple backwashes, and clear water tank cannot be easily isolated from the network).	Capital Upgrades	JGWTP	DRC	Manager Strategy Water Supply and Sewerage	2. Moderate	Long Term	Under Investigation
77	Improve understanding of assets and what is required to enable isolation.	Operational	JGWTP	DRC	Water & Sewer Operations Engineer Treatment	3. Low	Long Term	Progressing
78	Review system set up to ensure that valving etc is ground-truthed and accurate.	Operational	JGWTP	DRC	Water & Sewer Operations Engineer Treatment	3. Low	Long Term	Not yet commenced
79	Review access permissions to the SCADA system	Operational	All WTP's	DRC	Manager Water Sewer	1. High	Short Term	Completed
80	Review SCADA equipment to ensure operators can effectively observe and respond to system requirements.	Operational	All WTP's	DRC	Manager Water Sewer	2. Moderate	Short Term	Completed
81	Review raw water and operational monitoring regime, to improve system understanding and evidence base for monitoring (location, parameter, monitoring type, frequency). Objective is to improve understanding of when / if configuration needs to change.	Operational	JGWTP	DRC	Manager Water Sewer	3. Low	Long Term	Not yet commenced
82	Conduct jar testing to understand coagulant dosing	Operational	JGWTP	DRC	Water & Sewer Operations	2. Moderate	Short Term	Completed
83	Include operators in incident meeting to inform on plant status and progress in real time	Training / Staff	GWTP	DRC	Manager Water Sewer	1. High	Immediate Long Term Short Term	Completed
84	Refurbish filters and upgrade control capability for best practice operation	Capital Upgrades	GWTP	DRC	Manager Water Sewer	1. High	Short Term	Progressing
85	Investigate lagoon relining (either reinstate clay lining or consider concrete lining)	Capital Upgrades	GWTP	DRC	Manager Strategy Water Supply and Sewerage	2. Moderate	Short Term	Under Investigation
86	Install wastewater holding tank for backwash wastewater to control return into mixing pit	Capital Upgrades	GWTP	DRC	Manager Strategy Water Supply and Sewerage	2. Moderate	Short Term	Under Investigation
87	Improve site access for machinery for lagoon excavation (construct roadways around lagoon for access and entry)	Capital Upgrades	GWTP	DRC	Manager Strategy Water Supply and Sewerage	3. Low	Short Term	Under Investigation
88	Reconfigure WTP building to improve access and operability of chemical dosing systems	Capital Upgrades	GWTP	DRC	Manager Strategy Water Supply and Sewerage	3. Low	Long Term	Under Investigation
89	Install a new, larger clear water tank to allow for longer maintenance outages and improve WTP start/stop control.	Capital Upgrades	GWTP	DRC	Manager Strategy Water Supply and Sewerage	3. Low	Long Term	Under Investigation
90	Relocate raw water pipe underground to prevent damage to pipe and dosing lines	Capital Upgrades	GWTP	DRC	Manager Strategy Water Supply and Sewerage	3. Low	Short Term	Under Investigation
91	Develop an operator handbook to support the O&M manual and provide targeted troubleshooting techniques.	Procedures / Documentation	GWTP	DRC	Manager Water Sewer	1. High	Immediate	Not yet commenced
92	Review and update the roles and responsibilities of Council's Emergency Operating Procedure (EOP) - Boil Water Notice. Positions should be listed instead of names to prevent document becoming outdated due to staffing changes.	Procedures / Documentation	GWTP	DRC	Manager Water Sewer	1. High	Immediate	Progressing
93	Finalise Emergency Operating Procedure - Boil Water Notice and conduct staff training.	Procedures / Documentation	GWTP	DRC	Manager Water Sewer	1. High	Immediate	Progressing
94	Develop updated CCP response procedures for revised CCPs. Display in the WTP building and conduct staff training on procedures.	Procedures / Documentation	GWTP	DRC	Water & Sewer Operations Engineer Treatment	1. High	Immediate	Progressing

	ACTION	Action Categorisation	Plant Name	Responsibility Organisation	Responsibility - DRC Staff	Priority	Timeframe	Status
95	Enable remote operation of Geurie WTP through SCADA system at Wellington WTP. Council is currently investigating requirements to enable this.	Operational	GWTP	DRC	Water & Sewer Operations Engineer Treatment	1. High	Short Term	Progressing
96	Replace manual valves with solenoid valves to enable automatic plant operation	Operational	GWTP	DRC	Manager Strategy Water Supply and Sewerage	2. Moderate	Short Term	Under Investigation
97	Install VSDs and flowmeters throughout the WTP	Operational	GWTP	DRC	Manager Strategy Water	2. Moderate	Short Term	Not yet
98	Install flowmeters on standpipes and hydrants to track flushing progress	Operational	GWTP	DRC	Manager Water Sewer	3. Low	Short Term	Completed
99	Upgrade process and PLC to enable flow-paced chemical dosing	Operational	GWTP	DRC	Manager Strategy Water Supply and Sewerage	3. Low	Long Term	Under Investigation
100	Optimise filter operation (including backwashing triggers and sequence, filter control and filter to waste)	Operational	GWTP	DRC	Manager Water Sewer	1. High	Short Term	Progressing
101	Undertake regular incident response scenario training including flushing procedures. DPE have offered to assist with scenario training development and implementation.	Training / Staff	GWTP	DPE DRC	Manager Water Sewer	2. Moderate	Long Term	Under Investigation
102	Undertake operator training including general operations and common troubleshooting	Training / Staff	GWTP	DRC	Manager Water Sewer	2. Moderate	Immediate	Not yet commenced



DUBBO REGIONAL
COUNCIL

REPORT: Annual Review of Energy Strategy and Implementation Plan

DIVISION: Development and Environment

REPORT DATE: 22 February 2024

TRIM REFERENCE: ID24/377

EXECUTIVE SUMMARY

Purpose	<ul style="list-style-type: none"> Provide review or update 	
Issue	<ul style="list-style-type: none"> Council’s recently adopted Net Zero Framework outlines the organisation’s commitment to reducing greenhouse gas emissions to net zero within its operations by 2050. Priority areas for emission reduction include purchased electricity, fuel and gas, which contribute to 14%, 4% and 1% of Council’s operational emissions. Electricity, fuel and gas inputs are also a significant expense for Council. 	
Reasoning	<ul style="list-style-type: none"> Council’s Energy Strategy and Implementation Plan is a key tool utilised by Council to tackle greenhouse gas emissions and to reduce costs. The implementation of the Strategy and Plan is a key action under Council’s 2023/2024 Operational Plan (6.1.1.3). 	
Financial Implications	Budget Area	Various
	Funding Source	Various
	Proposed Cost	N/A
	Ongoing Costs	N/A
Policy Implications	Policy Title	Net Zero Framework
	Impact on Policy	Assists to meet Net Zero Targets

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: 6 Environmental Sustainability
 CSP Objective: 6.1 We achieve net zero emissions
 Delivery Program Strategy: 6.1.1 Investment in renewable energy opportunities is encouraged and supported

Theme: 6 Environmental Sustainability
 CSP Objective: 6.1 We achieve net zero emissions
 Delivery Program Strategy: 6.1.2 Council buildings and facilities are energy efficient,

carbon neutral and utilise renewable energy sources

Theme: 6 Environmental Sustainability
CSP Objective: 6.1 We achieve net zero emissions
Delivery Program Strategy: 6.1.3 Alternative modes of transport are available

RECOMMENDATION

That the Report of the Organisational Sustainability Coordinator dated 22 February 2024, be noted.

Stephen Wallace
Director Development and Environment

CJ
Organisational
Sustainability Coordinator

BACKGROUND

On 24 February 2020 Dubbo Regional Council adopted *an Energy Strategy and Implementation Plan 2020 – 2025* for its operations with the vision of becoming a leader in regional New South Wales in the reduction of energy consumption, increased energy efficiency and use of renewable energy. The Strategy and Implementation Plan included four key strategy areas with the following goals:

1. Energy Efficiency - Council implements energy efficiency practices and improvements across its activities and operations.
2. Renewable Energy - Council obtains 50% of its predicted electricity consumption by 2025 from renewables, directly or by purchasing renewable energy.
3. Sustainable Transport - Council plans for, and begins to transition to, a zero emissions fleet by 2025.
4. Supporting Energy Smart Communities - The community is supported in becoming energy smart and ultimately adopts energy efficiency, renewable energy and sustainable transport practices.

