

AGENDA WORKS AND SERVICES COMMITTEE 12 DECEMBER 2016

MEMBERSHIP: Mr M Kneipp (Administrator).

The meeting is scheduled to commence at pm.

		Page
WSC16/28	REPORT OF THE WORKS AND SERVICES COMMITTEE - MEETING 21 NOVEMBER 2016 (ID16/2270) The Committee had before it the report of the Works and Services Committee meeting held 21 November 2016.	5
WSC16/29	BUILDING SUMMARY - NOVEMBER 2016 (ID16/2263) The Committee had before it the report dated 7 December 2016 from the Director Environmental Services regarding Building Summary - November 2016.	9
WSC16/30	PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO - RESULTS OF PUBLIC SUBMISSION (ID16/1710) The Committee had before it the report dated 1 December 2016 from the Director Technical Services regarding Proposed Pipeline from Burrendong Dam to Dubbo - Results of Public Submission.	23
WSC16/31	ADOPTION OF TECHNICAL CONSTRUCTION SCHEDULES (ID16/2202) The Committee had before it the report dated 2 December 2016 from the Director Technical Services regarding Adoption of Technical Construction Schedules.	114

WSC16/32 RESTART NSW FUNDING DEED - PURVIS LANE UPGRADING (ID16/2151) 129 The Committee had before it the report dated 30 November 2016 from the Manager Civil Infrastructure and Solid Waste regarding Restart NSW Funding Deed - Purvis Lane Upgrading.

WSC16/33 PROPOSED NEW LICENCE FOR NSW GOVERNMENT TELECOMMUNICATIONS AUTHORITY AT MOUNT BODANGORA (ID16/2230) The Committee had before it the report dated 1 December 2016 from the Manager Civil Infrastructure and Solid Waste regarding Proposed New Licence for NSW Government Telecommunications Authority at Mount Bodangora.

WSC16/34 UPCOMING CIVIL INFRASTRUCTURE WORKS REQUIRING TREE REMOVALS AND REPLACEMENTS (ID16/2138)

The Committee had before it the report dated 21 November 2016 from the Director Parks and Landcare Services regarding Upcoming Civil Infrastructure Works Requiring Tree Removals and Replacements.

WSC16/35 INCREASED VEGETATION CLEARANCE ZONES AT MYALL STREET RESERVOIR (ID16/2152) The Committee had before it the report dated 23 November 2016 from the Director Parks and Landcare Services regarding Increased

Vegetation Clearance Zones at Myall Street Reservoir.

WSC16/36REVIEW OF THE DUBBO REGIONAL COUNCIL SIGNIFICANT TREE
REGISTER 2017 (ID16/2183)147The Committee had before it the report dated 29 November 2016
from the Manager Horticultural Services regarding Review of the
Dubbo Regional Council Significant Tree Register 2017.147WSC16/37ENVIRONMENTAL CONTROL POLICIES REVIEW (ID16/2271)
The Committee had before it the report dated 7 December 2016
from the Manager Environmental Control regarding Environmental
Control Policies Review.192

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WSC16/38 TENDER FOR THE SUPPLY OF A TWO WAY COMMUNICATION SYSTEM UPGRADE (ID16/2159)

The Committee had before it the report dated 5 December 2016 from the Manager Fleet Management Services regarding Tender for the Supply of a Two Way Communication System Upgrade.

In accordance with the provisions of Section 9 (2A) of the Local Government Act 1993 the General Manager 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, prejudice the commercial position of the person who supplied it (Section 10A(2)(d)(i)).

WSC16/39 REPLACEMENT OF PLANT NUMBER 2075 A HEAVY HAULAGE TIPPING TRUCK AND PLANT NUMBER 1148 A TRI-AXLE DOG TRAILER (ID16/1948)

The Committee had before it the report dated 2 December 2016 from the Manager Fleet Management Services regarding Replacement of Plant Number 2075 a Heavy Haulage Tipping Truck and Plant Number 1148 a Tri-axle Dog Trailer.

In accordance with the provisions of Section 9 (2A) of the Local Government Act 1993 the General Manager 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, prejudice the commercial position of the person who supplied it (Section 10A(2)(d)(i)).

WSC16/40 REPLACEMENT OF PLANT NUMBER 2083, A 12,500 LITRE WATER TRUCK (ID16/1947)

The Committee had before it the report dated 2 December 2016 from the Manager Fleet Management Services regarding Replacement of Plant Number 2083, a 12,500 Litre Water Truck.

In accordance with the provisions of Section 9 (2A) of the Local Government Act 1993 the General Manager 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, prejudice the commercial position of the person who supplied it (Section 10A(2)(d)(i)).

WSC16/41 REPLACEMENT OF PLANT NUMBER 1159, A CCF CLASS 4.4 TO 5.5 BACKHOE LOADER (ID16/1946)

The Committee had before it the report dated 29 November 2016 from the Manager Fleet Management Services regarding Replacement of Plant Number 1159, a CCF Class 4.4 to 5.5 Backhoe Loader.

In accordance with the provisions of Section 9 (2A) of the Local Government Act 1993 the General Manager 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, prejudice the commercial position of the person who supplied it (Section 10A(2)(d)(i)).

WSC16/42 TENDER FOR THE CONSTRUCTION OF DUBBO RURAL FIRE SERVICE AIRPORT HARDSTAND AREA AND AIRPORT ROAD. (ID16/2257)

The Committee had before it the report dated 5 December 2016 from the Manager Works Services regarding Tender for the Construction of Dubbo Rural Fire Service Airport Hardstand Area and Airport Road..

In accordance with the provisions of Section 9 (2A) of the Local Government Act 1993 the General Manager 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, prejudice the commercial position of the person who supplied it (Section 10A(2)(d)(i)).



Report of the Works and Services Committee meeting 21 November 2016

AUTHOR: Administrative Officer - Governance REPORT DATE: 7 December 2016

The Committee had before it the report of the Works and Services Committee meeting held 21 November 2016.

MOTION

That the report of the Works and Services Committee meeting held on 21 November 2016, be adopted.



REPORT WORKS AND SERVICES COMMITTEE 21 NOVEMBER 2016

PRESENT:

Mr M Kneipp (Administrator).

ALSO IN ATTENDANCE:

The Interim General Manager, the Director Organisational Services, the Manager Governance and Risk, the Supervisor Governance, the Director Corporate Development, the Corporate Communications Supervisor (K Matts), the Director Technical Services, the Manager Technical Support, the Manager Civil Infrastructure and Solid Waste, the Manager Works Services, the Director Environmental Services, the Director Community Services (J Watts), the Director Parks and Landcare Services and the Transition Project Manager.

Mr M Kneipp (Administrator) assumed chairmanship of the meeting.

The proceedings of the meeting commenced at 5.47pm.

WSC16/23 REPORT OF THE WORKS AND SERVICES COMMITTEE - MEETING 17 OCTOBER 2016 (ID16/2115)

The Committee had before it the report of the Works and Services Committee meeting held 17 October 2016.

Moved by Mr M Kneipp (Administrator)

MOTION

The Committee recommends that the report of the Works and Services Committee meeting held on 17 October 2016, be adopted.

CARRIED

WSC16/24 BUILDING SUMMARY - OCTOBER 2016 (ID16/2099)

The Committee had before it the report dated 2 November 2016 from the Director Environmental Services regarding Building Summary - October 2016.

Moved by Mr M Kneipp (Administrator)

MOTION

The Committee recommends that the information contained in this report of the Director Environmental Services, dated 2 November 2016 be noted.

CARRIED

WSC16/25 EXCELLENCE AWARDS RECEIVED FOR TECHNICAL SERVICES DIVISION PROJECTS (ID16/2111)

The Committee had before it the report dated 4 November 2016 from the Director Technical Services regarding Excellence Awards Received for Technical Services Division Projects.

Moved by Mr M Kneipp (Administrator)

MOTION

The Committee recommends:

- **1.** That the report of the Director Technical Services be noted.
- 2. That the Council staff members involved in the delivery of these successful projects be congratulated.

CARRIED

WSC16/26 B DOUBLE ROUTE EXTENSION SHOWGROUND ROAD, RENSHAW MCGIRR WAY AND SUNTOP ROAD WELLINGTON (ID16/2118)

The Committee had before it the report dated 11 November 2016 from the Manager Technical Support regarding B Double Route Extension Showground Road, Renshaw McGirr Way and Suntop Road Wellington.

Moved by Mr M Kneipp (Administrator)

MOTION

The Committee recommends:

- 1. That approval be given for an extension of the B-Double Route along Showground Road for a distance of 0.65 km west of Mitchell Highway (Maughan Street), Renshaw McGirr Way for a distance of 8.4 km south of the Showground Road/Bushrangers Creek Way intersection and Suntop Road for a distance of 10.80 km west of Renshaw McGirr Way to the property "Glencardie" and return subject to the following conditions being attached to the B-Double route.
- That there be no B-Double access along Showground Road/Renshaw McGirr Way and Suntop Road during School Bus Service times between 7.00 am – 9.00 am and 3.00 pm – 5.00 pm.
- 3. That a 70 km/h speed limit be applied to B-Doubles along Renshaw McGirr Way outside of the 60 km/h speed zone limit and Suntop Road.
- 4. That a review be undertaken of the B-Double Route to assess the requirements for an upgrade of the road warning signage applicable to the horizontal and vertical alignment, intersections and other traffic facilities as identified, including additional 80 km/h repeater signs along Renshaw McGirr Way.

CARRIED

WSC16/27 LANDFILL GAS CAPTURE SYSTEM AT WHYLANDRA WASTE AND RECYCLING CENTRE - ANNUAL PROGRESS REPORT (ID16/2120)

The Committee had before it the report dated 14 November 2016 from the Manager Civil Infrastructure and Solid Waste regarding Landfill Gas Capture System at Whylandra Waste and Recycling Centre - Annual Progress Report.

Moved by Mr M Kneipp (Administrator)

MOTION

The Committee recommends that the information regarding the performance of landfill gas destruction at the Whylandra Waste and Recycling Centre be noted.

CARRIED

The meeting closed at 5.54pm.

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CHAIRMAN



REPORT: Building Summary - November 2016

AUTHOR:Director Environmental ServicesREPORT DATE:7 December 2016TRIM REFERENCE:ID16/2263

EXECUTIVE SUMMARY

Information has been prepared on the statistics of the number of dwellings and residential flat buildings approved in the Dubbo Regional Council Local Government Area and statistics for approved Development Applications for the information of Council.

FINANCIAL IMPLICATIONS

There are no financial implications arising from this report.

POLICY IMPLICATIONS

There are no policy implications arising from this report.

RECOMMENDATION

That the information contained in this report be noted.

Melissa Watkins Director Environmental Services

REPORT

Provided for information are the latest statistics (as at the time of production of this report) for Development Applications for the Dubbo Regional Council.

1. <u>Residential Building Summary</u>

Dwellings and other residential developments approved during November 2016 were as follows:

	<u>Dubbo</u>	Wellington
Dwellings	12	2
Other residential development	6	5
(No. of units)	(10)	(-)

For consistency with land use definitions included in the Dubbo Local Environmental Plan 2011, residential development has been separated into 'Dwellings' and 'Other residential development'. 'Other residential development' includes dual occupancies, secondary dwellings, multi-unit and seniors living housing.

These figures include Development Applications approved by Private Certifying Authorities (Complying Development Certificates).

A summary of residential approvals for the former Dubbo City Council area since 2009-2010 is provided attached as **Appendix 1**.

2. <u>Approved Development Applications</u>

<u>Dubbo</u>

The total number of approved Development Applications (including Complying Development Certificates) for November 2016 and a comparison with 2015 figures and the total for the financial years to date for 2016 and 2015 are as follows:

	<u>1 November 2016 – 30 November 2016</u>	<u>1 July 2016 – 30 November 2016</u>
No. of applications	63	355
Value	\$21,939,337	\$81,822,366
	4 November 2045 - 20 November 2045	1 July 2015 - 20 November 2015
	1 NOVAMBAR 1115 - 30 NOVAMBAR 1115	
	<u>1 November 2015 – 30 November 2015</u>	<u>1 July 2015 – 30 November 2015</u>
No. of applications		<u>1 July 2013 – 30 November 2013</u> 92

A summary breakdown of the figures for the Dubbo office for November 2016 and 2015 is included in **Appendix 2** and **Appendix 3** and the year-to-date figures are included in **Appendix 4** and **Appendix 5**.

Wellington

The total number of determined Development Applications (including Complying Development Certificates) for November 2016 and a comparison with 2015 figures are as follows:

	<u>1 November 2016 – 30 November 2016</u>	<u>1 July 2016 – 30 November 2016</u>
No. of applications	5 7	25
Value	\$351,401	\$927,613
	<u>1 November 2015 – 30 November 2015</u>	<u>1 July 2015 – 30 November 2015</u>
No. of applications		<u>1 July 2015 – 30 November 2015</u> 31

A summary breakdown of the figures for the Wellington office for November 2016 and 2015 is included in **Appendix 6** and **Appendix 7** and the year-to-date figures are included in **Appendix 8** and **Appendix 9**.

The information included in this report is recommended for notation.

Appendices:

- **1** Building Summary Dubbo
- 2 Approved Development Applications November 2016 (Dubbo)
- 3 Approved Development Applications November 2015 (Dubbo)
- 4 Approved Development Applications 1 July 2016 to 30 November 2016 (Dubbo)
- **5** Approved Development Applications 1 July 2015 to 30 November 2015 (Dubbo)
- 6 Approved Development Applications November 2016 (Wellington)
- 7 Approved Development Applications November 2015 (Wellington)
- 8 Approved Development Applications 1 July 2016 to 30 November 2016 (Wellington)
- **9** Approved Development Applications 1 July 2015 to 30 November 2015 (Wellington)

	JUL	AUG	SEPT	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2009/2010													
Dwellings	20	11	16	14	7	3	5	11	11	7	12	11	128
Flat Buildings	-	1	1	1	1	3	-	2	2	-	1	-	12
(No of units)	(-)	(2)	(2)	(2)	(2)	(6)	(-)	(4)	(4)	(-)	(4)	(-)	(26)
2010/2011													
Dwellings	8	15	10	7	2	6	-	6	6	6	7	9	82
Flat Buildings	-	1	0	3	1	-	-	1	1	1	4	-	12
(No of units)	(-)	(2)	(0)	(5)	(2)	(-)	(-)	(2)	(2)	(2)	(7)	(-)	(22)
2011/2012													
Dwellings	6	12	10	6	7	16	4	16	12	8	12	9	118
Flat Buildings	1	1	-	1	2	2	-	-	-	-	-	1	8
(No of units)	(14)	(2)	(-)	(1)	(4)	(3)	(-)	(-)	(-)	(-)	(-)	(16)	(40)
2012/2013													
Dwellings	3	7	14	13	9	3	9	9	13	13	15	13	121
Flat Buildings	4	6	-	-	1	9	-	-	1	-	2	-	23
(No of units)	(8)	(6)	(-)	(-)	(2)	(11)	(-)	(-)	(2)	(-)	(39)	(-)	(68)
2013/2014	1	1											
(incl. private certifiers)													
Dwellings	23	17	25	20	14	15	19	10	18	14	19	14	208
Flat Buildings	-	1	1	-	-	1	4	2	1	2	-	3	15
(No of units)	(-)	(2)	(2)	(-)	(-)	(2)	(46)	(1)	(2)	(4)	(-)	(6)	(65)
2014/2015													
(Incl. PCs and redefined land use categories based on LEP definitions)													
Single dwellings	19	34	19	21	13	16	14	12	20	19	15	20	222
Multi unit housing	3	1	6	5	6	12	-	4	2	1	9	5	54
(No of units)	(6)	(2)	(31)	(50)	(6)	(21)	(-)	(87)	(4)	(1)	(25)	(10)	(243)
2015/2016													
(Incl. PCs and redefined land use													
categories based on LEP definitions)			20	10		26	10		10	47	47		244
Single dwellings Multi unit housing	27 6	20 8	26 8	19 4	21 1	26 3	19 3	14 3	16 3	17 5	17 3	22 8	244 55
(No of units)	(50)	(98)	(12)	(7)	(2)	(5)	(18)	(4)	(5)	(14)	(6)	(23)	(244)
2016/2017	(30)	(90)	(12)	(7)	(2)	13/	(10)	(**)	(3)	(14)	(0)	(23)	(244)
(Incl. PCs and redefined land use													
categories based on LEP definitions)													
Single dwellings	24	13	17	18	12								84
Multi unit housing	8	5	7	4	6								30
(No of units)	(10)	(10)	(13)	(7)	(10)								(50)