The implementation of the Strategy and Plan is a key action under Council's 2023/2024 Operational Plan (6.1.1.3).

The effect of energy efficiency and renewable energy measures undertaken as a result of the Strategy and Implementation Plan is monitored through Council's energy monitoring service – e21. This Report provides information on Council's energy use for the 2022/2023 Financial Year.

Key strategic goals, outcomes and actions from the Strategy and Implementation Plan are incorporated by relevant Directors and Managers into Council's four-year Delivery and one-year Operational Plans. In this light any progress achieved against the Strategy and Implementation Plan is reported on by the Responsible Council Officer through the standard Council Integrated Planning and Reporting process. In addition, Council's Organisational Sustainability Coordinator completes an annual operational review of the Strategy and Implementation Plan. This Report summaries Strategy and Implementation Plan progress, challenges and opportunities for improvement.

A detailed strategic review of the Strategy and Implementation Plan is to be completed by December 2024.

REPORT

Council's Energy Use Snapshot

Table 1 provides a snapshot of Council's energy use examining changes in electricity, gas and fuel consumption from July 2018 until June 2023.

Electricity

The Table below indicates that Council has in the last five years seen a reduction in its overall annual electricity consumption from the grid by 20% compared to 2018/2019. This has coincided with a change in climatic conditions such as the end of the 2017 to 2019 drought, and also the implementation of two key Council initiatives including the upgrade of 88% of Council's streetlight network to LED technology in 2020 and the installation of behind-the-meter (BTM) solar systems on numerous Council facilities in 2021 and 2022.

However, despite a reduction in annual electricity use for Council, the cost of electricity per MWh has continued to rise and has risen by 19% or approximately \$39/MWh since 2018/2019. This trend is expected to worsen with global pressures driving up gas/oil and coal prices; early shutdowns of old coal power stations; and continued unreliability of old coal power stations.

Council has recently renewed its electricity contracts which provides price certainty for the 'electricity generation and retail component' of Council's electricity bill but Council is still exposed to transmission, distribution, network, and government environmental levy costs which can contribute to over 50% of an electricity bill.

Over 70% of Council's annual electricity costs in the 2022/2023 Financial Year were attributed to just 15 sites. Note that the street lighting costs below include both electricity and maintenance (SLUOS) costs and thus the cost per KWh is higher.

#	Site	Annual kWh 2022/2023	Annual Cost 2022/2023
1	1637716 John Gilbert Water Filtration Plant	4,531,594	\$862,942.12
2	143016 Dubbo Street Lighting	1,788,393	\$683,341.40
3	Dubbo STP Troy Junction HV	1,938,297	\$320,696.13
4	132457 Dubbo STP012 Effluent Irrigation Pumps	756,497	\$174,774.92
5	32934 Wellington Filtration Plant	621,182	\$157,749.38
6	84787 Airline Passenger Terminal Coreena Road	680,868	\$148,113.04
7	2145505 Theatre and Convention Centre	405,536	\$122,520.66
8	Wellington Aquatic Leisure Centre	233,176	\$115,426.12
9	143012 Wellington Street Lighting	300,626	\$108,161.47
10	Dubbo Aquatic Leisure Centre 84808	527,449	\$106,082.40
11	Dubbo Civic Administration Building (CAB)	402,903	\$105,457.73
12	89902 Western Plains Cultural Centre, Dubbo	446,181	\$96,765.58
13	84830 Troy Gully Sewage Pump Station	308,058	\$92,824.82
14	95639 Wellington Sewer Treatment Works	306,487	\$74,351.31
15	130991 Saleyards Bootherba Road	232,272	\$56,162.85

Gas

The total annual cost of natural gas to Council has continued to rise and has risen by 24% since the 2018/2019 Financial Year, however the annual cost of natural gas per gigajoule (GJ) has improved slightly.

The total annual consumption of natural gas has increased and has risen by 56% since the 2018/2019 Financial Year. This might be associated with cooler climatic conditions associated with La Nina events occurring in NSW from 2020 to 2022.

Council's Dubbo and Wellington pools contributed to over 71% of Council's total annual natural gas costs and 77% of total annual natural gas consumption in the 2022/2023 Financial Year. The Western Plains Cultural Centre, Dubbo Civic Administration Building and Dubbo Regional Theatre and Convention Centre contributed to around 20% of Council's total annual natural gas consumption in the 2022/2023 Financial Year.

The total annual consumption of bottled gas has decreased and has decreased by 47% since the 2018/2019 Financial Year. The cost of bottled gas per litre however has risen substantially.

Fuel

Total annual fuel consumption (diesel, unleaded ethanol) has slowly risen over the last five years. Diesel use is the primary contributor to the slight rise in fuel use. In the 2022/2023 Financial Year diesel use accounted for approximately 95% (1232 KL) of all fuel use, with unleaded ethanol approximately 5% (60 KL).

Whilst a majority of diesel use would be associated with Council's heavy vehicle fleet and plant, notably two thirds of Council's light vehicle fleet are light commercial vehicles (e.g., utilities and vans) which may also utilise diesel.

The total annual cost of fuel per KL has continued to rise and has risen by 15% or approximately \$191/KL since 2018/2019. When looking at the previous financial year, fuel costs rose by 34% (\$366/KL).

Table 1: Dubbo Regional Council Energy Snapshot July 2018 – June 2023

Indicator	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	Trend
Annual electricity costs (excl. GST) from grid for Council controlled facilities (\$)	\$4,830,372	\$4,326,454	\$4,060,550	\$4,262,706	\$4,571,821	Worsening Trend
Annual electricity consumption from grid for Council controlled facilities (MWh)	23,056	20,498	18,705	16,996	18,372	Improving Trend
Electricity Cost (excl. GST) from grid per MWh (\$/MWh)	\$209.51	\$211.07	\$217.08	\$250.80	\$248.85	Worsening Trend
Annual natural gas costs (excl. GST) for Council controlled facilities (\$)	\$137,349	\$126,419	\$131,681	\$134,643	\$169,997	Worsening Trend
Annual natural gas consumption for Council controlled facilities (GJ)	6,430	5,929	6,909	6,833	10,047	Worsening Trend
Natural Gas Cost (excl. GST) per GJ (\$/GJ)	\$21.36	\$21.32	\$19.06	\$19.70	\$16.92	Improving Trend
Annual bottled gas consumption for Council controlled facilities (L)	28,316	25,315	13,383	10,227	15,079	Improving Trend
Annual bottled gas costs (excl. GST) for Council controlled facilities (\$)	-	\$29,374	\$20,537	\$22,696	\$44,139	Worsening Trend
Bottled Gas Cost (excl. GST) per Litre (\$/L)		\$1.16	\$1.53	\$2.13	\$2.92	Worsening Trend
Total fuel consumption (KL)	1,163	1,213	1,296	1357	1,293	Worsening Trend
Total fuel costs (excl. GST) (\$)	\$1,451,432	\$1,301,797	\$1,341,181	\$1,455,900	\$1,860,601	Worsening Trend
Fuel Cost (excl. GST) per KL (\$/KL)	\$1248	\$1073	\$1035	\$1073	\$1439	Worsening Trend

Implementation Plan Progress

The following provides a brief summary of Council’s progress against the Energy Strategy and Implementation Plan.

For each Strategy Area, commentary has been provided around key projects implemented in the 2022/2023 Financial Year and key projects still to be actioned in Council’s Delivery and Operational Plans.

A more detailed review, and update, on all actions within Council’s Energy Strategy and Implementation Plan is provided in **Appendix 1** of this Report.

Energy Efficiency	
Key Projects Implemented	Key Projects Outstanding
<p>Sustainable Building Policy & Standards adopted (1.2.1; 1.3.1, 1.3.2).</p> <p>A number of Building Management Systems (BMS) have been investigated and installed into Council buildings (1.6.2).</p>	<p>Develop and implement an energy efficiency project to prioritise the upgrade of very high to high energy using sites across Council (1.4.1). Noting Council’s Net Zero Framework seeks higher energy efficiency goals.</p> <p>An annual staff training session in asset energy management (1.1.2).</p> <p>Through Southern Lights Council Network, continue to lobby Essential Energy on the provisions of smart controllers, smart poles and sensors (1.5.2, 1.5.3).</p> <p>Undertake a LED light replacement program across all Council parks, reserves and open space, with a priority focus on Victoria and Cameron Parks (1.5.4).</p>
Renewable Energy	
Key Projects Implemented	Key Projects Outstanding
<p>Sustainable Building Policy & Standards adopted (2.2.1, 2.2.2, 2.8.1, 2.8.2, 2.8.3).</p> <p>Installation of solar on Council buildings to meet Council’s 50% renewable energy target (2.3.1, 2.3.2). Close to 400 kW installed, with a 30kW PV system installed on Wellington Depot in the 2022/2023 Financial Year.</p> <p>Purchase of renewable electricity to meet Council’s 50% renewable energy target (2.4.1, 2.4.2). <u>Council is now guaranteed to meet its 50% renewable energy target by 2025.</u></p>	<p>Ongoing installation of solar on Council buildings to meet Council’s 50% renewable energy target, especially at Airport and Water & Sewer sites (2.3.2). Noting Council’s Net Zero Framework seeks higher renewable energy goals.</p> <p>Further investigation of alternative renewable energy opportunities, such as Virtual Power Plant (VPP) and solar batteries, should a business case be present (2.6.2; 2.6.3).</p> <p>Development of a monitoring and maintenance program for Council installed solar systems (2.8.3).</p>

Sustainable Transport	
Key Projects Implemented	Key Projects Outstanding
<p>Sustainable Building Policy & Standards adopted (3.2.5).</p> <p>Net Zero Emissions Fleet Strategy and Implementation Plan adopted (3.2.1,3.3.1).</p> <p>Implementation of Council's Zero Emissions Fleet Strategy and Implementation Plan (3.4.1).</p> <ul style="list-style-type: none"> Fleet EVs: 4 x EVs; 1 x Electric Mower. Fleet Charging Stations: 1 x 7kW at MRL; 4 x 22kW at Dubbo CAB; 1 x 11kW at Hawthorne Street Depot. 	<p>It is recommended that Council's Neutral Drive Program cease or be modified as planting trees to offset emissions is not a key initiative of the Net Zero Framework (3.2.6).</p> <p>Council's Zero Emissions Fleet Strategy and Implementation Plan needs to be incorporated into the CSP (3.4.1).</p>
Supporting Smart Energy Communities	
Key Projects Implemented	Key Projects Outstanding
<p>Inclusion of energy efficiency, renewable energy and sustainable transport provisions included within Council strategic and statutory plans (e.g., CSP, North-West Urban Release Area Structure Plan) (4.1.1).</p> <p>Council promotes and supports state government EV Destination Charging Program with 4 x public charging stations installed in Wellington (4.3.1).</p>	<p>Continue to include energy efficiency, renewable energy and sustainable transport provisions included within Council strategic and statutory plans (e.g. Local Strategic Planning Statement (LSPS), Development Control Plan (DCP) (4.1.1).</p> <p>Council to continue to promote, and support where resourcing is available, state or federal government programs for the deployment of renewable energy, energy efficiency and sustainable transport (4.3.1). This could include:</p> <ul style="list-style-type: none"> Development of an <i>EV Charging Stations on Public Land Policy</i> which would apply to both fast and destination charging stations. Installation of further fast and destination charging stations either by Council or a third party.

Key Challenges and Opportunities for Improved Energy Management

A short survey was completed by Facility Managers in September 2023 to better understand the key challenges and opportunities to improve energy management across Council. The following provides a brief summary of the key challenges and opportunities identified as part of this Survey.

Challenges	Opportunities
Staff time constraints and conflicting priorities when it comes to energy management and monitoring.	Increase staff access and use of Council’s energy monitoring software E21, which can provide monthly energy bill reports with a traffic light alert system to highlight any anomalies that require further review. In addition, increase staff awareness of the need to monitor facility energy use particularly from a time of use and demand management perspective.
The staff roles and responsibilities in relation to energy management could be made clearer.	Develop an Energy Management Framework or Policy to clearly outline staff energy management roles and responsibilities across Council.
A lack of understanding and awareness of energy efficiency and renewable energy opportunities across Council.	As per the Energy Strategy and Implementation Plan, develop and implement an energy efficiency project to prioritise the upgrade of very high to high energy using sites across Council (1.4.1). Continue to prioritise the installation of solar PV systems on high energy using Council building and facilities, particularly the Dubbo Regional Airport and Water and Sewer Assets (2.3.2). Council to take advantage of Federal or State Government’s Energy Programs, such as the upcoming Community Energy Upgrade Fund or ongoing NSW Energy Savings Scheme.

Consultation

Action updates were sought from:

- Various Facility Managers
- Manager Resource Recovery and Efficiency

Resourcing Implications

Not relevant to this Report, however rising energy prices will impact heavily on Council.

Next Steps

Encourage Facility Managers to incorporate any remaining and relevant Strategy actions into Council’s 2024/2025 Operational Plan and budget accordingly.

Update of Council’s Energy Strategy and Implementation Plan to align with Net Zero Framework due in December 2024.

APPENDICES:

- 1 [↕](#) Energy Strategy Implementation Plan - Operational Review

Strategy Area	Key Strategic Outcomes	Actions	Delivery	Funding	Responsibility	Status ?	Comments
Energy Efficiency	1.1 Council staff are aware of and supported to implement energy-efficiency measures.	1.1.1 A staff induction video is developed for and shown at all staff inductions to raise awareness and knowledge of Council's sustainability principles and practices.	Short Term	Development and Environment	People Culture Team	Not commenced	This action is not currently resourced by Council.
Energy Efficiency	1.1 Council staff are aware of and supported to implement energy-efficiency measures.	1.1.2 An annual staff training session in asset energy management is conducted to drive improvements in facility and asset energy management.	Short Term	Organisational Performance	Manager Property Assets (now Manager Building Services)	Commenced	Organisational Sustainability Coordinator has provided education on reviewing electricity bills via e21 Council's energy management software.
Energy Efficiency	1.2 Council's procurement policies and plans set min. energy efficiency benchmarks	1.2.1 The Council Procurement Policy is amended and sets a number of minimum energy efficiency benchmarks.	Short Term	Organisational Performance	Corporate Procurement Specialist / OSC	Completed	A Sustainable Building Policy & Standards was adopted by the Executive Leadership Team in April 2023 which sets out energy efficiency benchmarks for new build and renovation works over \$50,000.
Energy Efficiency	1.3 Council major capital works and/or building projects set minimum energy efficiency benchmarks in their design and construction.	1.3.1 Council develops and adopts a Sustainable Buildings Policy which sets minimum energy efficiency benchmarks in the design and construction of major capital works and/or buildings projects.	Short Term	Development and Environment	Organisational Sustainability Coordinator	Completed	A Sustainable Building Policy & Standards was adopted by the Executive Leadership Team in April 2023 which sets out energy efficiency benchmarks for new build and renovation works over \$50,000.
Energy Efficiency	1.3 Council major capital works and/or building projects set minimum energy efficiency benchmarks in their design and construction.	1.3.2 Council implements a Sustainable Buildings Policy which sets minimum energy efficiency benchmarks in the design and construction of major capital works and/or buildings projects.	Short Term	All Council Divisions	Relevant Asset Managers	Commenced	A Sustainable Building Policy & Standards was adopted by the Executive Leadership Team in April 2023 which sets out energy efficiency benchmarks for new build and renovation works over \$50,000. The new Animal Shelter is the first project to trial incorporating the Standards.
Energy Efficiency	1.4 Council adopts best practice energy efficiency measures across all buildings and facilities, with a priority on upgrading very high to high energy using sites.	1.4.1 Develop and implement an energy efficiency project to prioritise the upgrade of very high to high energy using sites across Council (E.g. sites using >100,000 kwh per year and or > \$20,000 in energy bills per year). Consider upgrading end of life motor systems, lighting, HVAC and electrification of gas appliances, space and water heating systems.	Short Term	Relevant Divisions	Manager Property Assets (now Manager Building Services)	Commenced	A 'whole of Council' energy efficiency program has not been developed, however a number of individual energy efficiency initiatives have been implemented.
Energy Efficiency	1.5 Council rolls out energy efficient street lighting and smart controls program across the local government area	1.5.1 Work in collaboration with Essential Energy to undertake a LED street light replacement program across the LGA	Short Term	Infrastructure	Organisational Sustainability Coordinator	Completed	In 2020, Council's Organisational Sustainability Coordinator worked in partnership with Essential Energy to upgrade 88% of Council's street light network to LED technology. The project is expected to deliver energy and maintenance savings to Council and the community of up to 50 per cent per year when compared to traditional lighting technology. The upgrade of the remaining 12 % of Council's street light network to LED is a key emission reduction goal under the newly adopted Net Zero Framework. Essential Energy is currently working with Council to upgrade remaining residential and commercial streets to LED technology. Of note Macquarie Street was upgraded to LED globes in late 2023.
Energy Efficiency	1.5 Council rolls out energy efficient street lighting and smart controls program across the local government area	1.5.2 Work in collaboration with Essential Energy to investigate the business case for, and if feasible install, smart controls for LED street lights across the LGA. Smart controllers can enable light dimming further enhancing energy savings.	Short Term	Infrastructure	Organisational Sustainability Coordinator	Commenced	Essential Energy did not provide a business case to Council for smart controllers siting low business case. Council has joined the Southern Lights council network to continue to be part of the conversation around smart controllers.
Energy Efficiency	1.5 Council rolls out energy efficient street lighting and smart controls program across the local government area	1.5.3 Work in collaboration with Essential Energy to investigate the business case for, and if feasible install integrated smart pole technology within the CBD areas of Dubbo (Macquarie St, Talbragar St) and Wellington (Swift St).	Medium Term	Infrastructure	Manager Infrastructure Strategy & Design	Commenced	Essential Energy were investigating options for smart poles but no further information was provided to Council. Council has joined the Southern Lights network to continue to be part of the conversation around smart controllers, smart poles and sensors.
Energy Efficiency	1.5 Council rolls out energy efficient street lighting and smart controls program across the local government area	1.5.4 Undertake a LED light replacement program across all Council parks, reserves and open space, with a priority focus on Victoria and Cameron Parks.	Short Term	Liveability	Manager Recreation & Open Space	Commenced	Council is investigating LED lighting options for Cameron Park and Elston Park. Further investigations and funding are required to upgrade any remaining parks, including Victoria Park.
Energy Efficiency	1.5 Council rolls out energy efficient street lighting and smart controls program across the local government area	1.5.5 Develop and implement appropriate policy to ensure all new developments and future street lighting upgrades adopt LED technology	Short Term	Infrastructure	Manager Infrastructure Strategy & Design	Commenced	Council ensures all new development streetlighting includes LED technology.
Energy Efficiency	1.6 Technological advances in energy-efficient products are investigated to assess the feasibility of implementation	1.6.1 New technologies are identified and capital costs are monitored to assess feasibility for implementation across key Council buildings	Ongoing	Organisational Performance	Manager Property Assets (now Manager Building Services)	Commenced	Technological advances in energy efficient products are investigated by Building Services or facility managers as required. Building Management Systems (BMS) are one of the ways in which the Building Services Team is identifying savings and opportunities.