STATISTICAL INFORMATION ON DWELLINGS AND MULTI UNIT HOUSING

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Approved Development & Complying Development Applications for former Dubbo LGA and Private Certifiers-Period 1/11/2016 - 30/11/2016

Development Type	Number of Applications	Est. S	New Developments	Est. \$	Additions and Alterations	Est. S	New Dwellings	New Lots
Dwelling - single	16	4,664,986	12	4,260,986	4	404,000	12	
Dwelling - Secondary/Dual Occ Dwelling	3	748,600	3	748,600			3	
Dwelling - Dual Occupancy, one storey	1	300,000	1	300,000			2	
Medium Density Res - one/two storeys	2	675,000	2	675,000			5	
Garage/Carport/Roofed Outbuildings	25	643,830	21	499,890	4	143,940	1	
Fences/Unroofed Structures	1	2,500	1	2,500				
Swimming Pool	6	98,100	6	98,100				
Nursing Home/Dementia Care	1	12,825,721	1	12,825,721				
Retail Building	3	196,600			3	196,600		
Warehouse/storage	1	1,400,000	1	1,400,000			1	
Carpark	1	350,000	1	350,000				
Signs/Advertising Structure	2	25,000	1	5,000	1	20,000		
Demolition	1	4,000	1	4,000				
Subdivision - Residential	1	0	1					2
Miscellaneous	1	5,000	1	5,000				
Totals for Development Types	65	21,939,337						

Total Number of Applications for this period: 63

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

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

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APPENDIX NO: 3 - APPROVED DEVELOPMENT APPLICATIONS - NOVEMBER 2015 (DUBBO)



Civic Administration Building P.O. Box 81 Dubbo NSW 2830 T (02) 6801 4000 F (02) 6801 4259 ABN 53 539 070 928

> Print Date: 6/12/2016 Print Time:10:19:40AM

Approved Development & Complying Development Applications for former Dubbo LGA and Private Certifiers-Period 1/11/2015 - 30/11/2015

Development Type	Number of Applications	Est. S	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwellings	New Lots
Dwelling - single	24	7,492,895	21	7,112,895	3	380,000	21	
Dwelling - Secondary/Dual Occ Dwelling	1	390,376	1	390,376			2	
Dwelling - Dual Occupancy, one storey	1	467,185	1	467,185			2	
Garage/Carport/Roofed Outbuildings	21	595,831	20	545,831	1	50,000	1	
Fences/Unroofed Structures	1	15,000	1	15,000				
Swimming Pool	11	267,267	11	267,267				
Retail Building	1	1,500,000	1	1,500,000				
Community/Public Building	1	600,000			1	600,000		
Demolition	2	0	2					
Change of Use - Commercial	3	25,000	2	5,000	1	20,000		
Agricultural Development	1	800,000	1	800,000				
Subdivision - Residential	1	0						
Subdivision - Rural	1	0			1			
Subdivision - Other	1	0						
Miscellaneous	1	122,410	1	122,410				
Totals for Development Types	71	12,275,964						

Total Number of Applications for this period: 67

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

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

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APPENDIX NO: 4 - APPROVED DEVELOPMENT APPLICATIONS - 1 JULY 2016 TO 30 NOVEMBER 2016 (DUBBO)



Civic Administration Building P.O. Box 81 Dubbo NSW 2830 T (02) 6801 4000 F (02) 6801 4259 ABN 53 539 070 928

> Print Date: 6/12/2016 Print Time:10:24:08AM

Approved Development & Complying Development Applications for former Dubbo LGA and Private Certifiers-Period 1/07/2016 - 30/11/2016

Development Type	Number of Applications	Est. S	New Developments	Est. \$	Additions and Alterations	Est. S	New Dwellings	New Lots
Dwelling - single	105	30,992,117	83	28,621,217	22	2,370,900	83	
Dwelling- Transportable/Relocatable	1	198,884	1	198,884			1	
Dwelling - Secondary/Dual Occ Dwelling	11	2,390,900	11	2,390,900			15	
Dwelling - Dual Occupancy, one storey	19	6,260,000	19	6,260,000			34	1
Medium Density Res - one/two storeys	2	675,000	2	675,000			5	
Garage/Carport/Roofed Outbuildings	98	1,766,915	92	1,593,375	6	173,540	2	
Fences/Unroofed Structures	3	9,000	3	9,000				
Swimming Pool	34	835,263	34	835,263				
Nursing Home/Dementia Care	1	12,825,721	1	12,825,721				
Office Building	3	529,280			3	529,280		
Retail Building	13	3,425,408			13	3,425,408		
Office & Retail Building	1	30,000			1	30,000		
Factory/Production Building	2	3,130,000	2	3,130,000				
Warehouse/storage	9	3,881,000	7	3,551,000	2	330,000	1	
Carpark	2	550,000	2	550,000				
Infrastructure - Transport, Utilities	1	60,000	1	60,000				
Health Care Facility - Hospital	1	50,000			1	50,000		
Entertainment/Recreational Building	1	200,000			1	200,000		
Signs/Advertising Structure	3	47,500	2	27,500	1	20,000		
Demolition	1	4,000	1	4,000				
Home Industry	3	0	1		2			
Child Care - Centre Based	1	1,530,000	1	1,530,000				

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Approved Development & Complying Development Applications for former Dubbo LGA and Private Certifiers-Period 1/07/2016 - 30/11/2016

Development Type	Number of Applications	Est. S	New Developments	Est. \$	Addifions and Alterations	Est. \$	New Dwellings	New Lots
Change of Use - Commercial	6	190,000	3	35,000	3	155,000		
Tourism Development	1	4,250,000	1	4,250,000				
Subdivision - Residential	22	919,000	2					4
Subdivision - Commercial	2	0	1					6
Subdivision - Industrial	3	12,000			1			2
Subdivision - Rural	1	15,000						2
Miscellaneous	5	7,045,378	5	7,045,378				
Totals for Development Types	355	81,822,366						

Total Number of Applications for this period: 335

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

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

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APPENDIX NO: 5 - APPROVED DEVELOPMENT APPLICATIONS - 1 JULY 2015 TO 30 NOVEMBER 2015 (DUBBO)



Civic Administration Building P.O. Box 81 Dubbo NSW 2830 T (02) 6801 4000 F (02) 6801 4259 ABN 53 539 070 928

> Print Date: 6/12/2016 Print Time:10:26:29AM

Approved Development & Complying Development Applications for former Dubbo LGA and Private Certifiers-Period 1/07/2015 - 30/11/2015

Development Type	Number of Applications	Est. S	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwellings	New Lots
Dwelling - single	128	34,798,157	112	33,683,257	16	1,114,900	112	
Dwelling- Transportable/Relocatable	1	210,000	1	210,000			1	
Dwelling - Secondary/Dual Occ Dwelling	8	2,016,918	8	2,016,918			11	
Dwelling - Dual Occupancy, one storey	18	7,477,185	18	7,477,185			35	
Medium Density Res - Seniors Living SEI	₽ ₽ 2	20,000,000	2	20,000,000			125	2
Garage/Carport/Roofed Outbuildings	105	2,109,246	99	1,940,896	6	168,350	3	
Fences/Unroofed Structures	2	25,000	1	15,000	1	10,000		
Swimming Pool	30	717,106	30	717,106				
Office Building	3	55,000	2	55,000	1			
Retail Building	17	5,395,000	1	1,500,000	16	3,895,000		
Hotels	1	10,000			1	10,000		
Office & Retail Building	1	250,000			1	250,000		
Factory/Production Building	5	1,090,000	2	540,000	3	550,000		
Warehouse/storage	7	6,700,000	6	6,690,000	1	10,000		
Infrastructure - Transport, Utilities	1	40,000	1	40,000				
Health Care Facility - Other	1	540,000			1	540,000		
Educational Building	2	1,503,911	2	1,503,911				
Entertainment/Recreational Building	1	200,000	1	200,000				
Community/Public Building	1	600,000			1	600,000		
Signs/Advertising Structure	4	44,050	4	44,050				
Demolition	6	120,000	6	120,000			1	
Child Care - Centre Based	1	1,800,000	1	1,800,000				

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Approved Development & Complying Development Applications for former Dubbo LGA and Private Certifiers-Period 1/07/2015 - 30/11/2015

Development Type	Number af Applications	Est. S	New Developments	Est. \$	Addifions and Alterations	Est. \$	New Dwellings	New Lots
Change of Use - Commercial	10	800,000	3	5,000	7	795,000		
Agricultural Development	1	800,000	1	800,000				
Parks/Reserves	1	550,000	1	550,000				
Subdivision - Residential	15	16,000	4	16,000				6
Subdivision - Commercial	1	0			1			
Subdivision - Industrial	1	0	1					
Subdivision - Rural	3	0			1			4
Subdivision - Other	1	0						
Miscellaneous	6	4,201,410	6	4,201,410				
Totals for Development Types	384	92,068,983					•	-

Total Number of Applications for this period: 360

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

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

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Approved Development & Complying Development Applications for Certifiers-Period 1/11/2016 - 30/11/2016 (inc Private Certifiers)

Development Type	Number of Applications	Est. S	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwellings	New Lots
Dwelling	2	247,185	1	10,000	1	237,185	1	1
Garage/Carport/Shed	4	80,116	3	45,000	1	35,116		
Pool/Spa	1	24,100			1	24,100		
Totals for Development Types	7	351,401			2			

Total Number of Applications for this period: 7

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

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> Print Date: 6/12/2016 Print Time:10:32:35AM

Approved Development & Complying Development Applications for Certifiers-Period 1/11/2015 - 30/11/2015 (inc Private Certifiers)

Development Type	Number of Applications	Est. S	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwallings	New Lots
Change Of Use	1	285						
Demolition	1	12,000	1	12,000				
Garage/Carport/Shed	3	101,490	3	101,490				1
Subdivision	3	0						
Totals for Development Types	8	113,775						

Total Number of Applications for this period: 8

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

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

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> Print Date: 6/12/2016 Print Time:10:33:56AM

Approved Development & Complying Development Applications for Certifiers-Period 1/07/2016 - 30/11/2016 (inc Private Certifiers)

Development Type	Number of Applications	Est. S	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwallings	New Lots
Change Of Use	2	71,000			1	68,000		
Commercial Premises	1	50,000	1	50,000				2
Demolition	1	28,600	1	28,600				
Dwelling	6	900,834	5	663,649	1	237,185	5	2
Garage/Carport/Shed	20	477,869	18	440,753	2	37,116		1
Pool/Spa	2	48,100	1	24,000	1	24,100		
Subdivision	3	0	1					2
Totals for Development Types	35	1,576,403		-				

Total Number of Applications for this period: 33

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

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

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> Print Date: 6/12/2016 Print Time:10:35:57AM

Approved Development & Complying Development Applications for Certifiers-Period 1/07/2015 - 30/11/2015 (inc Private Certifiers)

Development Type	Number of Applications	Est. S	New Developments	Est. \$	Additions and Alterations	Est. \$	New Dwellings	New Lots
Change Of Use	2	10,285						
Commercial Premises	1	5,000						
Demolition	3	22,000	3	22,000				
Dwelling	5	1,038,291	4	948,291	1	90,000	4	1
Garage/Carport/Shed	11	183,685	10	175,685			1	2
Pool/Spa	2	61,800	2	61,800				
Subdivision	7	0						
Totals for Development Types	31	1,321,061				-		

Total Number of Applications for this period: 31

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

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

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REPORT: Proposed Pipeline from Burrendong Dam to Dubbo - Results of Public Submission

AUTHOR: Director Technical Services REPORT DATE: 1 December 2016 TRIM REFERENCE: ID16/1710

EXECUTIVE SUMMARY

At the Ordinary Meeting of Council held 22 June 2016, Council resolved:

- 1. That the attached draft route plans of a proposed future pipeline from Burrendong Dam to the John Gilbert Water Treatment Plant at Dubbo, via the Wellington Water Treatment Plant and Geurie, along the Macquarie River, be adopted for Public Exhibition purposes.
- 2. That, following consideration of submission received during the Public Exhibition period, a further report be prepared for Council.

The Draft Burrendong Dam to Dubbo Pipeline maps were placed on Public Exhibition commencing 18 July 2016 to 26 August 2016.

The Draft Burrendong to Dubbo Pipeline Maps were publicly displayed at Council's Civic Administration Building's, Dubbo and Wellington, Macquarie Regional Library, Dubbo, Macquarie Regional Library, Wellington and Geurie General Store. The Plans were also displayed on Council's website, with advertisements being placed in the Council Column on Thursday 18 July 2016 and Thursday 1 August 2016.

Council received 66 submissions to the Burrendong to Dubbo Pipeline. Of the 66 submissions received, only Macquarie Food and Fibre were not completely opposed to the construction of the pipeline, with the majority citing environmental issues and the de-valuation of private property, see **Appendix 1**.

FINANCIAL IMPLICATIONS

There are no financial implications arising from this report.

POLICY IMPLICATIONS

There are no policy implications arising from this report.

RECOMMENDATION

- **1.** That the information contained within the report of the Director Technical Services be noted.
- 2. That the people who made submissions be advised of the outcome of Council's considerations and thanked for their submission.

Stewart McLeod Director Technical Services

BACKGROUND

During 2015 the former Dubbo City Council and the NSW Government cooperated in the preparation of plans that show possible routes of a future pipeline from Burrendong Dam to Dubbo via the Wellington Water Treatment Plant and Geurie, along the Macquarie River Valley.

Such a pipeline would significantly improve the drought security of Dubbo, Wellington and Geurie and may be identified as such in the development of a new Integrated Water Cycle Management (IWCM) strategy for these localities.

The aim of the Burrendong Dam to Dubbo pipeline is to be able to source water directly from Burrendong Dam, and deliver it to both the Wellington water treatment plant and the Dubbo water treatment plant via Geurie. Even during a major drought it is expected that enough rain would fall in the headwaters of the Macquarie and Cudgegong Rivers around Mudgee, Rylstone, Lithgow and Oberon to maintain at least a small pool in the "dead storage" of Burrendong Dam from which town water could be drawn.

The pipeline would provide water security to the residents of Dubbo, Wellington and Geurie, the major population localities in the Dubbo Regional Council Local Government Area. It could supply water if river water or bore water was not available, such as during a contamination incident, or a major algae bloom.

The pipeline would be physical insurance. A pipeline would not be essential in most years, but could be essential during major droughts. For example, if the water in Burrendong Dam reached very low levels, delivering water to the towns by a pipeline rather than down the river would result in much less water being removed from Burrendong Dam. In such a drought the river could cease to flow below Burrendong Dam for days or weeks at a time, and thus the need for the pipeline to supply essential human and economic needs for Wellington, Geurie, Dubbo and surrounding villages.

In general, on a normal day to day basis, the three water treatment plants at Wellington, Geurie and Dubbo would continue to draw water directly from the Macquarie River, just as they do now, supplemented by the pipeline flows.

Compared to the Macquarie River, the volume of water that can be transported by a 600 mm diameter pipe is quite small. At Dubbo, the Macquarie River often flows at between 200 ML/day to 2000 ML/day. By comparison a very large flood could be up to 100,000 ML/day. A 600 mm diameter pipe can only transfer between 12 ML/day and 20 ML/day, depending on the height of water in Burrendong Dam.

Investigations were undertaken to examine possible pipeline routes. These drawings are the result of these early stage investigations, and are not final plans.

The proposed pipeline would usually operate under gravity. This means that the pipeline route tends to follow the river, which also falls under gravity. Even at low dam levels it would

be proposed to pump dam water up to a small service reservoir on a nearby hill and use that as a header tank to continue to drive flows in the pipe down to Dubbo in a similar fashion as when the Dam itself is full of water.

Two suggested pipeline routes have been drawn. One route is on the northern side of the river, and the other is on the southern side of the river. These are not the final routes but would be used in the process of determining a final detailed design of same.

Sections of a pipeline route could be changed if detailed examination showed there was an easier path in that section. Each route will be optimised when further, more detailed investigation are undertaken.

Additionally, the selection of a final route may not fall exclusively to either the northern route, or the southern route, but some combination of these. Mapping both the northern and southern routes in their entirety allows all these possibilities to be considered.

The proposed Burrendong Dam pipeline could be designed so that it could also tap groundwater reservoirs along the river valley and transport the groundwater to population centres in Dubbo, Wellington and Geurie. This would provide more flexibility and even greater water supply security than just relying on Burrendong Dam.

Council had forwarded the pipeline route plans to:

- Infrastructure NSW
- Department Primary Industries Water

REPORT

This report addresses the public submissions received in regard to Council's Draft Proposed Pipeline from Burrendong Dam to Dubbo. Council received a total of 66 submissions.

The majority of submissions received were from community residents and private property owners (94%), with sixty one (61) submissions received from Wellington residents and one (1) submission received from a Dubbo resident. Four (4) submissions (6%), were received from government or other entities/associations, being Department of Primary Industries – Water, WaterNSW, Mount Arthur Reserve Trust and Macquarie River Food and Fibre.

Eleven (11) submissions from Wellington residents and one (1) submission from a Dubbo resident provided detailed comment. Fifty (50) submissions from Wellington residents cited "No pipeline" as the only comment.

Residents' submissions expressed concern regarding the construction of the pipeline, citing the de-valuation of private property, environmental/ecological reasons, and capital costs involved as significant concerns.

PUBLIC SUBMISSION COMMENTS

1. Department of Primary Industries – Water (DPI Water)

"DPI Water looks forward to Council's further assessment of this project as part of its proposed integrated Water Cycle Management Plan. The project assessment should consider the economic benefit and cost of supplying other users along the pipeline route extending to Cobar on a triple bottom line basis.

DPI Water does not have any other specific comments on the proposal at this time however Council should seek further advice on matters to be considered when undertaking the environmental assessment for the project".

The DPI submission recommends including in the assessment of the pipeline possible extension of supply to Cobar. The future scope of further feasibility studies can include Narromine, Warren, Nyngan and Cobar if required. It should be noted that this supply is for drought security for urban centres only and does not include large industries such as mining.

2. WaterNSW

"WaterNSW is the NSW Government's bulk water delivery business, responsible for managing and protecting 42 water storages and associated water supply infrastructure across NSW, including Burrendong Dam. WaterNSW is also responsible, together with DPI Water, for the delivery of Infrastructure NSW's (NSW) State Infrastructure Strategy in the Macquarie Valley.

As Dubbo Regional Council's (DRC) proposed pipeline has the potential to impact directly and significantly on WaterNSW's infrastructure and operations, we must be consulted at all stages of this project. This includes any investigations, options studies, development of designs and construction options being considered for the pipeline and all future planning processes affecting Burrendong Dam. Any deviation from WaterNSW's long-term strategy for the Macquarie Valley has the potential to create permanent supply and environment problems now and in the future. In this submission WaterNSW has provided some comments and questions for your consideration".

Pipeline Operations

"WaterNSW seeks clarification of the following issues:

- Is the intention of this pipeline to supply water only in drought periods or will it be in continuous use?
- WaterNSW understands that DRC is proposing to connect to the pipeline for the purposes of providing high security town water. Has there been any consideration as to usage by other customers' en-route?

- The current WaterNSW level of service for Dubbo in terms of security of supply is very high far higher than before the millennium drought. To better understand the requirements for the pipeline WaterNSW requests more information regarding any perceived deficiencies in current service levels. Are service levels properly understood by customers?
- Water will still need to be delivered to Warren to supply Nyngan and Cobar. Has there been any consideration as to the effect of this pipeline on these customers?"

The submission from WaterNSW raises several issues that would need to be considered in the feasibility report.

It is intended to use the pipeline continuously once built, though it would only become "essential" during periods of extreme drought when Burrendong Dam can no longer deliver water into the Macquarie River without pumping. The pipeline in these circumstances would avoid the large transmission losses due to seepage and evaporation and would allow the State Government to send intermittent pulses of water down the river rather than continuous flows.

The feasibility study would include the possibility of providing water to users other than urban centres – eg stock and domestic supplies along the river.

Water NSW indicates that the level of water security is higher now than during the Millenium Drought. This indicates that the operation of dam during low water levels in the dam has changed in order to provide a higher level of security to Local Water Utilities. Details of this increased security need to be clarified with Water NSW.

Any feasibility study that included delivery of water to Cobar would need to include Narromine, Warren and Nyngan.

Environmental Issues

"WaterNSW anticipates the proposed pipeline will have significant potential to negatively impact on the environment during both the construction and operational phases. All potential environmental impacts should be fully addressed in an environmental risk assessment, including but not limited to the following:

- Water quality impacts both within and downstream of Burrendong Dam.
- Access requirements. Access consents are required for entry onto WaterNSW property. Licences or easements may be required for areas where the pipeline is located on WaterNSW land.
- Impacts caused by the operations of the pipeline during drought. Removing water from the river during drought would compound the harmful effects on an already stressed river.
- Likely impacts on current environmental flows.
- Possible variations in extraction licences.
- Location of the pipeline with respect to flood zones".

It is worth noting that subsequent to this submission being received Council Officers met with key Water NSW staff in Dubbo to provide them with more detail and context regarding this

preliminary pipeline investigation. The visiting officers were much more receptive to the concept face to face than the above formal questions would indicate.

All environmental impacts both during construction and operation would be covered in the feasibility study similar to other such major pipeline projects.

Access and Land matters would be handled in the accordance with all relevant legislation.

During extreme drought water would only be drawn from the "dead water" in the Dam. The feasibility report would provide the comparison of trying to pump and deliver the dead water via the river versus via a pipeline.

There would be very little water available in any case to deliver environmental flows. It is worth noting that the Macquarie River ceased to flow during severe droughts before the Dam was constructed.

Extraction Licences for Local Water Utilities when the pipeline is operational would be on the basis of the highest level of water restrictions

The pipeline would be constructed at a suitable depth in flood affected zones. Pipelines are constructed on flood plains at many locations around Australia and the world. This is not seen as a significant technical constraint.

Engineering Issues

"The Dubbo Drought Plan and Drought Management Plan mentions the proposed Burrendong pipeline specifically however it is not clear if any detailed studies have been completed. With respect to the design and construction of the pipeline and consideration of existing assets WaterNSW seeks clarification on the following points:

- Is this pipeline intended to connection directly to the dam wall or will the draw-off point be downstream of the dam? This would obviously affect the amount of head available to direct the pipeline flow.
- What is the proposed design flow? Is this peak day, average day or something else?
- Will pumping stations be required? If so then flooding impacts should be considered.
- What is the rationale for the proposed route? Has ownership of the land been considered?"

"WaterNSW looks forward to a constructive and consultative relationship with Dubbo Regional Council".

It is intended to pump water from the "dead water" pool in the floor of the dam up to a reservoir on a nearby hill. The dam infrastructure would not be impacted.

The design flow would be analysed for several scenarios, but most likely be based on a minimum daily flow rate and the highest levels of water restrictions.

It is not intended to provide a pumping station between the Dam and Dubbo. If the study is extended to include Cobar and other towns in between, the need for pumping stations would need to be considered

The rationale for the proposed route is to provide a gravity fed supply from Burrendong Dam to Dubbo. The other routes that have been investigated would be included in the feasibility study.

3. Mount Arthur Reserve Trust – Shaun Baigent, Chairman

"I refer to 'Exhibit 42, Ch41000 to Ch42000' of the exhibited Burrendong Dam to Dubbo South West Pipeline route. The Trust notes that this section of the preliminary south-west pipeline route passes through the northern-most section of the Mt Arthur Reserve. The Mt Arthur Reserve is gazetted for Public Recreation and Environmental Protection. It is our view that the pipeline would be inconsistent with the gazetted Reserve purpose. In particular, we wish to bring to Council's attention that the proposed south-west pipeline route in that location passes through the Trust's revegetation area. This project was commenced in 2008 and was funded by the former Central West Catchment Management Authority. The purpose of the project is to rehabilitate former cleared land within the Reserve and increase the linkage between the existing native vegetation in the Reserve, the Macquarie River and native vegetation immediately to the north".

"Mt Arthur Reserve Ranger and several volunteers planted over 6,000 trees in this area, with assistance from Central West CMA staff. This project has been a huge task, including extensive weed control efforts, hand planting of seedlings and follow up watering involving hundreds of volunteer hours. The revegetation efforts at this site have been very successful, with only minimal plant losses thanks to the vigilance of volunteers and their watering and weed control efforts. Over \$13,000 has been spent on this project and its ongoing maintenance to date, and we value the volunteer effort at over \$20,000. This project contributed to the Trust making it to the top 3 finalists in the NSW Regional Achievement and Community Awards, Crown Reserve Community Manager Category in 2011, 2012 and 2014. The Trust is not supportive of any infrastructure projects proceeding in this area that would compromise this revegetation project".

Mt Arthur Trust is concerned regarding the environmental impact on the Trust land near the river on the proposed route. The Feasibility study would require a significant assessment of environmental impacts and be in full consultation with the Trust.

4. Macquarie Valley Food and Fibre – Grant Buckley – MRFF Executive Officer

"I write to you as the Executive Officer of Macquarie River Food & Fibre (MRFF) – an association representing the interests of over 500 irrigation farmers in the Macquarie Valley – in relation to the current public exhibition for the draft route of the proposed Burrendong Dam to Dubbo pipeline. Given the criticality of a reliable water supply to all water users downstream of Burrendong Dam, it is important that a transparent and comprehensive consultation process takes place prior to a pipeline, or any similar project, being adopted. Access to a reliable water supply is vital in the Macquarie Valley for a range of stakeholders, including towns and irrigators, and this importance has been highlighted in recent years with below average inflows into Burrendong Dam".

"There are a range of questions that need to be answered as part of a broader consultation process before the viability of a pipeline can be confirmed. These include:

- Is the pipeline the most effective solution? What other options are being considered?
- What impact will the construction of a pipeline have on all water users, including other townships in the Macquarie Valley?
- What impact will extracting water directly from Burrendong Dam have on all water users and the river system itself?
- What impact will the pipeline have on current river operating practices?
- How and when will the pipeline be utilised and operated?
- Where will funding for the pipeline be sourced?"

"It should be noted that MRFF is not opposed to the construction of the Burrendong Dam to Dubbo pipeline, however, is more concerned with ensuring that the rights of all water users in the Macquarie Valley are not adversely impacted by such a project. I would like to thank you for the opportunity to provide this brief submission as part of the public exhibition process and look forward to hearing more as the concept progresses".

The question of the whether the pipeline is the most cost effective solution would be considered in the feasibility study by considering other sources of possible water supply during periods of extreme drought. The only other known supply of water during extreme droughts are the significant aquifers along the Macquarie River Basin.

Council has said publicly on a number of occasions that the majority funding for such a pipeline, if built, would need to be supplied by the State and/or Federal Governments to assist them to discharge their responsibilities in terms of ensuring security of water supply to urban communities in the Lower Macquarie Valley.

5. Stephen Lousick - Wellington

"I believe your route devalues our property from Burrendong Dam. Wellington to Dubbo if it goes ahead. I believe your route devalues our property and affects any future subdivision and buildings that may take place on our land. Our proposed route will allow us to undertake any future development without affecting the value of the land. The most preferred position of the pipeline is Route A as this does not affect any private land whatsoever".

The pipeline route would need to consider individual landowner concerns including future land development. Land value issues would be addressed in any Fair Valuation undertaken for easement acquisition purposes.

6. Sam Deshon – Wellington

"The draft route for the pipeline cuts across my property for 3 kilometres. I'm against the pipeline due to the large cost involved following the river contours. The path of the pipeline cuts through a very highly populated area with lots of private infrastructure".

Concerns regarding the impacts on individual properties and existing infrastructure would be addressed in more detail in the feasibility assessment. The final route chosen would do so in terms of best value for the dollars being spent.

7. Marie Cornish – Wellington

"Can Wellington residents tap into this – wouldn't think so and why would we want to".

Wellington and Geurie would be connected to the pipeline.

8. F Cookson – Wellington

"I don't believe there should be a pipeline put from the Treatment Works to Dubbo. There is already a treatment works at Dubbo and too much will be taken that is needed in the town of Wellington. There will be damage done to the ecology of the Macquarie River. Land should not be taken from the farmers who need it for agriculture".

The pipeline is from Burrendong Dam not the Wellington Treatment Plant. The pipeline will be deep enough underground so as to not interfere with agricultural production.

9. Rowena Marchant – Wellington

"Recently, thousands of 'fingerlings' were released into Burrendong Dam. I wondered if large numbers of these small fish may be sucked out into large pipelines on their journey to local water treatment plants. Usually, tiny fish spend several years growing in Burrendong Dam. I do <u>not</u> support a pipeline from Burrendong Dam".

The intake at Burrendong Dam would have a filter to prevent intake of fish and debris etc.

10. Douglas Howell – Wellington

"I have a water pipe and power from the river to my house tanks which your pipeline would go through. I cannot see why you could not take the water pipeline down the road which would not interfere with my water pipe and underground power".

The pipeline design will cater for any intersections with existing pipelines and underground power lines. This is a straight forward design issue common to all pipelines.

11. Lorraine Forrest

"Climate change has already put stress on our water supply and we need a little more to cater for our tourist trade. No pipeline".

The pipeline will provide extended security of water supply for Wellington, Dubbo and Geurie, during extreme drought conditions. As such it is designed to decrease stress not increase it.

12. Patrick Slack-Smith – Wellington

"Pipeline is a stupid pipedream, not to mention a colossal waste of money. You might as well throw money down the drain".

The economics of the pipeline as well as other community and environmental considerations will be the subject of the feasibility study. As stated elsewhere this would be largely Government funded NOT Council funded if it comes to fruition.

13. Norm Dowton – Dubbo

"Where a \$90 million project is involved the research must be thorough and valid. I wonder if this plan will prove a great waste of money. Here are some observations:

- 1. The pipeline purpose is for drought events so it's a structure that could not be needed for 50 years.
- 2. The extreme situation of a severe long-period dry time would mean that the river flow is seriously affected. It could be augmented by having the lower water at the dam pumped and taken by pipeline only a few kilometres downstream. Surely it would be a catastrophe for Dubbo to drain the water and stop the flow of the river. Unfair to Narromine and downstream towns".

The economics of the pipeline as well as other community and environmental considerations will be the subject of the feasibility study.

The pipeline would be operated all of the time, not just when the flow from Burrendong Dam into the Macquarie River has ceased. During extreme drought however, the pipeline will transfer the "dead water" from Burrendong Dam directly to urban centres without the seepage and evaporation losses associated with transmitting the water via the river. In this scenario Water NSW would not have enough water available to keep the river flowing continuously in any case, and it should be noted that DPI Water's submission has requested that consideration be given to extending the pipeline beyond Dubbo to Narromine, Warren, Nyngan and Cobar.

Appendices:

1 Public Submissions - Burrendong to Dubbo Pipeline



PO Box 323, Penrith NSW 2751 Level 4, 2-6 Station Street Penrith NSW 2750 www.waternsw.com.au ABN 21 147 934 787

Ref: D2016/96945

Mr Mark Riley Interim General Manager Western Plains Regional Council PO Box 81 Dubbo NSW 2830

Dear Mr Riley

Draft route of proposed Burrendong Dam to Dubbo pipeline

Thank you for the opportunity to comment on the public exhibition of the Draft route for the proposed Burrendong Dam to Dubbo pipeline.

WaterNSW is the NSW Government's bulk water delivery business, responsible for managing and protecting 42 water storages and associated water supply infrastructure across NSW, including Burrendong Dam. WaterNSW is also responsible, together with DPI Water, for the delivery of Infrastructure NSW's (INSW) State Infrastructure Strategy in the Macquarie Valley.

As Western Plains Regional Council's (WPRC) proposed pipeline has the potential to impact directly and significantly on WaterNSW's infrastructure and operations, we must be consulted at all stages of this project. This includes any investigations, options studies, development of designs and construction options being considered for the pipeline and all future planning processes affecting Burrendong Dam. Any deviation from WaterNSW's long-term strategy for the Macquarie Valley has the potential to create permanent supply and environment problems now and in the future.

In this submission WaterNSW has provided some comments and questions for your consideration.

Pipeline Operations

It is understood the new pipeline was proposed in the *Dubbo City Council Drought Management Plan* (Hydroscience 2015) and in the *Dubbo Options for Water Supply Sustainability Report* (DCC 2009). WaterNSW seeks clarification of the following issues:

- Is the intention of this pipeline to supply water only in drought periods or will it be in continuous use?
- WaterNSW understands that WPRC is proposing to connect to the pipeline for the purposes of providing high security town water. Has there been any consideration as to usage by other customers en-route?
- The current WaterNSW level of service for Dubbo in terms of security of supply is very high far higher than before the millennium drought. To better understand the requirements for the pipeline WaterNSW requests more information regarding any perceived deficiencies in current service
- Ievels. Are service levels properly understood by customers?
- Water will still need to be delivered to Warren to supply Nyngan and Cobar. Has there been any consideration as to the effect of this pipeline on these customers?