Energy Efficiency	1.6 Technological advances in energy-efficient products are investigated to assess the feasibility of implementation	1.6.2 Pilot, and build the business case for, installing intelligent building management systems across key Council buildings	Medium Term	Organisational Performance	Manager Property Assets (now Manager Building Services)	Commenced	A number of Building Management Systems (BMS) have been investigated and installed into Council buildings. This includes buildings such as the Dubbo Regional Airport, Western Plains Cultural Centre and Dubbo Civic Administration Building. The BMS allows for more detailed monitoring and subsequent identification of potential energy saving opportunities.
Energy Efficiency	1.7 Council's energy consumption is monitored and energy savings are assessed	1.7.1 Energy management tools, such as e21, are utilised to monitor Council's energy consumption.	Ongoing	Organisational Performance	Corporate Procurement Specialist / OSC	Commenced	Council energy consumption and energy savings continue to be monitored through energy management software e21.
Energy Efficiency	1.7 Council's energy consumption is monitored and energy savings are assessed	1.7.2 Energy performance of buildings and facilities, where monitored via Council's energy management tool, is regularly reported.	Ongoing (quarterly)	Development and Environment	Organisational Sustainability Coordinator	Commenced	Energy performance of buildings and facilities is reported to facility managers via a new e21 tool titled 'bill reviewer' which sends monthly reminders to facility managers to check their bills and consumption.
Energy Efficiency	1.7 Council's energy consumption is monitored and energy savings are assessed	1.7.3 Smart Metering and internal monitoring software is installed at very high to high energy consuming Council facilities and/or buildings.	Short Term	Organisational Performance	Manager Property Assets (now Manager Building Services)	Commenced	All Council's high energy using sites have interval monitoring. A number of high energy using sites also have internal monitoring via BMS systems.
Renewable Energy	2.1 Council staff are aware of and supported to implement renewable energy measures.	2.1.1 Council continues to be a member of the NSW Department of Planning, Industry and Environment's (DPIE) Sustainability Advantage Program, or a similar program, of whom builds the capacity of council staff to understand and implement renewable energy measures.	Ongoing	Development and Environment	Organisational Sustainability Coordinator	Commenced and ongoing	Council is currently a member of Sustainability Advantage.
Renewable Energy	2.2 Council major capital works and/or building projects set minimum renewable energy benchmarks in their design and construction	2.2.1 Council develops and adopts a Sustainable Buildings Policy which sets minimum renewable energy benchmarks in the design and construction of major capital works and/or buildings projects.	Short Term	Development and Environment	Organisational Sustainability Coordinator	Completed	A Sustainable Building Policy & Standards was adopted by ELT in April 2023 which sets out renewable energy benchmarks for new build and renovation works over \$50,000.
Renewable Energy	2.2 Council major capital works and/or building projects set minimum renewable energy benchmarks in their design and construction	2.2.2 Council implements a Sustainable Buildings Policy which sets minimum renewable energy benchmarks in the design and construction of major capital works and/or buildings projects.	Short Term	All Council Divisions	Relevant Asset Managers	Commenced	A Sustainable Building Policy & Standards was adopted by ELT in April 2022. The new Animal Shelter is the first project to trial incorporating the Standards.
Renewable Energy	2.3 Council develops and implements a behind-the-meter solar PV program to meet up to 25% of its predicted electricity consumption* from renewables by 2025.	2.3.1 Council develops a behind-the-meter solar PV program to meet up to 25% of its predicted electricity consumption* from renewables by 2025.	Short Term	Development and Environment	Organisational Sustainability Coordinator	Commenced	A 30 kW PV system was installed at the Wellington Depot in March 2023. In total Council has over 399 kW of solar installations. Opportunities still exist at Council's Water & Sewer and Airport sites to install solar.
Renewable Energy	2.3 Council implements a behind-the-meter solar PV program to meet up to 25% of its predicted electricity consumption* from renewables by 2025.	2.3.2 Council implements a behind-the-meter solar PV program to meet up to 25% of its predicted electricity consumption* from renewables by 2025.	Short Term	Development and Environment	Manager BUILT	Commenced	A 30 kW PV system was installed at the Wellington Depot in March 2023. In total Council has over 399 kW of solar installations. Opportunities still exist at Council's Water & Sewer and Airport sites to install solar.
Renewable Energy	2.4 Council develops and implements a Power Purchasing Agreement (PPA) to meet up to 25% of its predicted electricity consumption* from renewables by 2025	2.4.1 Council develops a Power Purchasing Agreement (PPA) program to meet up to 25% of its predicted electricity consumption* from renewables by 2025.	Short Term	Development and Environment	Organisational Sustainability Coordinator	Completed	Small sites - Council has entered into an 8 yr electricity contract with Shell, including 100% Green Power, commencing January 2023. The small sites account for approximately 20% of Council's electricity consumption. Large sites/streetlighting - Council has also entered into a 7.5 year PPA with Iberdrola, including the purchase of an increasing component of renewable electricity. The large sites/streetlighting account for approximately 80% of Council's electricity consumption.
Renewable Energy	2.4 Council develops and implements a Power Purchasing Agreement (PPA) to meet up to 25% of its predicted electricity consumption* from renewables by 2026	2.4.2 Council implements a Power Purchasing Agreement (PPA) to meet up to 25% of its predicted electricity consumption* from renewables by 2025.	Medium Term	Organisational Performance	Corporate Procurement Specialist / OSC	Completed	Small sites - Council has entered into an 8 yr electricity contract with Shell, including 100% Green Power, commencing January 2023. The small sites account for approximately 20% of Council's electricity consumption. Large sites/streetlighting - Council has also entered into a 7.5 year PPA with Iberdrola, including the purchase of an increasing component of renewable electricity. The large sites/streetlighting account for approximately 80% of Council's electricity consumption.
Renewable Energy	2.5 Council implements landfill gas methane flaring and investigates methane capture for electricity generation.	2.5.1 Council continues to implement landfill gas methane flaring at its primary landfill facility.	Short Term	Development and Environment	Manager Resource Recovery & Efficiency	Ongoing	Council has renewed 5 yr contract for methane flaring at primary landfill, expiring in 2027.