Environmental Issues

* ₆

WNSW anticipates the proposed pipeline will have significant potential to negatively impact on the environment during both the construction and operational phases. All potential environmental impacts should be fully addressed in an environmental risk assessment, including but not limited to the following:

Water quality impacts both within and downstream of Burrendong Dam

- Access requirements. Access consents are required for entry onto WaterNSW property. Licences or easements may be required for areas where the pipeline is located on WaterNSW land.
- Impacts caused by the operation of the pipeline during drought. Removing water from the river during drought would compound the harmful effects on an already stressed river.
- Likely impacts on current environmental flows
- Possible variations in extraction licences
- Location of the pipeline with respect to flood zones.

Engineering Issues

The Dubbo Drought Plan Dubbo City Council Drought Management Plan mentions the proposed Burrendong pipeline specifically however it is not clear if any detailed studies have been completed. With respect to the design and construction of the pipeline and consideration of existing assets WaterNSW seeks clarification on the following points:

- Is this pipeline intended to connect directly to the dam wall or will the draw-off point be downstream of the dam? This would obviously affect the amount of head available to drive the pipeline flow.
- What is the proposed design flow? Is this peak day, average day or something else?
- Will pumping stations be required? If so then flooding impacts should be considered.
- What is the rationale for the proposed route? Has ownership of the land been considered?

WaterNSW looks forward to a constructive and consultative relationship with Western Plains Regional Council.

If you have any questions regarding this submission, please contact Michael Barratt, Strategic Asset Planner on 4724 2320 or at michael barratt@waternsw.com.au.

Yours sincerely.

Hadne Freser .

ANDREW FRASER Manager Asset Strategy Strategic Engineering



All correspondence to:

The Secretary PO Box 328 WELLINGTON NSW 2820

ABN: 71832758859

25 August 2016

Mr Mark Riley Interim General Manager Western Plains Regional Council PO Box 81 Dubbo NSW 2830

Dear Mr Riley,

Public Exhibition: Draft route of proposed Burrendong Dam to Dubbo Pipeline

I am making this submission on behalf of the Mt Arthur Reserve Trust.

I refer to 'Exhibit 42, Ch41000 to CH42000' of the exhibited Burrendong Dam to Dubbo South West Pipeline route. The Trust notes that this section of the preliminary south-west pipeline route passes though the northern-most section of the Mt Arthur Reserve.

The Mt Arthur Reserve is gazetted for Public Recreation and Environmental Protection. It is our view that the pipeline would be inconsistent with the gazetted Reserve purpose.

In particular, we wish to bring to Council's attention that the proposed south-west pipeline route in that location passes through the Trust's revegetation area. This project was commenced in 2008 and was funded by the former Central West Catchment Management Authority. The purpose of the project is to rehabilitate former cleared land within the Reserve and increase the linkage between the existing native vegetation in the Reserve, the Macquarie River and native vegetation immediately to the north. A map of this area is included in **Attachment A**.

Mt Arthur Reserve Ranger and several volunteers planted over 6,000 trees in this area, with assistance from Central West CMA staff. This project has been a huge task, including extensive weed control efforts, hand planting of seedlings and follow up watering involving hundreds of volunteer hours. The revegetation efforts at this site have been very successful, with only

minimal plant losses thanks to the vigilance of volunteers and their watering and weed control efforts. Example 'before and after' photos are included in **Attachment B**.

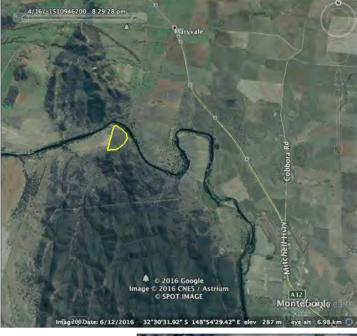
Over \$13,000 has been spent on this project and its ongoing maintenance to date, and we value the volunteer effort at over \$20,000. This project contributed to the Trust making it to the top 3 finalists in the NSW Regional Achievement and Community Awards, Crown Reserve Community Manager Category in 2011, 2012 and 2014. The success of this project is to be featured in a field day hosted by Local Land Services and the Office of Environment and Heritage (with involvement from the Trust, the Dubbo Field Naturalists, Mid Macquarie Landcare Group and Charles Sturt University) in October this year.

The Trust is not supportive of any infrastructure projects proceeding in this area that would compromise this revegetation project.

Yours sincerely,

nd

Shaun Baigent Chairman Mount Arthur Reserve Trust



Attachment A - Map of the Mt Arthur Reserve Revegetation Area

Left: Over view of the northern portion of the Mt Arthur Reserve with the revegetation area highlighted in yellow



Mount Arthur Public Recreation Reserve 85000

Right: The Mt Arthur Reserve Revegetation Area

Attachment B - Revegetation Area 'Before and After' Photos



October 2008

August 2016





October 2008





APPENDIX NO: 1 - PUBLIC SUBMISSIONS - BURRENDONG TO DUBBO PIPELINE



August 2016



Sue Bunyan

From:	Brad Pascoe <brpascoe@gmail.com></brpascoe@gmail.com>
Sent:	Friday, 5 August 2016 10:11 AM
To:	DCC Mailbox; mail@wellington.nsw.gov.au
Subject:	Att: Michael Kneipp - RE: Pipeline from Lake Burrendong to Dubbo

Good morning,

I have been a long term resident of Wellington area, over the past number of years moved away from the area, but still hold close ties and residence therein.

More recently I have noticed investigations are under way in having a pipeline from Lake Burrendong to Dubbo, this very much surprises me in terms of how this will address drought security when the Macquarie River already runs through Dubbo and further.

With the recent proclamation, is there any security in place to ensure monies held by way of restricted asset (cash reserve) for the former Wellington Council 'Water Fund' will actually be spent on infrastructure needs for the former Wellington Council region?

I think it would be a case where the monies were raised in direct relationship to the service provision for Wellington area, rather than go towards a project to benefit Dubbo alone, when it is at such a high cost to build and operate (when compared to that of Macquarie pipeline of Bathurst to Orange) which despite the drought is/was rarely used and is at substantial cost just to sit there over time.

I would be very interested to see plans about the project as they progress, whether or not any sense of capital asset pricing model are applied, whether or not the estimated return on invested capital warrants the project going ahead, what impact this infrastructure provision will have over time as burdened on the rate payers? Are other options being sought or is this just a 'keeping up with the Jones's' idea with Dubbo v's Orange (so to speak).

Would be interesting to see what cost/impact extension of or having additional weir/s might have along the river system closer to that of Dubbo.

Feel free to contact me at any stage to discuss, or return email is fine also.

Bradley Pascoe 0478705354



MACQUARIE RIVER FOOD & FIBRE

1/193 Macquarie St, PO Box 1657, Dubbo NSW 2830 Phone: (02) 6884 9577 Mobile: 0400 849 577 Executive Officer: Grant Buckley Email: mrff@bigpond.com

Mr Mark Riley Interim General Manager, Western Plains Regional Council PO Box 81 Dubbo NSW 2830

via electronic submission: http://www.dubbo.nsw.gov.au/YourCouncil/submission-form

26th August 2016

RE: Proposed Burrendong Dam to Dubbo pipeline

Dear Mark,

I write to you as the Executive Officer of Macquarie River Food & Fibre (MRFF) - an association representing the interests of over 500 irrigation farmers in the Macquarie Valley - in relation to the current public exhibition for the draft route of the proposed Burrendong Dam to Dubbo pipeline.

This submission relates specifically to the pipeline concept and the consultation process in general, as opposed to the route that the pipeline should take if it were to be constructed.

Given the criticality of a reliable water supply to all water users downstream of Burrendong Dam, it is important that a transparent and comprehensive consultation process takes place prior to a pipeline, or any similar project, being adopted. Access to a reliable water supply is vital in the Macquarie Valley for a range of stakeholders, including towns and irrigators, and this importance has been highlighted in recent years with below average inflows into Burrendong Dam.

There are a range of questions that need to be answered as part of a broader consultation process before the viability of a pipeline can be confirmed. These include:

- Is the pipeline the most effective solution? What other options are being considered?
- What impact will the construction of a pipeline have on all water users, including other townships in the Macquarie Valley?
- What impact will extracting water directly from Burrendong Dam have on all water users and the river system itself?
- · What impact will the pipeline have on current river operating practices?
- How and when will the pipeline be utilised and operated?
- Where will funding for the pipeline be sourced?

The above questions are not exhaustive and a range of others would need to be considered as part of a broader consultation process.

It should be stated that MRFF is not opposed to the construction of the Burrendong Dam to Dubbo pipeline, however, is more concerned with ensuring that the rights of all water users in the Macquarie Valley are not adversely impacted by such a project.

I would like to thank you for the opportunity to provide this brief submission as part of the public exhibition process and look forward to hearing more as the concept progresses.

1 of 2

If you would like to discuss any of the above comments in more detail please don't hesitate to contact me.

Regards,

Grant Buckley MRFF Executive Officer

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APPENDIX NO: 1 - PUBLIC SUBMISSIONS - BURRENDONG TO DUBBO PIPELINE

ITEM NO: WSC16/30

am under the understanding no tampering with a Rivers Natural watercourse can happen - machinery to be used running the pipeline next to the river will automatically disturb much of the existing land. 5. Has Dubbo ever had water restrictions? Not here!

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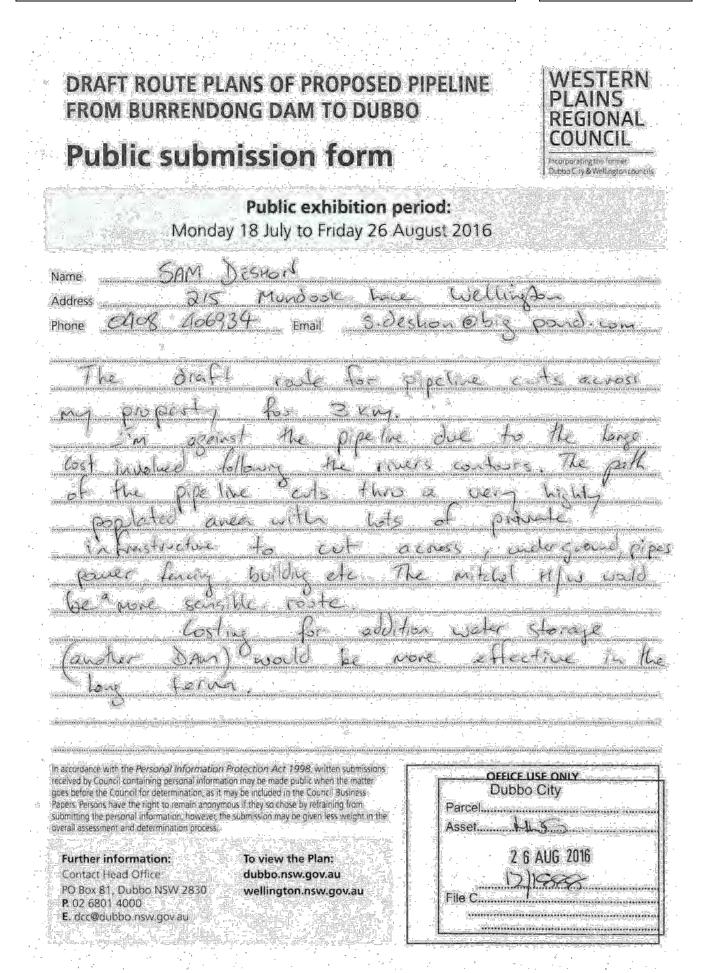
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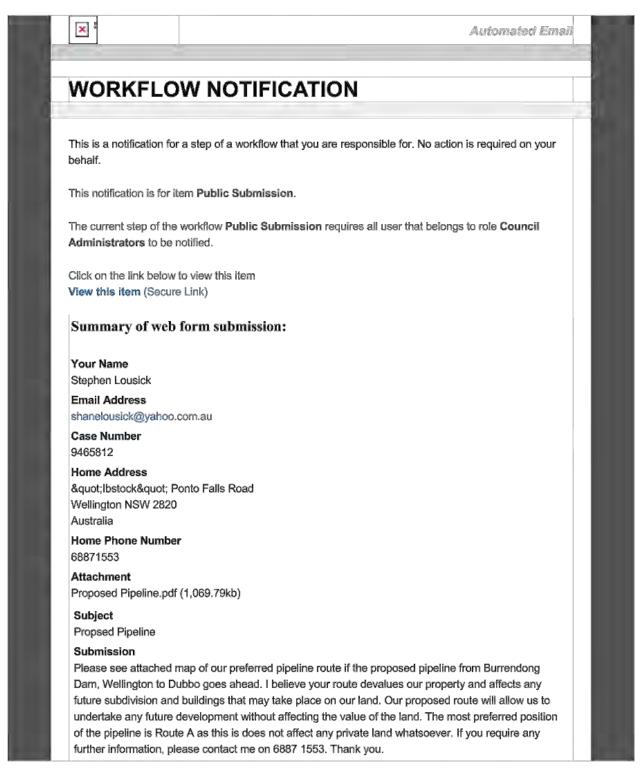
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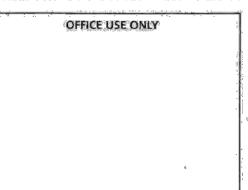


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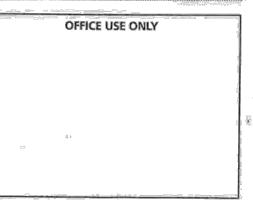
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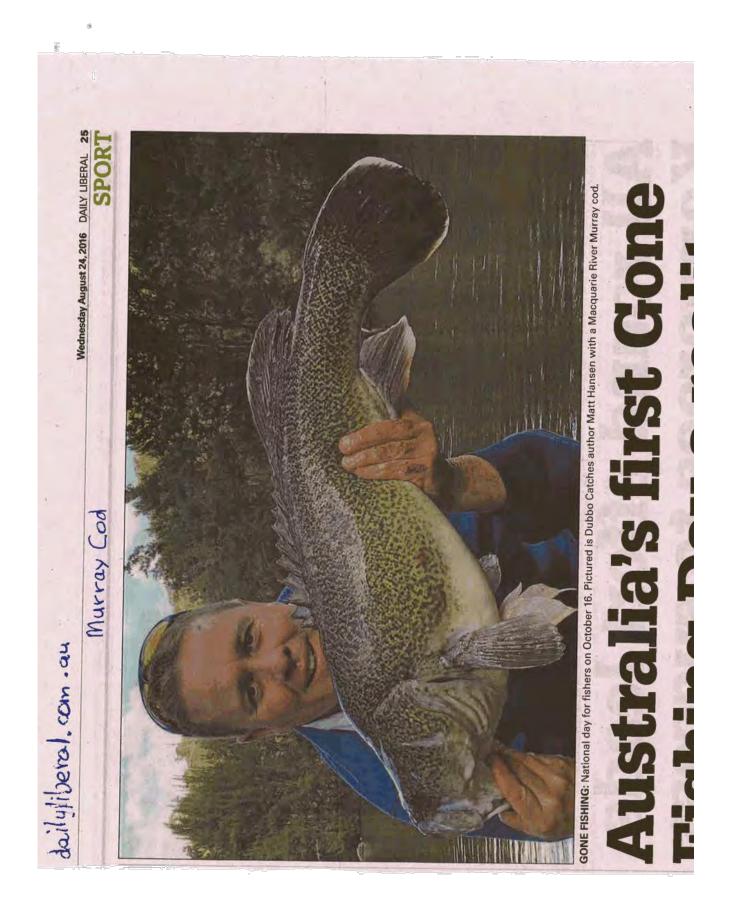


peruon was need over 500 yards at the Narromine-Dubbo rifle range. Once again F-class shooters dominated with only Locky Simpson and Rob Rainbow com- peting in target rifle. From the start the first two shooters, Daniel Galea and Scott Monaghan, posted identical scores of 57/60 aphere, while Dave Goodridge, shooting from the benchrest, fired a 33/60 rhold	the lead in F-class. Gayle Hyland used Daniel Gayle Hyland used Daniel Gaylesis rifle to group deffect and scored her beschast Rists stage hit yet of 55/60 and Cass McKinnon was showing the boys how to shoot, again, starting with a 48/60. In the second stage, Scott Monaghan upped the pace and fixed a perfect60/960 against another 55/60 from Dave Goodbidge who went on to win the F-class badge on a total of H2/120. Bob Rahrbuw won the R-market	badge with an off-rifle score of 33/100, while Locky Simpson had a better second stage thit of 45/50 to win the C.grade badge. The weekly handicap trophy went to Dave Goodridge and Daniel Galea hit the "pin-hole" for the second week in a row to take home the prize.	Monaghan 57 (60. F-class total 117/120: Locky Simpson 37/45, off-tifle 82, handicap 11, total 93/100; Clive Simpson 55/58, F- class total 113/120; Ray Brown 55/54, F-class total 109/120; Dave Goodridge 59/59, F-class total 118/120; Class McKinnon 48/44, F- class total 92/120; Bilan	McKinnon 34/40, F-class total 74/120: Daniel Gales 57/57, F- class total 114/120; Scott Harris 47/49, F-class total 96/120; Rob Rainbow 47/46, o/r 93, hcp 8, total 100; Simon Etcell 45/44, F-class total 89/120; Nick Reardon 51/48, F-class total 99/120; Arthur Seaman 46/44, F-class total 90/120; Gayle Hydand 55/56, F-	47/48. F-class total 95/100. Brad McKinnon 46/46. F-class total 92/120. This Saturday. shooting is from 600 yards starting at 12.30pm
 anager (Inland). Canteron the proposed native treativer treation the proposed native treative treation the proposed native treative treation the proposed native treative treative treation the proposed native treative treatine treative treative treative treative treative treative treat					Healthy fish stocks are a prized community asset, just ask Lincoln McBroom who caught this 87cm Murray cod on a Gobsmacked Leviathan on the Macquarie River recently.

APPENDIX NO: 1 - PUBLIC SUBMISSIONS - BURRENDONG TO DUBBO PIPELINE

ITEM NO: WSC16/30

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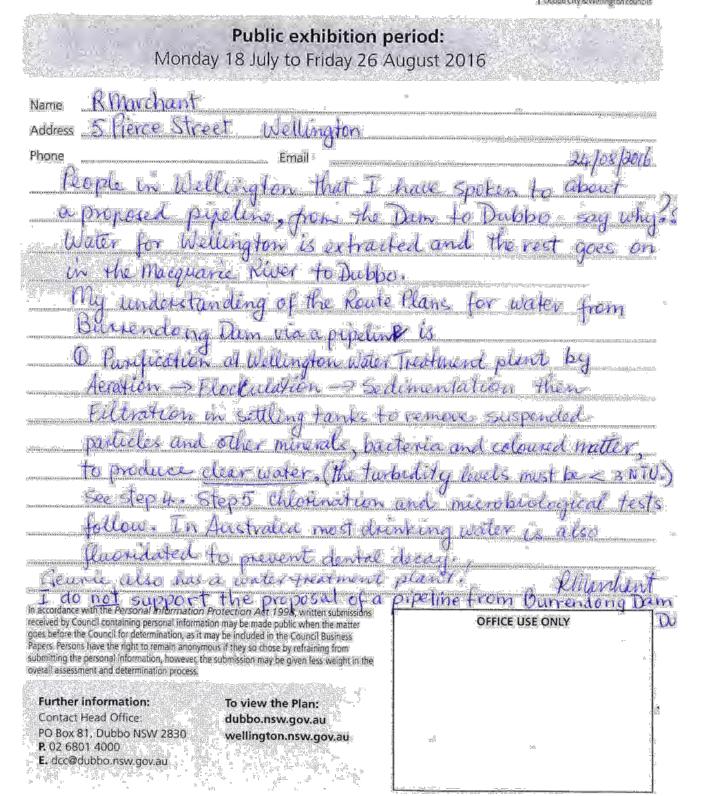
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DRAFT ROUTE PLANS OF PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO

Public submission form



Incorporating the former Dubbo City & Wellington councils



26.2 Water purification

Potable water

The sources of potable water include reservoirs, rivers, lakes, natural springs and wells. As water moves across the Earth's surface or through the rocks and soil it dissolves minerals, gases and various organic materials and these substances are carried into the sources of drinking water. Wastes from animal and human activity also find their way into our water supplies.

- The substances that can contaminate our water supplies include:
- microbes from sewage plants, agricultural livestock and wastes from native animals
- salts and metallic ions from natural weathering and erosion as well as from waste water released by various industries, mining and farming
- pesticides and herbicides from agriculture and some urban areas
- organic chemicals from petrochemical factories and industries.

It is the job of chemists employed by State and regional water authorities to monitor and manage our water supplies. In the case of potable water they must ensure that levels of microbes, salts, heavy metals, suspended and coloured matter and organic substances are within acceptable ranges.

Purification of drinking water

The steps involved in the purification of drinking water will now be examined. They are summarised in Figure 26.10.

Step 1 Aeration

The first step is to spray the water into the air to increase the concentration of dissolved oxygen. Any hydrogen sulfide gas dissolved in the water is oxidised to sulfate ions and iron salts are also oxidised to insoluble iron oxides which can later be removed. Oxygenated water also has a more pleasant taste.

Step 2 Flocculation

Water in rivers and reservoirs contains small suspended particles. The diameter of these clay colloids may be in the range 10^{-4} mm to 10^{-6} mm. They are prevented from settling due to the repulsion between their negative surfaces. These can be made to precipitate by a process called flocculation. Chemicals such as alum (aluminium sulfate) are added to the water to produce a gelatinous precipitate or **floc** of aluminium hydroxide. This jelly-like precipitate traps other suspended particles, including some microbes.

$Al^{3*} + 3H_2O(l) \rightarrow Al(OH)_3(s) + 3H^*$

The hydrogen ions produced in this hydrolysis reaction are attracted to the surface of the aluminium hydroxide flocs. The negative surfaces of the clay colloids are then attracted to the positive surfaces of the flocs and these larger particles settle out under gravity. Iron oxides and other soluble coloured compounds also adhere to the flocs.

Step 3 Sedimentation—settling of the flocs

The treated water is allowed to stand in a settling tank so that the flocs settle to the bottom to form sludge. The sludge can be removed from these settling tanks periodically. By the end of step 3 about 95% of the suspended impurities (particle size >25 μ m) have been removed.

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APPENDIX NO: 1 - PUBLIC SUBMISSIONS - BURRENDONG TO DUBBO PIPELINE

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Step 4 Filtration

Water from the settling tanks is then passed through a filter containing sand and gravel to remove the remaining suspended particles and to remove other minerals, bacteria and coloured matter. The water at this stage should now be clear. (The turbidity levels must be less than 3 NTU.) If the water is still coloured by dissolved organic matter it can be passed through layers of activated charcoal which adsorbs the coloured matter onto its surface.

Step 5 Chlorination and microbiological tests

The clear water emerging from the filter is now chlorinated to kill bacteria and other microbes. The chlorination process produces hypochlorite ions which kill the microbes. Biochemists test the water for the presence of bacteria called **coliforms** (e.g. *Escherichia coli*) which are associated with pollution from animal manure. Drinking water should contain on average less than two **colony-forming units** (CFU) per 100 mL (i.e. 2 CFU/100 mL) of water throughout the year. The chlorine level must be constantly monitored to assure that carcinogenic chlorinated alkanes are not produced.

$$\operatorname{Cl}_2(g) + \operatorname{H}_2O(l) \rightarrow 2\mathrm{H}^* + \mathrm{Cl}^- + \mathrm{OCl}^-$$

Step 6 Fluoridation

In most Australian water supplies the water is fluoridated before it is released for consumption. Compounds such as sodium fluoride, calcium fluoride and sodium fluorsilicate (Na_2SiF_6) are added to the water in very small amounts to achieve a final concentration of about 1 ppm. The presence of this small quantity of fluoride is sufficient to strengthen tooth enamel and prevent dental decay.

The chlorinated and fluoridated water should have a pH of between 7 and 8.5. Lime may be added to achieve the desired pH. Adjustment of pH is important as this reduces the subsequent corrosion of water pipes. The total of dissolved solids should ideally be less than 500 ppm.

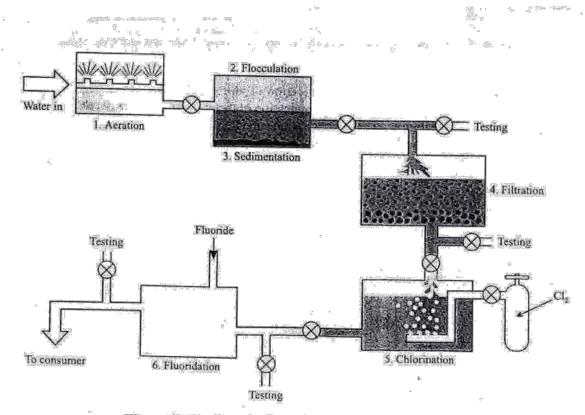


Figure 26.10 Steps in the purification of drinking water

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Further information: Contact Head Office: PO Box 81, Dubbo NSW 2830 P. 02 6801 4060 E. dcc@dubbo.nsw.gov.au	To view the Plan: dubbo.nsw.gov.au wellington.nsw.gov.au	

Public submission form



Incorporating the former Dubbe City & Weller gron councils

Public exhibition period: Monday 18 July to Friday 26 August 2016 LAVRIE Parera - ANN Name WELLING TON AHORNHON Address 80 Phone , Email No pipeline. $\frac{1}{2}$ 8e n accordance with the Personal Information Protection Act, 1998, whiteh submissions eceived by Council containing personal information may be made public when the matter OFFICE USE ONLY pes before the Council for determination, as it may be included in the Council Business apers. Persons have the right to remain anonymous if they so chose by refraining from ubmitting the personal information, however, the submission may be given less weight in the werall assessment and determination process. Further information:

Contact Head Office: PO Box 81, Dubbo NSW 2830 P. 02 6801 4000 E. dcc@dubbo nsw.gov.au To view the Plan: dubbo.nsw.gov.au wellington.nsw.gov.au

Public submission form

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In corporating the former Dubbo City & Vielungton councils

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Public submission form



Incorporating the former, Dubbo City & Wollington councils

Public exhibition period: Monday 18 July to Friday 26 August 2016

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Public submission form



Description of the former Dubbo City & Wellington councils

Public exhibition period: Monday 18 July to Friday 26 August 2016

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PO Box 81, Dubba NSW 2830

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Further information:

Contact Head Office:

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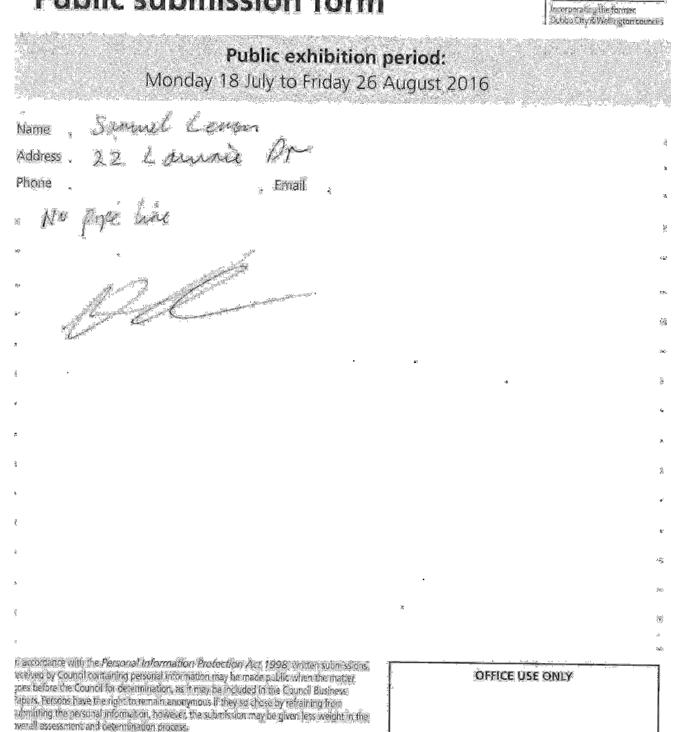
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REGIONAL COUNCIL

DRAFT ROUTE PLANS OF PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO

Public submission form



Further Information: To view t Contact Head Office: dubbo.ns PO Box 81, Dubbo NSW 2830 wellingto P. 02 6801 4000 E. dcc@dubbo.nsw.gov.au

To view the Plan: dubbo.nsw.gov.au wellington.nsw.gov.au

Public submission form



Incorporating the former Dubba Lity & Wallington councils

Public exhibition Monday 18 July to Friday 26	
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Public submission form



Incorporating the former. Dilbbo City & Wellington councils:

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Public submission form		
Public exhibition period: Monday 18 July to Friday 26 August 2016		
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Incorporating the former-Dubbo City & Weilington councils

DRAFT ROUTE PLANS OF PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO

Public submission form

Monday	Public exhibition p 18 July to Friday 26 A	
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Public submission form



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Public exhibition Monday 18 July to Friday 26	period: August 2016
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DRAFT ROUTE PLANS OF PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO

Public submission form



Incorporating the former Dubbo City & Wollington councils

Public exhibition period: Monday 18 July to Friday 26 August 2016	
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Public submission form

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Incorporating the former Dubbo City & Wellington councils

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Public exhibition period: Monday 18 July to Friday 26 August 2016	
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Public submission form



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Public submission form



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Public exhibition period: Monday 18 July to Friday 26 August 2016			
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Public submission form



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In orporating the former Dobbo City & Wellington councils

Public exhibition p Monday 18 July to Friday 26 A	eriod: ugust 2016
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Public submission form



Incorporating the former Dubbs City & Weilington councils

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Public submission form



Incorporating the former Dubbo City & Wellington councils

Public exhibition p Monday 18 July to Friday 26 A	
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Public exhibition Monday 18 July to Friday 26		
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In accordance with the Personal Information Protection Act 1998, written submissions received by Council containing personal information may be made public when the matter goes before the Council for determination, as it may be included in the Council Business Papers. Persons have the right to remain anonymous if they so chose by refraining from submitting the personal information, however, the submission may be given less weight in the overall assessment and determination process.	OFFICE US	EONLY
Further information:To view the Plan:Contact Head Office:dubbo.nsw.gov.auPO Box 81, Dubbo NSW 2830wellington.nsw.gov.auP. 02 6801 4000E. dcc@dubbo.nsw.gov.au		

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Further information:To view the Plan: dubbo.nsw.gov.auContact Head Office:dubbo.nsw.gov.auPO Box 81, Dubbo NSVV 2830wellington.nsw.gov.auP. 02 6801 4000E. dcc@dubbo nsw.gov.au	- - - - - - - - - - - - - - - - - - -	

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DRAFT	ROUTE	PLANS	OF	PROP	OSED P	IPELINE
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Public submission form



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Incorporating the former Dubbo City & Wellington councils

Public exhibition p Monday 18 July to Friday 26 A	
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Further information: Contact Head Office: PO Box 81, Dubbo NSW 2830 P. 02 6801 4000 E. dcc@dubbo.nsw.gov.au	To view the Plan: dubbo.nsw.gov.au wellington.nsw.gov.au		

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DRAFT ROUTE PLANS OF PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO

Public submission form



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Incorporating the former Dubbo City & Wellington coursels

Public exhibition period: Monday 18 July to Friday 26 August 2016
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DRAFT ROUTE PLANS OF PROPOSE FROM BURRENDONG DAM TO DUB		WESTERN PLAINS REGIONAL
Public submission form		COUNCIL Incorporating the former Dubba City & Wellington councils
Public exhibition Monday 18 July to Friday 26	period: August 2016	
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DRAFT ROUTE PLANS OF PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO

Public submission form

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DRAFT ROUTE PLANS OF PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO

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Public submission form



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Incorporating the former Dubbo City & Wellington councils

Public exhibition period: Monday 18 July to Friday 26 August 2016			
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DRAFT ROUTE PLANS OF PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO	WESTERN PLAINS REGIONAL
Public submission form	COUNCIL Incorporating the former Dubbe City & Wellington councils
Public exhibition period: Monday 18 July to Friday 26 August 2016	
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DRAFT ROUTE PLANS OF PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO

Public submission form

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DRAFT ROUTE PLANS OF PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO

Public submission form



Incorporating the former Dubba City & Wellington councils

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DRAFT ROUTE PLANS OF PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO

Public submission form



Incorporating the former Dubbo City & Wellington councils

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DRAFT ROUTE PLANS OF PROPOSED PIPELINE FROM BURRENDONG DAM TO DUBBO

Public submission form



Incorporating the former Dubbo City & Wellington councils

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In accordance with the Personal Information Protection Act 1998, written submissions received by Council containing personal information may be made public when the matter goes before the Council for determination, as it may be included in the Council Business Papers. Persons have the right to remain anonymous if they so chose by refraining from submitting the personal information, however, the submission may be given less weight in the overall assessment and determination process.	OFFICE USE ONLY
Further information:To view the Plan: dubbo.nsw.gov.auContact Head Officedubbo.nsw.gov.auPO Box 81, Dubbo NSW 2830wellington.nsw.gov.auP. 02 6801 4000e. dcc@dubbo.nsw.gov.au	



REPORT:Adoption of Technical ConstructionSchedules

AUTHOR:Director Technical ServicesREPORT DATE:2 December 2016TRIM REFERENCE: ID16/2202

EXECUTIVE SUMMARY

At the Ordinary Meeting of Council held 27 July 2016, Council resolved:

- 1. That the draft Technical Schedules and Standards of Water Supply and Sewerage Works be adopted for the purpose of Public Exhibition.
- 2. That the draft Technical Schedules and Standards of Water Supply and Sewerage Works be placed on Public Exhibition for a period of no less than 28 days.
- 3. That a further report be made to Council for the consideration following the completion of the Public Exhibition period.