Renewable Energy	2.5	Council implements landfill gas methane flaring and investigates methane capture for electricity generation.	2.5.2	Council commissions a detailed feasibility study of methane capture for electricity generation.	Medium Term	Development and Environment	Organisational Sustainability Coordinator	Commenced	Council has commenced preliminary investigations through Essential Energy.
Renewable Energy	2.6	Council is aware of and investigates alternative renewable energy opportunities	2.6.1	New technologies are identified and capital costs are monitored to assess feasibility for implementation.	Ongoing	Development and Environment	Organisational Sustainability Coordinator	Commenced	This is an ongoing action. Council's focus has been on achieving its renewable energy target via behind the meter solar and power purchasing agreement (PPA) projects.
Renewable Energy	2.6	Council is aware of and investigates alternative renewable energy opportunities	2.6.2	Council investigates Virtual Net Metering or Virtual Power Plant (VPP) energy models to aggregate Council's solar capacity and offset energy use across all Council sites.	Medium Term	Development and Environment	Organisational Sustainability Coordinator	Commenced	At present Council's focus has been on achieving its renewable energy target via behind the meter solar (with potential for battery in future) and power purchasing agreement (PPA) projects.
Renewable Energy	2.6	Council is aware of and investigates alternative renewable energy opportunities	2.6.3	Council expands solar battery storage capacity and create scalable storage networks across Council assets.	Medium Term	Development and Environment	Organisational Sustainability Coordinator	Not commenced	The business case for solar batteries will continue to be investigated, no batteries have been installed at this stage.
Renewable Energy	2.7	Council maintains a revolving energy fund to finance renewable energy projects	2.7.1	Council maintains a revolving energy fund to finance renewable energy projects inline with Council's Energy Strategy And Implementation Plan.	Short Term	Development and Environment	Organisational Sustainability Coordinator	Not commenced	Facility managers seek funding for capital works via a capital works prioritisation program.
Renewable Energy	2.8	Solar PV systems on Council buildings and facilities are managed, monitored and maintained	2.8.1	Council develops a policy for the installation, management, maintenance, and monitoring of solar PV systems on all Council buildings and facilities.	Short Term	Development and Environment	Organisational Sustainability Coordinator	Commenced and ongoing	Council's newly adopted Sustainable Building Policy and Standards outlines requirements for solar system size, design, installation and monitoring. In addition, a cleaning and maintenance program for Council's installed solar systems is currently being developed.
Renewable Energy	2.8	Solar PV systems on Council buildings and facilities are managed, monitored and maintained	2.8.2	Council implements the policy for the installation of solar PV systems on all Council buildings and facilities.	Short Term	All Council Divisions	Relevant Asset Managers/Manager BUILT	Commenced and ongoing	Council's newly adopted Sustainable Building Policy and Standards outlines requirements for solar system size, design, installation and monitoring. In addition, OSC has been working with Building Assets Team to design and implement a maintenance program for Council's installed solar systems.
Renewable Energy	2.8	Solar PV systems on Council buildings and facilities are managed, monitored and maintained	2.8.3	Council implements a policy for the management, maintenance and monitoring of solar PV systems on all Council buildings and facilities.	Short Term	Organisational Performance	Manager Property Assets (now Manager Building Services)	Commenced and ongoing	Council's newly adopted Sustainable Building Policy and Standards outlines requirements for solar system size, design, installation and monitoring. In addition, OSC has been working with Building Assets Team to design and implement a maintenance program for Council's installed solar systems.
Sustainable Transport	3.1	Council understands current fleet practices and the opportunities available to reduce fleet fuel use, mileage, greenhouse gas emissions and fleet size without compromising on service delivery.	3.1.1	Undertake a Fleet Utilisation Study to examine current practices and to better understand the opportunities available to reduce fleet fuel use, mileage, greenhouse gas emissions and fleet size without compromising on service delivery.	Short Term	Infrastructure	Manager Fleet & Depot Services	Commenced and ongoing	Fleet and Depot Services conduct an annual plant report which includes examining fleet utilisation/optimisation.
Sustainable Transport	3.2	Council implements practices to optimise current fleet performance, reducing fuel use and greenhouse gas emissions.	3.2.1	Procedures and/or programs to reduce fuel usage are developed. This may include minimum efficiency standards for council vehicles, or driver training and education.	Short Term	Infrastructure	Manager Fleet & Depot Services	Commenced and ongoing	Net Zero Emission Fleet Strategy & Implementation Plan developed and adopted for Council's fleet which aims to reduce fossil fuel usage.
Sustainable Transport	3.2	Council implements practices to optimise current fleet performance, reducing fuel use and greenhouse gas emissions.	3.2.2	Council increases vehicle resource sharing where appropriate (fleet size optimisation).	Short Term	Infrastructure	Manager Fleet & Depot Services	Commenced and ongoing	In relation to promoting vehicle resource sharing where appropriate Fleet and Depot Services conduct annual reports on fleet utilisation and optimisation.
Sustainable Transport	3.2	Council implements practices to optimise current fleet performance, reducing fuel use and greenhouse gas emissions.	3.2.3	Council's maintenance and replacement program is implemented	Ongoing	Infrastructure	Manager Fleet & Depot Services	Ongoing	Fleet and Depot Services have maintenance and replacement programs in place in order to deliver a modern and efficient plant fleet. Council's recently adopted Zero Emissions Fleet Strategy & Implementation Plan outlines future maintenance and servicing needs for a zero emissions fleet.
Sustainable Transport	3.2	Council implements practices to optimise current fleet performance, reducing fuel use and greenhouse gas emissions.	3.2.4	Council promotes and supports ride or walk to work days, staff car pooling, and other less carbon intensive transport options throughout the year.	Ongoing	Executive Services	Executive Manager, People Culture and Safety	Commenced	Activities that promote fitness are implemented by People, Culture & Safety Team through their wellness program.
Sustainable Transport	3.2	Council implements practices to optimise current fleet performance, reducing fuel use and greenhouse gas emissions.	3.2.5	Council investigates, and if feasible installs, improved bike storage and staff change facilities at key Council buildings.	Short Term	Organisational Performance	Manager Property Assets (now Manager Building Services)	Commenced	There are bike storage and change facilities installed at the Dubbo Administration Building. In addition, Council's recently adopted Sustainable Buildings Policy & Standards outlines bike parking, storage and change facility requirements for new builds and renovations over \$50,000.
Sustainable Transport	3.2	Council implements practices to optimise current fleet performance, reducing fuel use and greenhouse gas emissions.	3.2.6	Council's vehicle emissions offset program, Neutral Drive, is retained and continued in the short term	Short Term	Infrastructure	Manager Fleet & Depot Services	Ongoing	It is recommended that the Neutral Drive Program be reviewed in light of the recently adopted Net Zero Framework