The draft Technical Schedules and Standards of Water Supply and Sewerage Works were placed on Public Exhibition commencing 29 August to 21 October 2016.

The Draft Technical Schedules of Water Supply and Sewerage Works were publicly displayed at:

- Council's website.
- Council's Civic Administration Building, Church Street, Dubbo.
- Council's Wellington Office Corner Nanima Crescent and Warne Street, Wellington.
- Daily Liberal News Paper.

Council received 2 submissions and out of the 2 submissions, Drilling Water Resources requested a consideration of an additional Technical Schedule being Case Hole Logging and CCTV Inspections of Bores.

FINANCIAL IMPLICATIONS

There are no financial implications arising from this report.

POLICY IMPLICATIONS

There are no policy implications arising from this report.

RECOMMENDATION

- 1. That the submissions received in respect to the draft Technical Schedules of Water Supply and Sewerage Works be noted.
- 2. That the Council adopt the Water Supply and Sewerage Works Technical Schedules.
- **3.** That the people who made a submission be advised of Council's considerations and be thanked for their submission.

Stewart McLeod Director Technical Services

BACKGROUND

The former Dubbo City Council prepared a suite of Technical Schedules several years ago. Technical Schedules are the part of the specification that describes technically the work to be undertaken.

The suite of Technical Schedules includes construction standards of water and sewerage pipes as well as standards to be adopted in the rehabilitation of gravity sewerage pipes. The use of standards reduces enquiries, ensures the asset created is what was intended, and gives guidance to contractors and suppliers.

The Lower Macquarie Water Utilises Alliance (LMUA) has expressed interest in also utilising these Technical Schedules, once adopted by Council.

REPORT

Council has 25 existing water and sewerage technical schedules which due to their age have become outdated and not representative of all current industry practices. A new suite of technical schedules have been developed for the various activities involving the construction, operation and/or maintenance of water and sewer assets listed below:

Construction Technical Schedules

- DCC-W101: General Construction
- DCC-W102: Construction of Water Reticulation
- DCC-W103: Construction of Water Trunk Mains
- DCC-W104: Construction of Gravity Sewerage Reticulation
- DCC-W105: Construction of Gravity Trunk Sewers
- DCC-W106: Construction of Sewage Pump Stations
- DCC-W107: Construction of Sewage Rising Mains

Water Operation and Maintenance Technical Schedules

- DCC-W201: Inspection & Internal Cleaning of Water Reservoirs
- DCC-W202: Internal Cleaning of Water Mains
- DCC-W203: Water Hydrant Maintenance
- DCC-W204: Water Hydrant Flushing and Dead End Flushing
- DCC-W205: Water Meter Reading
- DCC-W206: Water Meter Replacement
- DCC-W207: Supply of Water Treatment Chemicals
- DCC-W208: Pipe Bursting of Water Mains
- DCC-W209: Rehabilitation of Water Mains –Lining

Sewer Operation and Maintenance Technical Schedules



- DCC-W301: Sewer Maintenance General
- DCC-W302: Root Treatment of Sewers
- DCC-W303: CCTV Inspection of Gravity Sewers
- DCC-W304: Rehabilitation of Sewer Mains Lining
- DCC-W305: Rehabilitation of Sewer Mains Spot Repair
- DCC-W306: Pipe Bursting of Sewer Mains
- DCC-W307: Sewer Maintenance Hole Restoration
- DCC-W308: Sewer Bypass Pumping
- DCC-W309: Sewer Smoke Testing

Combined Operation and Maintenance Technical Schedules

- DCC-W401: Water and Sewer Valve Exercising
- DCC-W402: Periodic Inspection of Water/Sewerage Sites
- DCC-W403: Calibration of Instruments

The Technical Schedules have been based on the Water Services Association of Australia (WSAA) Water Industry Standards and codes as far as possible.

The Water Services Association of Australia (WSAA) is the peak industry body that supports the Australian urban water industry. Its members and associate members provide water and sewerage services to approximately 20 million Australians and many of Australia's largest industrial and commercial enterprises.

WSAA commenced the National Codes Initiative in 1997 to develop a set of industry standards for the Australian Water Industry. These standards have facilitated common industry wide standards that have replaced the need for individual design construction manuals, standard drawings and product selections for each water agency and as a result reduced unnecessary duplication of effort. The WSAA codes are used throughout Australia and are predominate reference standard within most regions.

The Technical Schedules will be used as standard specifications attached to contract documents for various activities involving the construction, operation and/or maintenance of water and sewer assets. Some of the benefits in adopting a system of standard technical schedules include:

- Improved efficiency in specifying works to be undertaken;
- Minimisation of repetitive work;
- Reduce risk of errors and omissions in documentation;
- Standardisation of terminology;
- Standardisation of approach and references to industry documents such as WSAA codes;
- Ease of updating of specification data and references.

PUBLIC SUBMISSION COMMENTS

1. Water Drilling Resources

The draft Technical Schedules should include some procedures in developing a bore maintenance programme for the Bores to ensure a reliable ground water supply for Dubbo. The submissions also suggest other standards that could be included:

- Routine Iron Hydroxide Treatment of water bores
- Withdrawing and installing submersible pumps

In response to this submission:

Council having 7 town water bores would consider adding the suggested Technical Schedule Standards to the Water Supply and Sewerage Works Technical Standards.

2. Maas Group

Maas Group provided the following concerns with the Draft Technical Schedule Standards for the Water Supply and Sewerage Works being:

CONSTRUCTION OF WATER RETICULATION DRC-W102.5

We understand this standard would require "PN18" pressure pipe as a minimum. We believe this requirement would be oversized due to all other components of the water system only requiring to be "PN16". Evidence of this is as follows;

- DRC-W102.8-stop valves (minimum pressure class is PN16)
- DRC-W102.9-Hydrants (minimum pressure class is PN16)
- DRC-W102.10-Non return Valves (minimum pressure class is PN16)
- DRC-W102.12-Mechanical joints (minimum pressure class is PN16)
- DRC-W102.13-Flanges (minimum pressure class is PN16)

We believe "PN16" would be suitable for these purposes.

CONSTRUCTION OF WATER TRUNK MAINS DRC-W103.5

We understand this standard would require "PN18" pressure pipe as a minimum We believe this requirement would be oversized due to all other components of the water system only requiring to be "PN16". Evidence of this is as follows;

- DRC-W103.8-PE Pipes and fittings (minimum pressure class is PN16)
- DRC-W102.9-Stop valves (minimum pressure class is PN16)
- DRC-W102.10-Stop valves (minimum pressure class is PN16)

- DRC-W102.11- Hydrants (minimum pressure class is PN16)
- DRC-W102.13-Non return valves (minimum pressure class is PN16)
- DRC-W102.16-Flanges (minimum pressure class is PN16)

In response to the submission by Maas Group:

Council would make the appropriate changes in the Technical Schedules DRC-W102.5 and DRC W-103.5 from "PN18" to "PN16" for the purpose of uniformity.

SUMMARY

Council has developed Technical Schedules for Water Supply and Sewerage work that if adopted can become standards to provide guidance to Council's requirements for developers, consultants and others.

The Technical Schedules are largely based on WSAA standards. This will ensure that Council avoids the issue of developing its own standards Schedules while still achieving the benefits of industry best practise.

The report recommends that Council adopt these Technical Schedules with the recommended changes and the consideration of the additional Technical Schedule Standards.

Appendices:

1 Adoption of Technical Schedules - Public Submissions



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Water Resources Drilling PO Box 4502 East Dubbo NSW Email <u>gregb@waterresourcesdrilling.com.au</u> Mobile 0428 481 590 Ph 02 6882 5566

October 14, 2016

Subject: Draft - Dubbo Regional Council Draft Technical Standards for Water Supply and Sewage works.

To Whom it may concern

I would like to make comment on Dubbo Regional Council Draft Technical Standards for Water Supply and Sewage works.

The document is a very positive initiative for council in the managing of important water infrastructure for both Dubbo and Wellington townships and other villages. I see potential for council to expand this work to include its town water borefield which is a key part of its water infrastructure and drought management strategy at present.

Dubbo town water supply is dependent on seven bores for town water and a number of other bores for its parks.

Back in the early 2000's the Directors of Water Resources Drilling spent a lot of time for the majority of the Dubbo town water bores undertaking either drilling of new bores a relining program and Iron. Treatment program. Thus we have a lot of Corporate knowledge on the Dubbo Town Water Borefield.

The Draft technical standards should include some procedures in developing a bore maintenance program for these bores to ensure a reliable groundwater supply for Dubbo.

I have attached an example of what could be done and some of the standards that council should have. In the same format as councils draft standard for information.

This draft is for Colour camera inspection and Acoustic Televiewer

Other standards could be written include

- routine Iron Hydroxide treatment of water bore
- Withdrawing and installing submersible bore pumps

🤟 sales@waterresourcesdrilling.com.au

🖳 www.waterresourcesdrilling.com.au

PO Box 4502, East Dubbo NSW 2830



As a resident of Dubbo and thirty years experience in town water bore assessment and rehabilitation I would be willing to provide council advice how to do this. I could provide advice on undertaking, a risk based assessment approach to provide a life cycle assessment of the town borefield. We are currently doing similar work for other water supply authorities such as Goldenfield Water Council, Moree Plains Shire Council and Kempsey Shire Council.

A Risk Based approach includes.

- Desktop study of bore design and pump settings to determine potential Iron Hydroxide and corrosion problems allowing bore prioritisation for investigating
- Camera and Geophysical cased logging to determine casing condition

From the initial assessment a Life Cycle assessment is undertaken and a monitoring and preventative maintenance program is recommended for the town borefield.

Some of the outcomes can be

Repair work including chemical treatment and casing repair when necessary.

Possible pump testing to determine well efficiency

Develop a monitoring program for Iron Hydroxide, water levels and flow rates (f not already being monitored)

A Report with a recommended preventative maintenance program.

I hope this advice will allow the Dubbo Regional Council to add to the already good work undertaken by the Technical Standards for Water and Sewage works.

Yours Faithfully

G. Barcha

G Brereton General Manager Water Resources Drilling

27; sales@waterresourcesdrilling.com.au

🔛 www.waterresourcesdrilling.com.au

PO Box 4502, East Dubbo NSW 2830.

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DRC-W310: CASED HOLE LOGGING and CCTV INSPECTION OF TOWN WATER BORE

GENERAL

DRC-W310.1 SCOPE

This Specification applies to Geophysical cased hole logging of town water bores and/or assessment of construction or remedial works.

Details of the individual town water bore to be inspected are listed separately in the Contract Specific Scope of Work document.

The work required to be performed under this contract shall comply with the referenced documents in Clause DRC-W303.2, unless specified otherwise herein.

DRC-W303.2 REFERENCED DOCUMENTS

The following documents are referred to in this Specification. The latest version of the document including any published amendments shall apply unless noted otherwise. Where the Drawings or a project specific Specification are in conflict or inconsistent with these referenced documents or this Specification, then the details on the Drawings or project specific Specification shall apply.

Standards

Works shall with the current versions of"

- ISO TR14685:2001 Hydrometric determinations Geophysical Logging of boreholes for hydrogeological purposes consideration and guidelines for making measurements
- Minimum construction requirements for water bores in Australia Edn 3 2012.

DRC-W303.3

STANDARDS

DRC-W303.4 GENERAL REQUIREMENTS

The Contractor shall comply with the general requirements for borehole inspections of water bores

DRC-W303.5 SAFETY

Refer to Technical Schedule DRC-W301 for details of safety requirements.

DRC-W303.6 CUSTOMER NOTIFICATION AND COMPLAINTS

The Contractor is responsible for notifying customers where entry to private property is required and also for handling and addressing any customer complaints. Refer to Technical Schedule DRC-W301 for details of customer notification and complaints requirements.

DRC-W303.7 QUALIFICATIONS OF CCTV OPERATORS

CCTV operators and inspectors shall hold a Statement of Attainment in NWP331B Inspect conduit and report on condition and features (for operators) based on WSA 05-2008 and recognised qualifications in:

- Workplace Health and Safety
- Traffic control
- Confined space entry

Contractor's supervisors, reviewers or managers of the CCTV work, including those who prepare inspection reports supplied by qualified CCTV operators shall hold a Statement of Attainment in NWP331A Supervise conduit inspection and reporting.

DRC-W303.8 EQUIPMENT

The CCTV camera used shall comply with the requirements of Clause 2.5 of WSA05-2008 and be capable of the following:

- Provision of a clear and concise viewing and recording of the internal surfaces of the water bore
- Pan and tilt type camera capable of turning at right angles to the pip axis over an entire vertical circle (minimum pan of 270° and rotation of 360°)
- Provision of accurate depth measurements relative to ground level

Acoustic Televiewer

The Acoustic Televiewer is to take an Oriented "picture" of the borehole using high resolution sound waves. The acoustic picture is to be displayed in both amplitude and travel time. T

Amplitude acoustic travel time minimum is 2.5mm

Recordings are to be taken in 256 samples per revolution 12 revs/sec

Magnetometer is to Recording counts per second

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Orientation of Callipers in relation to pad one are to be in four directions North, East South and or West.

Mechanical Calliper

The contractor is to supply a minimum three arm caliper mechanical log to allow accurate internal diameter of the bore to be measured. The Calliper needs to be calibrated prior to operation or a certificate of calibration supplied to council.

DRG-W303.11 CCTV INSPECTION

The CCTV inspection shall be carried out a minimum of 24 hours after bore pump has been withdrawn to allow the water clarity to improve after pump withdrawal. In some situation the use of Alum to clear the sediment in bore the day before is recommended when silt problems are likely to impact on water clarity

The CCTV camera shall be operated at a speed of no more than 6 metres per minute in vertical orientation

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DRC-W303.12 IMMEDIATE NOTIFICATION

The Contractor shall immediately notify the Superintendent relating to the finding of the following defects within a bore:

- Blockage within the bore preventing camera reaching the bottom of screens
- Bore casing or screen corrosion including holes in casing or screen and significant pitting of bore casing

DRC-W303.13 ABANDONMENT OF SURVEY

If the bore survey is abandoned due to an obstruction in the bore the contractor shall advise the Superintendent as soon as possible.

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DRC-W303.15 INSPECTION REPORT

An inspection report for the town water bore should include

- Written or computerized operators report detailing the observations (PDF format)
- Video record of the entire inspection (MPEG or Aviformat).
- Photographs of features of interest (JPG format)
- The inspection report shall be in WinCan 8 format.

Acoustic televelwer is to provide a 3D dimensional

representation image of the bore with the following parameters: as part of that representation

- 3D Physical Calliper
- 3D Median
- 3D Average
- Travel time 0 90 180 270 0 degree representation
- Amplitude 0 90 180 270 0 degree representation

DRC-W303.16 RECORDING OF INFORMATION

The Contractor shall record any errors in existing asset information observed during the Works. Such issues may include location of maintenance holes, connections, pipe materials, diameters or other items. These errors shall be recorded in prominent text within the remarks section of the operators report.

DRC-W303.17 MEASUREMENT AND PAYMENT

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The rates tendered in the Schedule of Rates shall be deemed to be inclusive of all responsibilities and obligations of the Contractor under the Contract including accommodation, travel, site establishment, waste disposal, and reporting.

Measurement for payment shall be based on a lump sum per bore.

DRC-W303.18 PRACTICAL COMPLETION

Practical Completion for the Contract will not be granted until all of the following requirements are achieved:

- The inspection works are complete except for minor omissions as agreed between
 the Superintendent and the Contractor
- All reports, videos, photos and any other information under the Contract to be submitted has been received and is found to be satisfactory by the Superintendent and in conformance with the requirements of the Specification in the Contract.