Sustainable Transport	3.2	Council implements practices to optimise current fleet performance, reducing fuel use and greenhouse gas emissions.	3.2.7	Biodiesel use by Council is retained and continued in the short term	Short Term	Infrastructure	Manager Fleet & Depot Services	Ceased	Council has ceased the use of biodiesel as it transitions to a zero emissions fleet (e.g. electric or hydrogen heavy vehicles)
Sustainable Transport	3.3	Council understands, and develops the business case for, transitioning to a low or zero emissions fleet	3.3.1	Council develops a Transition to EV Roadmap in order to understand how to, and build the business case for, transitioning to a low or zero emissions fleet.	Short Term	Infrastructure	Organisational Sustainability Coordinator/Manager Fleet & Depot Services	Completed	A Zero Emissions Fleet Strategy & Implementation Plan was adopted in December 2022 based on a roadmap developed by consultant Everengi. The Strategy and Implementation Plan will need to be updated with Council's recently adopted Net Zero Framework and revised targets for transition of Council's fleet.
Sustainable Transport	3.4	Council implements actions towards transitioning to a low zero emissions fleet	3.4.1	Council implements initiatives towards transitioning to a zero emissions fleet.	Medium Term	Infrastructure	Manager Fleet & Depot Services	Commenced	Electric vehicles purchased for Council's fleet include - 4 x EVs; 1 x Electric Mower. EV infrastructure installed for Council's fleet include: 6 EV charging stations
Supporting Energy Smart Communities	4.1	Council strategic and statutory planning processes support and promote energy efficiency, renewable energy and sustainable transport.	4.1.1	Energy efficiency, renewable energy and sustainable transport provisions included within Council strategic and statutory plans, including the Local Strategic Planning Statement, Community Strategic Plan, Local Environmental Plan, and Development Control Plan.	Short Term	Development and Environment	Manager Growth Planning	Commenced	Council's Community Strategic Plan supports and promotes energy efficiency, renewable energy and sustainable transport. In addition, provisions are incorporated into new North-West Residential Urban Release Area Structure Plan.
Supporting Energy Smart Communities	4.2	Council lobbies state and federal government to address barriers to the take up of renewable energy, energy efficiency and/or sustainable transport, and to support increased ambition in these areas.	4.2.1	Council to lobby state and federal government when and where appropriate	Ongoing	Development and Environment	Director Development and Environment	Ongoing	Council continues to lobby state and federal government when and where appropriate especially in relation to the Central West and Orana Renewable Energy Zone.
Supporting Energy Smart Communities	4.3	Council promotes and supports programs to increase community knowledge, skills and capacity to shift to renewable energy, energy efficiency and sustainable transport options.	4.3.1	Council promotes, and supports where resourcing is available, state or federal government programs for the deployment of renewable energy, energy efficiency and sustainable transport.	Short Term	Development and Environment	Organisational Sustainability Coordinator	Commenced	A public electric vehicle destination charging program was completed, including site investigations, quotations, successful grant application, and implementation of the project. This includes the installation of 4 x 22kW public electric vehicle charging stations, 2 at the Wellington Library and 2 at the Wellington Caves.
Supporting Energy Smart Communities	4.3	Council promotes and supports programs to increase community knowledge, skills and capacity to shift to renewable energy, energy efficiency and sustainable transport options.	4.3.2	Council organises and hosts the annual Dubbo Sustainable City Expo and Science Festival or similar to showcase ways in which the Dubbo Region can live and work more sustainably and become energy smart.	Ongoing (Annually)	Development and Environment	Organisational Sustainability Coordinator	Ceased	Resourcing issues and COVID has meant the Dubbo Sustainable City Expo ceased. In 2022 the former Expo exhibitors, and other sustainable stallholders, were invited to attend the 2022 Dream Lanterns event. Unfortunately there was low registration from former exhibitors and the event was cancelled due to rain. Alternatively, Council is now developing a Sustainable Events Policy and Guidelines to ensure all events held on Council land are run sustainably and reduce Council Scope 3 greenhouse gas emissions.
Supporting Energy Smart Communities	4.4	Council investigates, and if feasible, provides incentives to the community to increase the uptake of energy efficiency, renewable energy and sustainable transport options	4.4.1	Council, should legislation change to allow a special rates charge, investigate the option of providing incentives to the community to increase the uptake of energy efficiency, renewable energy and/or sustainable transport options.	Medium Term	Development and Environment	Organisational Sustainability Coordinator	Not commenced	Consider incorporating this action into the Delivery Plan should the legislation change.
Supporting Energy Smart Communities	4.5	Council supports the establishment of a Community Energy Hub to drive community energy initiatives across the local government area.	4.5.1	Investigate, develop and if feasible implement a pilot program which would see Council support the establishment of a Community Energy Hub.	Medium Term	Development and Environment	Organisational Sustainability Coordinator	Not commenced	This action is not currently resourced by Council and is outside the current role of the Organisational Sustainability Coordinator. That said there are a number of community energy groups popping up in the area that provide some support to the community about understanding and lobbying for community benefit from the Renewable Energy Zones.



REPORT: Results of Inground Parking Sensor and License Plate Recognition Camera Trials

DIVISION: Development and Environment
REPORT DATE: 21 February 2024
TRIM REFERENCE: ID23/2645

EXECUTIVE SUMMARY

Purpose	<ul style="list-style-type: none"> Provide review or update 	
Issue	<ul style="list-style-type: none"> Results of Inground Parking Sensor and License Plate Recognition Camera Trials. 	
Reasoning	<ul style="list-style-type: none"> Council in July 2022 commenced an inground parking sensor trial project in the Dubbo Central Business District (CBD) with industry group Database Consultants Australia. 150 inground parking sensors were installed in the Dubbo CBD in a number of locations. The results of the data from the inground parking sensors software shows that for the period from 22 August 2022 until 1 February 2024, a total of 1852 infringements were issued for overstaying permitted time. During the trial, the license plate recognition camera proved to be effective for monitoring timed parking areas throughout the Dubbo urban area. During the trial period 157,191 vehicles were scanned with 2413 time violations detected. Council Staff have also had representations from other private car park owners in the Dubbo CBD, including large scale parking areas, in respect of Council undertaking parking management on their behalf in the future. 	
Financial Implications	Budget Area	Environmental Compliance
	Funding Source	Environmental Compliance
	Proposed Cost	N/A
	Ongoing Costs	<ul style="list-style-type: none"> Inground Parking Sensors Pinforce Software - \$20,200 per annum (Initial Capital cost was \$72,000) Licence Plate Recognition Camera - Camera and software - \$28,744 per annum
Policy Implications	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:	2 Infrastructure
CSP Objective:	2.1 The road transportation network is safe, convenient and efficient
Delivery Program Strategy:	2.1.4 Adequate and convenient car parking is available in commercial centres

RECOMMENDATION

That Council note the initial results of the Inground Parking Sensor and License Plate Recognition Camera Trials.

Stephen Wallace
Director Development and Environment

HE
Manager Environmental
Compliance

BACKGROUND

The Towards 2040 Community Strategic Plan and Council's Smart Region Strategy identify a priority for Council to investigate and implement smart systems and processes for the management of public parking. In particular, Council's Smart Region Strategy includes the following priorities:

- Investigate the feasibility of expanding smart parking to high priority areas.
- Collect, analyse and share real time data on traffic, parking and congestion and optimise mobility planning.

Inground Parking Sensors

Council, in July 2022 commenced an inground parking sensor trial project within Dubbo Central Business District (CBD) with industry group Database Consultants Australia (DCA).

150 inground parking sensors were installed in the Dubbo CBD in the following locations:

- Parking bays in Church Street between Macquarie Street and Brisbane Street;
- Centre parking bays in Church Street between Macquarie and Bligh Street;
- Parking bays in Brisbane Street between Talbragar Street and the Railway Line; and
- Parking bays on both sides of Macquarie Street from 49-65 Macquarie Street (Riverdale Shopping Centre) to Church Street.

The locations of the inground sensors are shown in Figure 1.



Figure 1: Location of Inground Sensors

Dubbo residents and business owners were notified of the installation of the inground sensors and their locations within the Dubbo CBD.

In September 2022, Council trialled a compact License Plate Recognition (LPR) camera. Whilst no infringements were issued from the LPR camera during the trial, Parking Patrol Officers captured data of how many time violations were detected.

The purpose of this report is to provide initial results of the inground parking sensor trial and to provide information on other parking management products to manage parking.

REPORT

The future of parking compliance includes the incorporation of innovative capabilities that aim to manage parking resources more efficiently whilst contributing to the provision of optimal parking supply.

Parking restrictions are used to manage parking in areas of high demand. The Parking Patrol function aims to facilitate public access to these limited parking spaces by ensuring that parking turnover reflects restrictions. This aids the community in accessing business and services on a consistent and equitable basis.

1. Inground Parking Sensor Trial

Inground parking sensors capture and record data regarding vehicle movements in parking bays. The sensors are activated once a vehicle enters the parking bay and resets immediately when the vehicle leaves. The inground sensors send an immediate notification to Council's Parking Officers when a vehicle has overstayed the permitted time for the parking bay.

Following installation of the 150 inground parking sensors in July 2022, use of the sensors for the purposes of parking management commenced on 22 August 2022.

Table 1 below shows a comparison of the parking time violations detected in a three month period before the sensors were installed and for the same three month calendar period after the sensors were installed.