APPENDIX NO: 1 - ADOPTION OF TECHNICAL SCHEDULES - PUBLIC SUBMISSIONS

ITEM NO: WSC16/31

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Wednesday, 50 November 2016 AT 03 AM

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21 October 2016

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

Attention: Mr Mark Riley

PUBLIC EXHIBITION SUBMISSION- DRAFT TECHNICAL SCHEDULES FOR WATER SUPPLY AND SEWERAGE WORKS

Maas Group provides the following concerns with the exhibited Draft Technical Schedules for Water Supply and Sewerage Works. In an effort to provide a constructive response for Councils consideration where possible we provide an alternative or brief discussion on what we understand the objectives of schedule are and what we believe would be a cost effective solution for all.

CONSTRUCTION OF WATER RETICULATION

DRC-W102.5

We understand this standard would require "PN18" pressure pipe as a minimum. We believe this requirement would be oversized due to all other components of the water system only requiring to be "PN16". Evidence of this is as follows:

- DRC-W102 8-stop valves (minimum pressure class is PN16)
- ORC-W102.9-Hydrants (minimum pressure class is PN16)
- DRC-W102 10-Non return Valves (minimum pressure class is PN16)
- ORC-W102 12-Mechanical joints (minimum pressure class is PN16)
- DRC W102.13 Flanges (minimum pressure class is PN16)

We believe "PN16" would be suitable for these purposes.

CONSTRUCTION OF WATER TRUNK MAINS

DRC-W103.5

We understand this standard would require "PN18" pressure pipe as a minimum We believe this requirement would be oversized due to all other components of the water system only requiring to be "PN16". Evidence of this is as follows;

- DRC-W103 8-PE Pipes and fittings (minimum pressure class is PN16)
- DRC-W102 9-Stop valves (minimum pressure class is PN16)
- DRC-W102.10-Stop valves (minimum pressure class is PN16) **18**
- 1 DRC-W102 11- Hydrants (minimum pressure class is PN16)
- DRC-W102 13-Non return valves (minimum pressure class is PN16) 1
- 8 DRC-W102 16-Flanges (minimum pressure class is PN16)

Mass Group Properties Per Limited ABN: 76 165 255 934 + Eykan Holdings Pty Limited ABN: 15 003 589 464 Maa Group Properties No. 1 Pty Limited ABN 81165 257-134 in Plans Group Properties Not. 1 Pty Limited ABN 71-169 247 456 Plans Group Properties Not. 4 Pty Limited ABN 75-169 247 474 in Plans Group Properties Not. 5 Pty Limited ABN 95-604 412 997

APPENDIX NO: 1 - ADOPTION OF TECHNICAL SCHEDULES - PUBLIC SUBMISSIONS

ITEM NO: WSC16/31



We believe "PN16" would be suitable for these purposes.

CONSTRUCTION OF GRAVITY SEWERAGE RETICULATION & GRAVITY TRUNK SEWERS

DRC-W103.5 & DRC-W104.35

We understand this standard would require "CCTV" footage supplied for ALL sewer installed. We believe this requirement would result in an unreasonable cost for all future development to accept. We believe this cost would simply be passed down the development chain and ultimately be one which increases the cost of land development (for Council) in the Dubbo LGA. We believe this to be prohibitive for the following reasons:

- DRC inspector (Engineer) inspects all pipes prior to being backfilled.
- Sewer reticulation mains are tested in accordance with the technical specifications and WSAA codes. It is noted that if the main fails testing the installer would be required to correct the fault and have it retested until it passes inspection.
- For smaller development this process and standard could prove prohibitive to future development as it would comprise a greater proportion of development costs.

We thankyou for your consideration of these matters and would be happy to provide further assistance and should you require.

Kind regards,

Steve Guy General Manager Maas Group Properties

> Max Group Properties Pty Lineard ABN: 76-165-255-934 - Eyest Holding: Pty Lineard ABN: 35-003-589-464 Max Group Properties No. 2 Pty Lineard ABN: 81-65-257-134 - Max Group Properties No. 3 Pty Lineard ABN: 71-169-847-456 Max Group Properties No. 4 Pty Lineard ABN: 75-169-847-474 - Max Group Properties No. 5 Pty Lineard ABN: 95-604-412-893

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REPORT: Restart NSW Funding Deed - Purvis Lane Upgrading

AUTHOR:	Manager Civil Infrastructure and Solid Waste
REPORT DATE:	30 November 2016
TRIM REFERENCE:	ID16/2151

EXECUTIVE SUMMARY

Council has been successful in attracting funding through the Fixing Country Roads infrastructure development programme in the amount of \$2,260,000 to upgrade Purvis Lane between the Railway crossing and Yarrandale Road. Council is required to enter into a Deed of Agreement for the funding. Acceptance of this agreement will require the fixing of the Common Seal of the Council and is hereby presented for Council's consideration and endorsement.

FINANCIAL IMPLICATIONS

There are no financial implications arising from this report.

POLICY IMPLICATIONS

There are no policy implications arising from this report.

RECOMMENDATION

- 1. That the funding offer of \$2,260,000 from the State Government's Restart NSW Fund to construct the Purvis Lane upgrading, be accepted.
- 2. That the necessary documentation be executed under the Common Seal of the Council.

Stephen Clayton Manager Civil Infrastructure and Solid Waste

BACKGROUND

Council lodged an expression of interest for the funding of two projects under the second round of the Fixing Country Roads Program in December 2015. Two projects were accepted to proceed to full application, these being;

- Purvis Lane Upgrading (Stage 1 of northern Freightway development)
- Widening of Wheelers Lane Level Crossing approaches to accommodate four lanes plus boom gates.

The \$4.82m Purvis Lane Upgrading project was successful as one of 55 projects allocated funding from all proposals submitted across the State. The main funding criteria is the improvement in the efficiency of freight transport and Council was able to submit a positive case in support of the upgrading of Purvis Lane to permit access by road trains on the northern Freightway. The Freightway Ring which encircles the City reduces the travelling cost to industry and avoids the impact on local traffic and residents of these vehicles travelling through the heart of Dubbo to access the livestock markets and other nearby destinations.

REPORT

In order to receive the infrastructure funding, Council is required to enter into a Deed of Agreement to which the Common Seal of the Council is to be affixed and signed by the Administrator and Interim General Manager. The Agreement will contain details of Council's commitment as to how and over what timeframe the project will be completed, and details of the reporting requirements to keep the Minister informed of the progress being made. Council will also be obliged to recognise by on site signage the source of the funding.

The project funding will be allocated over three financial years concluding in 2018/2019.

SUMMARY

Council has been successful in attracting funding through the Fixing Country Roads infrastructure development programme in the amount of \$2,260,000. Council is required to enter into a Deed of Agreement and acceptance of this agreement will require the fixing of the Common Seal of the Council and is hereby presented for Council's consideration and endorsement.



REPORT: Proposed New Licence for NSW Government Telecommunications Authority at Mount Bodangora

AUTHOR:Manager Civil Infrastructure and Solid WasteREPORT DATE:1 December 2016TRIM REFERENCE: ID16/2230

EXECUTIVE SUMMARY

A telecommunications facilities licence at Mount Bodangora on Lot 7001, DP1020657 in the Parish of Mitchell for negotiated terms of five (5) years with three (3) x five year options totalling twenty (20) years with a retrospective commencement date being 1 August 2015 and termination date 31 July 2020, is recommended to be executed.

FINANCIAL IMPLICATIONS

All costs associated with the execution of the licence are to be met by each respective party. Council's costs will be recovered from the licence income.

POLICY IMPLICATIONS

Licences which exceed a three (3) year term require the Council seal to be affixed to the licence document.

RECOMMENDATION

- 1. That Council agree to a four (4) x five (5) consecutive year licence being granted to the NSW Government Telecommunications Authority (ABN 85 430 594 829) in respect of the Mount Bodangora Telecommunications site on Lot 7001, DP1020657.
- 2. That the terms of the licence be in accordance with the IPART review of rental arrangements for communication towers on Crown Land July 2013.
- 3. That all necessary documentation in relation to this matter be executed under the Common Seal of the Council.

Stephen Clayton Manager Civil Infrastructure and Solid Waste

BACKGROUND

The NSW Telecommunications Authority has leased a site on Mount Bodangora for the purpose of accommodating communications equipment from a number of agencies and organisations including Council, NSW Police, Prime 7 and the Telco Authority.

The new permitted use of licence area is to operate and maintain the facilities located on the licence area as at the commencement date of 1 August 2015. Facilities installed subsequent to the commencement date will be permitted in accordance with this licence provided they are for the purpose of telecommunications and/or for purposes reasonably incidental thereto. New equipment is anticipated to be installed in early 2017.

The licence fee agreed to and included in the licence document is \$4,500 per annum exclusive of GST and is subject to an annual CPI increase as per the terms of the licence agreement.

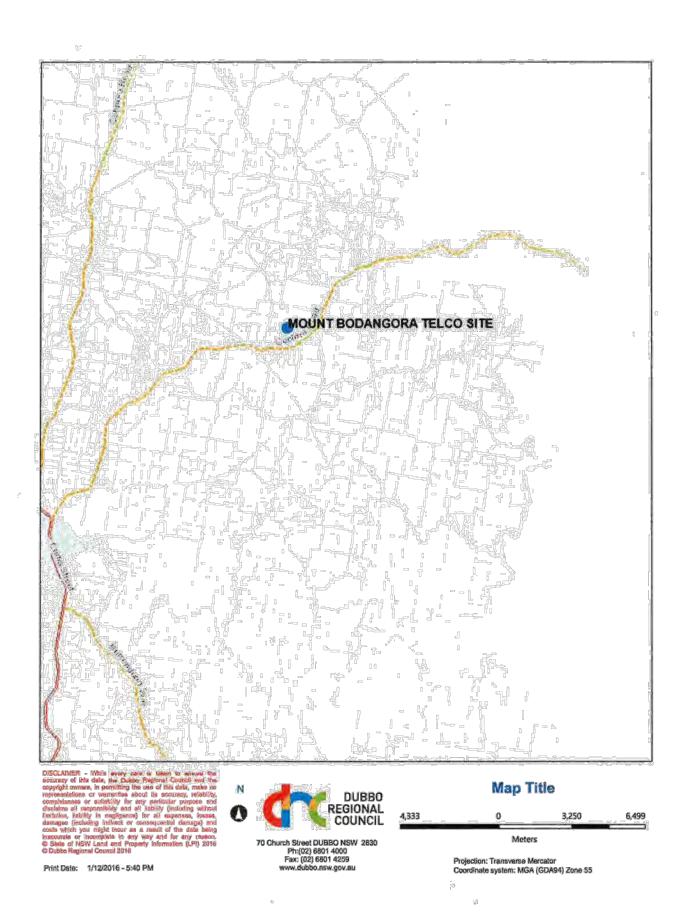
REPORT

The required new licence papers have been reviewed by both agencies and their legal advisors for over a year and have finally been agreed to. It should be noted that due to the merger of the former Dubbo and Wellington councils the name on the documents is Western Plains Regional Council and this will be amended to Dubbo Regional Council prior to execution of the documents.

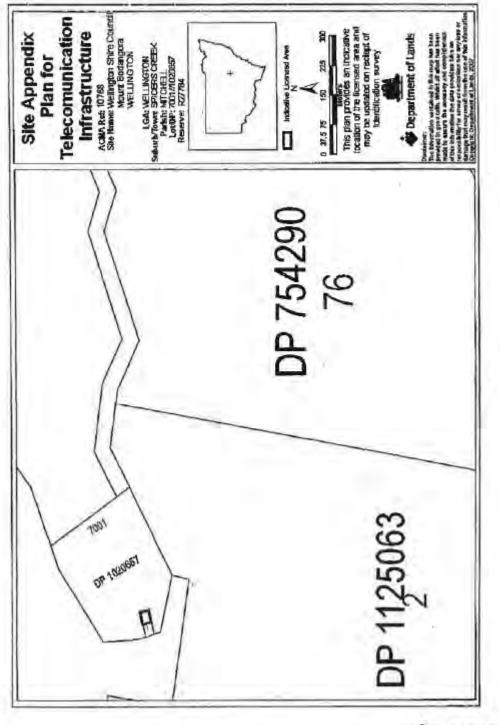
It is recommended that the licence be entered into with NSW Government Telecommunications Authority under the proposed terms.

Appendices:

1 Mount Bodangora - Location Map



WORKS AND SERVICES COMMITTEE



Mount Bodangora



REPORT: Upcoming Civil Infrastructure Works Requiring Tree Removals and Replacements

AUTHOR:Director Parks and Landcare ServicesREPORT DATE:21 November 2016TRIM REFERENCE: ID16/2138

EXECUTIVE SUMMARY

Technical Services Division is intending to undertake kerb and guttering replacement works in Wingewarra Street (between Darling and Bourke streets (south side), Brisbane Street (between Cobra Street and Reakes Avenue (western side) and Macquarie Street (between Cobra and Mitchell streets (eastern side)). To enable these works to proceed it is required to remove a number of existing street trees in each of the immediate areas.

To help ensure that the long term viability of the tree canopy of Dubbo is enhanced over time it is proposed to replace the same number of trees that are removed. In some cases it is not possible to replant the same number of the trees back into the same streetscape. In these cases the required number of trees to make up the numbers will be planted in adjacent streets.

The Wingewarra Street and Brisbane Street projects are proposed to be undertaken in two (2) stages with the first stage of each project being completed by 30 June 2017. It is anticipated that stage 2 of both projects would be completed by 30 June 2018.

The Macquarie Street project is proposed to be completed by 30 June 2017.

FINANCIAL IMPLICATIONS

Tree removal and replacement costs have been considered and factored into the cost of the respective kerb and guttering replacement projects.

POLICY IMPLICATIONS

There are no policy implications arising from this report.

RECOMMENDATION

- 1. That the information contained within this report be noted.
- 2. That the proposed replacement planting plans for Wingewarra, Brisbane and Macquarie streets are endorsed to enable the kerb and guttering replacement program to proceed.

Ian McAlister Director Parks and Landcare Services

REPORT

As part of the Technical Services – Civil Infrastructure kerb and guttering replacement program for 2016/2017 the following three (3) projects have been identified:

- Wingewarra Street (between Darling and Bourke streets (south side),
- Brisbane Street (between Cobra Street and Reakes Avenue (western side) and
- Macquarie Street (between Cobra and Mitchell streets (eastern side)).

Wingewarra Street

The existing trees in this section of Wingewarra Street are either *Brachychiton populneus* (Kurrajong) or *Lophostemon confertus* (Brush Box). There are fourteen (14) trees between Darling and Bourke streets and a further seven (7) trees between Bourke and Gipps streets. These trees were assessed as part of the first stage of the City wide audit in 2012, with the Kurrajongs generally being assessed in being in fair to poor condition with eight (8) of them having a life expectancy of 5 – 15 years and another four (4) having a life expectancy of <5 years. The Brush Box were in better condition with life expectancies of 15 - 40 years.

PROPOSED WINGEWARRA ST TREE REPLACEMENT FROM DARLING ST TO GIPPS ST



Figure 1. Proposed replacement of trees (5) on Wingewarra Street between Darling and Bourke streets.



Figure 2. Proposed replacement of trees (5) on Wingewarra Street between Bourke and Gipps streets.

The project has been developed to be undertaken in 2 stages and over two financial years. It is anticipated that the project will be completed by 30 June 2018.

Over both stages of the project a total of twenty one (21) trees require removal to allow access and removal of old sandstone kerb and guttering. As part of the project five (5) trees per block will be replanted using a similar planting method as the Darling Street beautification project, i.e. rock matrix rock pit with a finger bed at road level (figures 1 and 2), to tie the two streetscapes together. This approach is consistent with the park street model that has been previously adopted.

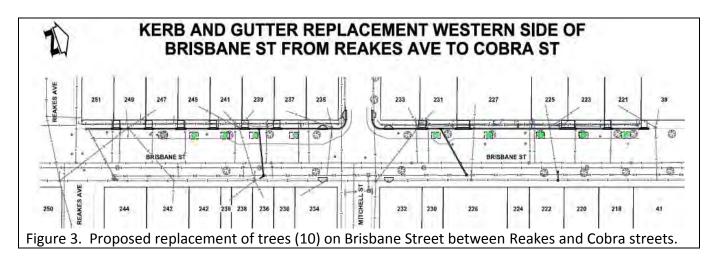
The tree species chosen for Wingewarra Street is *Zelkova serrata "wireless"*. This particular tree has been specifically bred to be planted under/adjacent to overhead electrical transmission lines and develops a broader canopy than either the Kurrajongs or Brush Box. Ultimately this tree species will replace the existing *Fraxinus raywoodii* (Claret Ash) between Fitzroy and Chelmsford streets that are failing due to disease incursion.