Date	Method of Parking Enforcement	Number of Violations Detected	Efficiency Factor
18 November 2021 to 18 February 2022	Foot Patrol/Manual Chalking	317	1
18 November 2022 to 18 February 2023	Inground sensors	570	1.8

Table 1 – Comparison of Manual Chalking Method Versus Inground Sensors

During this period, the inground sensors resulted in approximately 80% additional time violations being enforced in comparison to the manual chalking by foot patrol method. This result is considered representative of the continuing effectiveness of the technology.

The results of the data from the inground parking sensors software shows that for the period from 22 August 2022 until 1 February 2024, a total of 1852 infringements were issued for overstaying permitted time.

With reference to Table 1 above, the efficiency factor of the inground sensor technology is shown to be 1.8 times more effective than the manual chalking method. It would be reasonable to extrapolate that over the same period, the manual chalking method would likely have resulted in only 1030 infringements. For ease, this comparison is represented in Table 2 below.

Method of Parking Enforcement	Total Number of Infringements over the 75 Week Period	Average Number of Infringements per Week	Efficiency Factor
Foot Patrol/Manual Chalking	1030	13.7	1
Inground sensors	1852	24.7	1.8

Table 2 – Extrapolated Infringement Comparison of Manual Chalking Method Versus Inground Sensors

The initial capital cost of the 150 inground sensors was \$72,000. In addition to the initial capital cost, Council pays an annual support fee of approximately \$13,000 p/a and PinForce Software subscription of \$7200 p/a. Taking into account Council’s costs, the gross income generated during the trial period to date has been approximately \$238,000.

The sensors communicate to handheld devices through the 3G mobile network. With closure of the Vodaphone 3G mobile network at the end of January 2024, a new communication means was retrofitted to Council signposts to ensure communication with the sensors could be maintained.

It should be noted that if Council was to extend the sensor program to cover the remaining public parking spaces in the Dubbo CBD, this would cost approximately \$355,000 plus support costs for the provision of an additional 740 sensors.

2. License Plate Recognition (LPR) Cameras

Aero Ranger is an Automatic Number Plate Recognition system provider, including License Plate Recognition Camera technology.

Aero Ranger provided LPR cameras which were fitted to a Council vehicle for a trial period between 8 September 2022 to 24 March 2023. During the trial, the LPR proved to be effective for monitoring timed parking areas throughout the Dubbo urban area. During the trial period 157,191 vehicles were scanned with 2413 time violations detected.

In comparison to foot patrols, the LPR camera is 6.3 times more efficient and 3.5 times more efficient than inground sensors. It would be reasonable to extrapolate that over the same 75 week period of 22 August 2022 until 1 February 2024, the manual chalking method would

have resulted in only 1030 infringements compared with 6463 infringements detected by LPR. This comparison is shown in Table 3.

Method of Parking Enforcement	Total Number of Infringements over 75 Week Period	Average Number of Infringements per Week	Efficiency Factor
Foot Patrol/Manual Chalking	1030	13.7	1
Inground sensors	1852	24.7	1.8
LPR camera	6463	86.17	6.3

Table 3 – Extrapolated Infringement Comparison of Manual Chalking Method, Inground Sensors and LPR Camera

It should be noted that Council’s parking function has a vehicle resource, which is utilised for parking management operations. This vehicle is included as a component of existing Branch resources.

3. Private Carpark Contracts

Council has entered into a contract to monitor and enforce compliance of a private carpark in the Dubbo CBD. The contract conditions result in Council being paid an annual fee to patrol the car park, in addition to any income from infringements issued.

Council Staff have also had representations from other private car park owners in the Dubbo CBD, including large scale parking areas, in respect of Council undertaking parking management in the future.

It is considered that Council will require an efficient and effective way to monitor for time violations in these areas. The LPR system is likely to be the most effective tool to perform this monitoring. It is considered that foot patrols would require an additional parking officer to be employed to patrol private carparks. Given ownership, installation of inground sensors is likely to be cost prohibitive for private parking areas.

Consultation

Prior to commencing the inground parking sensor project, consultation was undertaken with a number of Council’s including Port Macquarie, Ryde and Blue Mountains. These Council’s had installed similar parking sensors.

Consultation has also been undertaken with Council’s Information Technology Branch in respect of technical compliance with Council’s systems.

Resourcing Implications

Table 4 provides an overall cost comparison of inground sensors and license plate recognition cameras for the purposes of parking management.

Method of Parking Enforcement	Up Front Capital Expenditure	Ongoing Equipment Subscription	Annual Software Subscription
Inground Sensors	\$72,000 for 150 sensors	\$13,000 p/a for support	\$7,200 p/a - Pinforce
LPR Cameras	Nil	\$19,734 p/a for LPR hardware system	\$9,010 p/a - Arthur D Riley & Co (ADR)

Table 4: Overall cost comparison between inground sensors and LPR system

The income generated by the inground sensors minus the ongoing costs of subscriptions, support, and software is approximately \$165,000.

Based on the number of violations detected during the LPR trial the estimated income is potentially up to 3.5 times the income generated by the inground sensors. However, as no infringements were issued during the trial of the LPR not all violations detected would have resulted in parking infringements being issued, therefore an accurate estimate of the income generated is not available.

Although the ongoing costs of the LPR system appear to be higher it is due to Council not having to purchase the LPR equipment outright. Unlike the inground sensors, which had an initial capital expenditure of \$72,000. The LPR equipment is leased via a monthly subscription.

The result of the two trials has shown that the inground sensors are a success. They have already paid for themselves and effectively ensured more carparking spaces are available due to a higher rate of turnover of parked vehicles in the CBD.

With the possibility to acquire more private carpark contracts in the future, the LPR camera may prove to be a more effective and efficient tool to monitoring timed parking across all areas. LPR allows for larger areas to be monitored more frequently, including the private carparks if required, which in turn will benefit the businesses and community with more turnover of parking spaces.



DUBBO REGIONAL
COUNCIL

REPORT: Naming of Road in Subdivision - 2 Spitfire Drive, Dubbo - Lot 6 DP 1267441

DIVISION: Development and Environment
REPORT DATE: 21 February 2024
TRIM REFERENCE: ID24/294

EXECUTIVE SUMMARY

Purpose	<ul style="list-style-type: none"> Seek endorsement Fulfil legislated requirement/compliance 	
Issue	<ul style="list-style-type: none"> Naming of a road in Subdivision of Lot 6 DP 1267441, known as 2 Spitfire Drive, Dubbo. 	
Reasoning	<ul style="list-style-type: none"> Dubbo Regional Council has received a request from Maas Group Properties RBD Holdings Pty Ltd to name a private road on Lot 6 DP 1267441, known as 2 Spitfire Drive, Dubbo. Section 162 of the Roads Act 1993. Section 7 of the Roads Regulation 2018. 	
Financial Implications	Budget Area	There are no financial implications arising from this report.
	Proposed Cost	Nil – The cost of the provision of the blade sign and installation would be met by the developer (Maas Group Properties RBD Holdings Pty Ltd).
Policy Implications	Policy Title	Naming of Thoroughfares and Other Geographical Features within the City of Dubbo; and the Geographical Names Board NSW Addressing Policy.
	Impact on Policy	The proposed road name has been considered in accordance with the above policies.

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: 2.2.5 Council maintains infrastructure and delivers services at the adopted service levels as agreed with the community

RECOMMENDATION

- 1. That the proposed road name, Woomera Circuit, be approved by Council as per the road layout plan.**
- 2. That the proposed name be notified in the local newspaper and Government Authorities notified in accordance with Section 162 of the Roads Act 1993 and Section 7 of the Roads Regulation 2018.**
- 3. That the developer be advised accordingly, once approval under the Roads Regulation 2018 has been given and the name gazetted.**

Stephen Wallace
Director Development and Environment

NB
Land & Information
Services Officer

REPORT

Proposed Road Name

A request was received from Maas Group Properties RBD Holdings Pty Ltd to name a private road at 2 Spitfire Drive, Dubbo as shown in **Figure 1**.

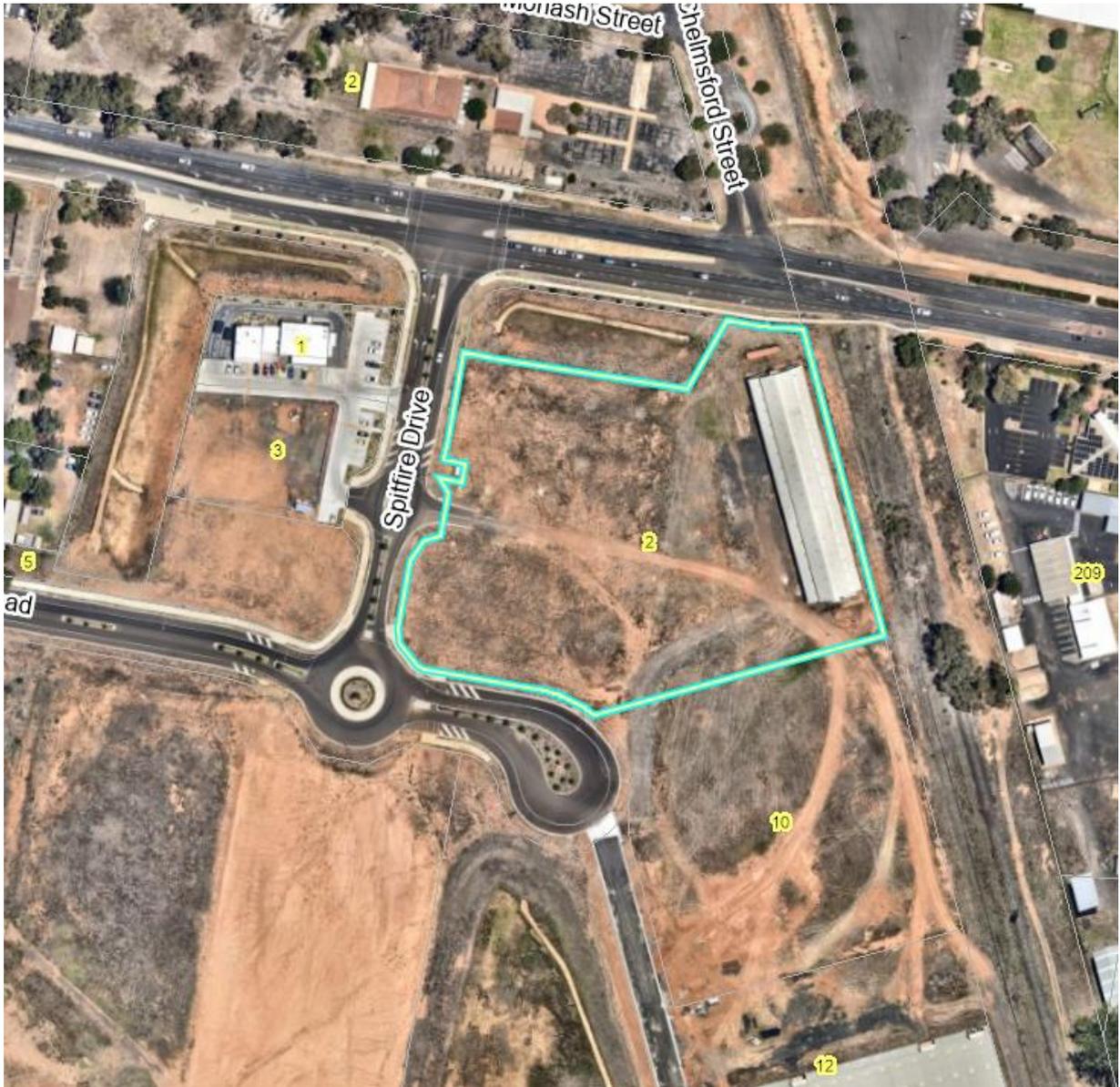


Figure 1: Aerial photograph of 2 Spitfire Drive, Dubbo

The proposed road name of Woomera Circuit as shown in **Figure 2**, is derived from the CA-11 Woomera. This was an Australian manufactured military torpedo and dive bomber aircraft, designed and constructed by the Commonwealth Aircraft Corporation (CAC) during World War II. The name is also in keeping with the current theme of the area as it was previously Dubbo's RAAF Base Depot.

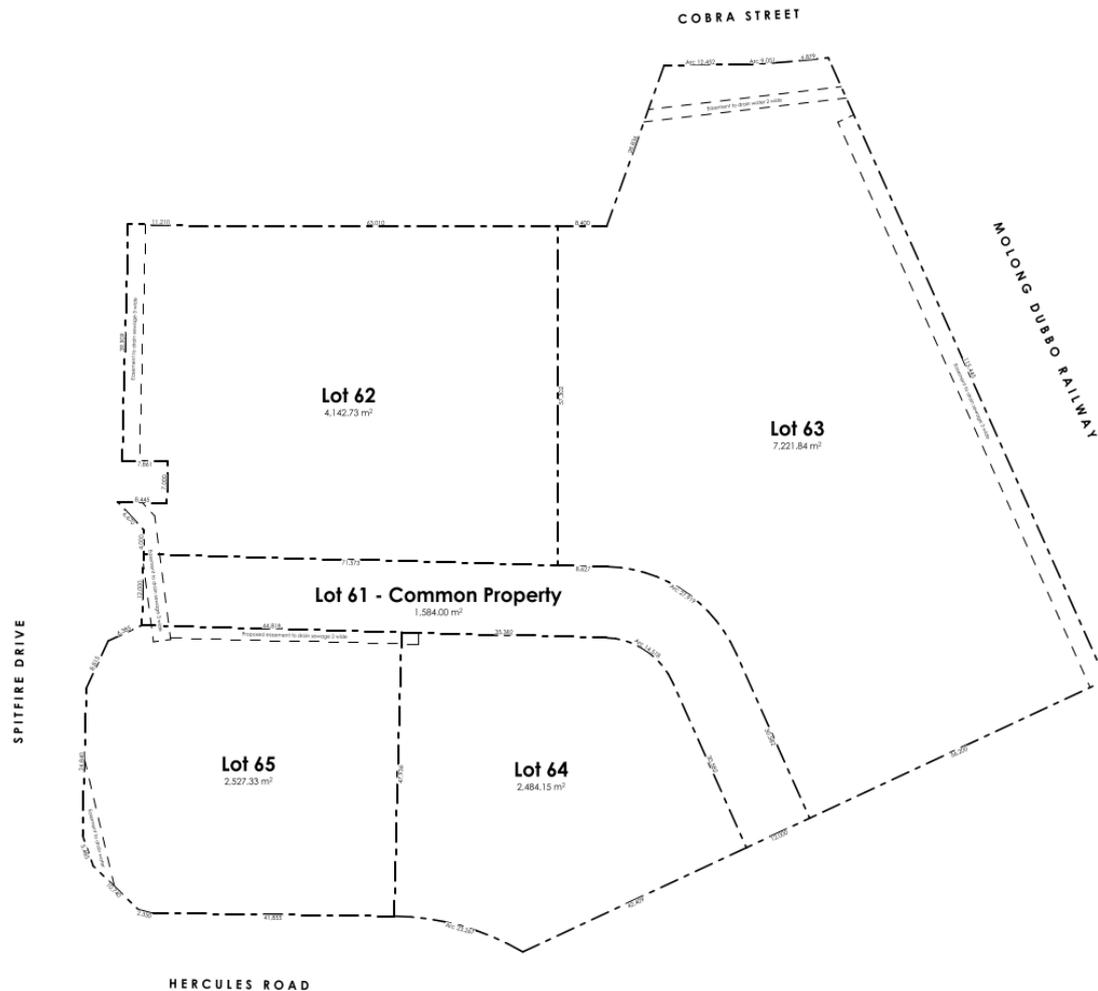


Figure 2: Proposed Road Layout (Lot 61 – Common Property)

Preferred Option

Woomera Circuit is the option put forward at this time as it is an Australian manufactured military aircraft.

If not accepted by Council, then the developer will revert to a previously approved, but not yet used, name of Sabre, however this is an overseas aircraft so not the preferred option.

Consultation

Geographical Names Board – Road Name Eligibility Check, NSW Addressing Policy and Dubbo Regional Council’s Policy, Naming of Thoroughfares and Other Geographical Features within the City of Dubbo. No potential issues were found.

Resourcing Implications

Future replacement of the blade sign should road become public – Infrastructure (Signage and Line Marking).

Planned Communications

- Public notification and advising authorities as per Section 7 of the Roads Regulation 2018.
- Daily Liberal and NSW Place and Road Naming Proposal System.

Timeframe

Key Date	Explanation
20 March 2024	28 days public notification
19 April 2024	Seek gazettal of proposed road names

Next Steps

If no objections received from the general public and authorities, the proposed road name will be gazetted and the developer will be advised.