The rationale behind the reduction of replacement trees in this section of Wingewarra Street include the narrow frontages of the residences and the need to provide adequate sight distances for vehicles entering the stream of traffic from these properties. A further consideration is that at the Wingewarra/Darling Street intersection additional lane width is required to extend the left turning lane (south) to accommodate increases in traffic load. The reduction of the number of trees also provides a small increase in the amount of parking in the immediate area that can be utilised both by residents and the tennis complex across the street.

The resultant loss of eleven (11) trees as a result of this kerb and guttering replacement in Wingewarra Street will be offset by the planting "missing trees in neighbouring streets, including Bultje and Arthur streets. In most cases these trees will be planted in existing trees rings in the shoulder of the road, or in the grass verge. Both of these planting options provide an economical and practical way to ensure that there is no loss of tree numbers in the immediate vicinity.

Brisbane Street

The existing trees in this section of Brisbane Street are a mix of *Brachychiton populneus* (Kurrajong), *Lophostemon confertus* (Brush Box) *Liquidambar styraciflua* (Liquidambar) and *Triadica sebiferum* (Tallow Tree). In total eleven (11) trees currently exist in this section with all of them being assessed in reasonable condition and having a life expectancy of 15 - 40 years, or better.

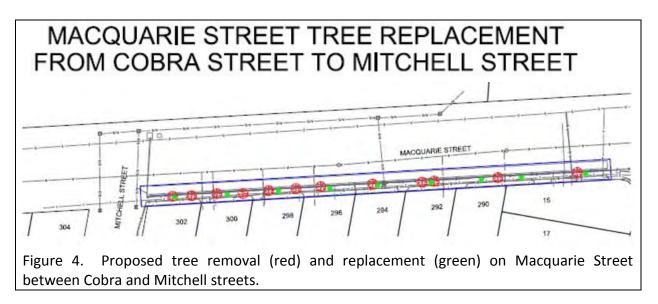


The project has been developed to be undertaken in 2 stages and over two financial years. It is anticipated that the project will be completed by 30 June 2018.

It is proposed to remove these eleven (11) trees to allow access and removal of the kerb and guttering and, as part of the project, replace them with ten (10) *Jacaranda mimosifolia* (Jacaranda). The Jacaranda has been identified as the preferred species for this street and further planting will occur as opportunities are identified and funding becomes available. Over time as this avenue is extended and matures it will provide a spectacular display of late spring colour. The loss of one tree is compensated by the broader canopy of the Jacaranda compared to the existing species.

Macquarie Street (south)

The existing trees in this section of Macquarie Street are predominately *Fraxinus raywoodii* (Claret Ash) and *Acer negundo* (Evergreen Alder). In total twelve (12) trees will be removed with all trees being assessed having a life expectancy of 5 - 15 years (2012).



This project has been developed to be completed in a single stage and is anticipated to be completed by 30 June 2017.

It is proposed to remove these twelve (12) trees to allow access and removal of the kerb and guttering and, as part of the project, replace them with nine (9) *Lagerstroemia indica 'biloxi'* (Crape Myrtle). The Crape Myrtle is a smaller tree than both the Claret Ash and Evergreen Alder and will not have the same pruning requirements to retain powerline clearances.

The Crape Myrtle has been identified as the preferred species for this street. Previous recent plantings exist further south long Macquarie Street and as opportunities and funding allow additional plantings to connect these areas will be carried out.

The primary rationale for this species being chosen is the presence of low voltage powerlines being directly overhead that has resulted in severe pruning of the existing trees over the years to comply with clearance zones (Figure 5). Another consideration for the change of species is the recognition that the Claret Ash is a species that is no longer suitable for planting in Dubbo due to the incidence of disease.



Figure 5. Macquarie Street looking north towards Cobra Street. Note the dead tree in the foreground and the severely pruned Claret Ash in the middle and back ground of the frame.

To further offset both the loss of the number of trees (3) and canopy cover on the eastern side of the Macquarie Street it is proposed to plant a larger species, possibly *Eucalyptus microcarpa* (Grey Box) on the western side. Over time these trees will be able to compensate and improve the level of shading provide in this area.

It is acknowledged that the removal of trees from the public domain, including street trees, is a contentious issue. However there is also an opportunity for Dubbo Regional Council to demonstrate to the public that tree removals for the sake of improving public infrastructure is not taken lightly. This can be achieved through the demonstrated commitment by Council of undertaking the timely replacement of these trees as part of the capital renewal program. Further, in many cases Council can also lead by example through better species selection that take into account site specific constraints that in turn can reduce recurrent maintenance costs and improve the visual amenity of the streetscape and over time also improve the canopy cover of the City.



REPORT: Increased Vegetation Clearance Zones at Myall Street Reservoir

AUTHOR:Director Parks and Landcare ServicesREPORT DATE:23 November 2016TRIM REFERENCE: ID16/2152

EXECUTIVE SUMMARY

One of the possible contributing factors to the recent Boil Water Alert issued by Dubbo Regional Council that affected north Dubbo is the close proximity of vegetation to the reservoir structures themselves. This relationship may have assisted fledglings/birds in gaining access into the structure.

As a precaution in reducing the likelihood of a similar event occurring in the future it is proposed to remove a total of 23 trees and shrubs to establish a vegetation clear zone around the reservoir.

To offset the removal of these trees and shrubs it is proposed to plant the Myall Street median strip with a suitable tree species, additional tree planting in the adjacent parkland and the replanting of smaller screening shrubs along the Myall Street Reservoir boundary fences.

FINANCIAL IMPLICATIONS

Funding for this project will be provided primarily through the Water and Sewer fund. This includes the cost of removal of 23 trees, water meter for median planting, and any further planting within the reservoir grounds. Parks and Landcare Services will offset the cost through the provision of the replacement median trees. The cost of planting the median trees will be absorbed as part of the Street Tree Maintenance budget.

POLICY IMPLICATIONS

There are no policy implications arising from this report.

RECOMMENDATION

- **1.** That the information contained within this report be noted.
- 2. That the proposed removal and replanting program be endorsed and implemented as soon as practical.

Ian McAlister Director Parks and Landcare Services

REPORT

In November 2016 a Boil Water Alert was issued due to the detection of low level contamination in the water supply. Council took a precautionary approach with the Boil Water Alert being put in place for north, central and south Dubbo. Following further testing it was identified that the contaminate source was limited to the Myall Reservoir, resulting in the lifting of the Boil Water Alert in central and south Dubbo. The causation of this contamination was identified as birds gaining access to the reservoir and not being able to escape.

An inspection of the site was carried out on the 17 November 2016 by the Acting Manager Water and Sewer, Mr Steve Carter, and the Manager Parks and Landcare Operations, Mr Mark Kelly. The purpose of this inspection was to identify what works would be required to establish a vegetation clear zone around the reservoirs to reduce the risk of a similar incidence reoccurring. This identification of risk and the subsequent reduction/elimination approach is consistent with Dubbo Regional Council's risk management approach. As a result of this inspection it is proposed to remove a total of 23 trees and shrubs to establish a vegetation clear zone around the reservoir. The density of the trees in the reservoir site can be observed in Figure 1 below.



Figure 1: Myall Street Reservoir showing the dense plantings within the site, and the proposed offset plantings in the median strip immediately adjacent.

The loss of these trees and shrubs will have a negative effect on the tree canopy cover of the immediate area. It also provides Council the opportunity to undertake offset planting in the immediate areas that includes:

• nine (9) advanced Silky Oaks (*Grevillea robusta*) will be planted in the median strip immediately north of the reservoir site (Figure 1)

- five (5) advanced Silky Oaks (*Grevillea robusta*) will be planted in the median strip immediately north of the TAFE and shopping centre (Figure 2), and
- seven (7) semi-advance Lemon Scented Gums (Corymbia citriodora) at Lunar Park (Figure 3)



Figure 2: Offset planting (proposed) north in the median strip north of TAFE and shopping centre.



Figure 3: Offset plantings (proposed) in Lunar Park (north east of reservoir).

In addition to these tree planting, the Acting Manager Water and Sewer has indicated that to help screen the reservoirs from Myall Street and Wheelers Lane a hedge would be planted. The combination of the proposed offset tree plantings, and the establishment of a hedge along the street facing boundary fences of the reservoir site will more than compensate for the loss of the 23 trees in the medium to longer term.

The Parks and Landcare Services Division will provide to the project the fourteen advanced Silky Oaks and the seven (7) semi-advanced Lemon Scented Gums from stock already held within the Parks and Landcare nursery. The planting of the medians will be funded through the Street Tree Maintenance budget.

A water connection will be required for the median strip that will be funded through Council's Water Community Services Obligation.

The establishment of the screening hedge within the reservoir site will be a full cost to the Water and Sewer function.

SUMMARY

It is acknowledged that the removal of the 23 trees from the reservoir site will have a short term impact on the canopy cover within the immediate area. However the public's access to a safe clean water supply is of paramount concern and to help achieve this a vegetation clear zone needs to be established around the reservoirs.

Council is attempting to reduce this short-term impact through the proposed offsetting planting using semi-advanced and advance trees in the immediate area that will also improve the visual amenity of the streetscape.



REPORT: Review of the Dubbo Regional Council Significant Tree Register 2017

AUTHOR:Manager Horticultural ServicesREPORT DATE:29 November 2016TRIM REFERENCE: ID16/2183

EXECUTIVE SUMMARY

In accordance with Dubbo City Council's resolution of 23 June 1995 (Clause 95/64) a review has been conducted of the Significant Tree Register and the Tree Preservation Order. It is proposed to continue with the current Significant Tree Register and Tree Preservation Order for the next 12 month period commencing 1 January 2017.

All trees that had been listed on the 2016 Dubbo City Council Significant Tree Register have been desktop audited to determine their condition and their suitability to be retained on the register. All trees located on private property were visually inspected, if possible, from outside the property boundary. No hazard assessment has been carried out on trees located on private property and their listing on the Significant Tree Register in no way implies that they have been. It remains the responsibility of owners of the trees to have their trees inspected on a regular basis.

It is noted that, no changes (i.e. additions or removals of trees) have been made to the Significant Tree Register since 2014.

FINANCIAL IMPLICATIONS

There are no financial implications arising from this report.

POLICY IMPLICATIONS

There are no policy implications arising from this report.

RECOMMENDATION

That the reviewed Tree Preservation Order and the Significant Tree Register for 2017, dated 29 November 2016, be adopted effective 1 January 2017.

Ben Pilon Manager Horticultural Services

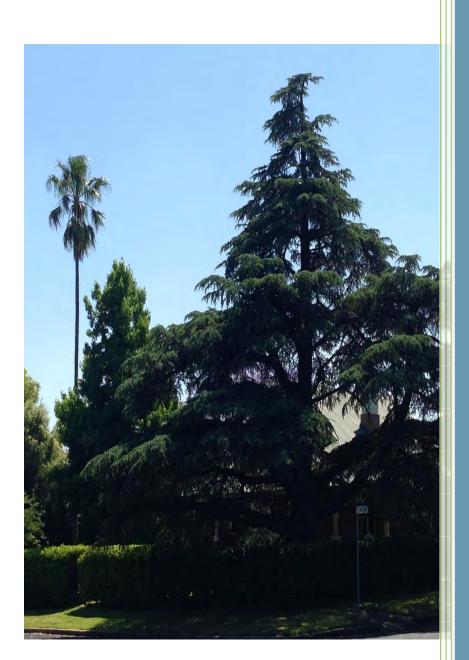
Appendices:

1 2017 Tree Preservation Order - Significant tree register 29/11/2016

APPENDIX NO: 1 - 2017 TREE PRESERVATION ORDER - SIGNIFICANT TREE REGISTER 29/11/2016

2017

Tree Preservation Order



Parks and Landcare Services Dubbo Regional Council 29/11/2016

WORKS AND SERVICES COMMITTEE

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PART A

1. Dubbo Regional Council Tree Preservation Order

Notice is hereby given that Dubbo Regional Council at its November 2013 meeting resolved to make the following Tree Preservation Order, such Order taking effect as of 1 January 2017.

- This Order applies to Trees or Groups of trees included in the Significant Tree Register and to Trees and Groups of trees on the Interim List associated with that Register and to all trees on public land and public roads.
- 2. This Order applies to all lands within the whole of the Dubbo City Local Government area.
- Subject to the exclusions listed in Schedule 1 and concessions listed in Schedule 2 hereunder this order prohibits –
 - The ringbarking, cutting down, topping, lopping, and removing, injuring or wilful destruction of any tree or groups of trees listed in the Significant Tree Register or the Interim List associated with that Register.
 - ii. The substantial alteration, giving cause or permission to substantially alter the natural ground level, either by excavation or fill around the trunk or within the drip line of a tree to which the Tree Preservation Order applies without the consent of Council.

Schedule 1 (Exclusions)

This Order does not apply to a tree or group of trees that:

- a. Is not listed on the Significant Tree Register or the Interim List associated with that Register, with the exemption of trees on public land and public roads;
- b. Is on land covered under the provisions of New South Wales forestry Act 1916, as amended; or
- c. Is declared a Noxious Plant under the provisions of the Noxious Weeds Act 1993; or

- d. Comprises part of a horticultural or orchard establishment where the lopping of and pruning of trees is a necessary agricultural practice of such undertaking; or
- e. Is subject of an approval granted under the provisions of New South Wales Soil conservation Act; or
- f. is required to be topped, lopped or removed by a Public Authority pursuant to an obligation imposed under an Act of Parliament for the purpose of installing, maintaining or repairing a public utility installation; and
- g. Is not listed, declared or nominated as an endangered species, endangered population, endangered ecological community or critical habitat under the Threatened Species Conservation Act, 1995.

Schedule 2 (Special Concessions).

- Trees within three (3) metres if a proposed structure of a building which is the subject of a building application may be removed following receipt of a building approval.
- 2. Groups of trees or sections thereof which are required to be dealt with under the provisions of the Rural Fires Act, 1997.
- Trees of Groups of trees required to be dealt with in the course of works for which consent has been issues under Part V of the Environmental Planning and Assessment Act 1979.

Enquiries may be directed to Council's Director Parks and Landcare Services, Mr Ian McAlister, on telephone (02) 6801 4000.

Mark Riley

INTERIM GENERAL MANAGER

Civic Administration Building

Church Street

DUBBO NSW 2830

2.

Preamble

Since European settlement, Australia has lost approximately 70% of its original tree cover. This is primarily due to clearing for agricultural and other primary production developments. Urban development has also contributed significantly to the removal of natural vegetation.

The loss of native vegetation in urban areas has largely been offset by the planting of amenity trees and cultivation of gardens in the streetscape, parks and privately owned land. A number of these trees or groups of trees have significant values associate with them and they require a higher level of protection to ensure their persistence within the urban landscape.

Council proclaimed a Tree Preservation Order on 23 June 1975.

The original intent of the Tree Preservation Order was one of education in so far as providing some control over the lopping or removal of trees would lead to a greater community awareness of the importance and value of trees to the environment and urban amenity.

Current community attitudes towards trees and the environment indicate that this strategy has been largely successful.

3. Tree Order Administration

There is a community expectation that the City's tree canopy will be maintained and enhanced and that Council will play a leading role in ensuring that this is the case. The community feeling is often demonstrated following any works on or which might impact on what communities consider significant trees.

It is fundamental that any Tree Preservation Order recognise:

- 1. The significance of the trees to be preserved;
- 2. That in some instances preserving very large old trees is inappropriate and the preservation of smaller younger and more vigorous trees is more beneficial;
- 3. Vegetation communities, i.e. natural occurring associations of vascular plants are often as important as trees;
- The desire to protect trees and vegetation must be balanced with the other infrastructure requirements, safety and the "rights" of individuals who "own" trees. And

5. The resourcing implications of administering and enforcing the Order.

4. Interpretation of the guidelines

The Tree Preservation Order applies to both rural and urban lands within the entire Dubbo city area.

The Tree Preservation order applies only to Trees and Groups of Trees and communities registered on the Significant Tree Register on the Interim List associated with the Register.

Dead trees are trees classified as Noxious under the Noxious Weeds Act are not covered by this Order.

Nominations of Trees or groups of Trees can only be made under one or more of the categories defined within the Significant Tree Register.

5. Breaches

Where a clear breach of the Tree Preservation Order occurs, legal proceedings may be commenced against the offending party.

6. Delegations

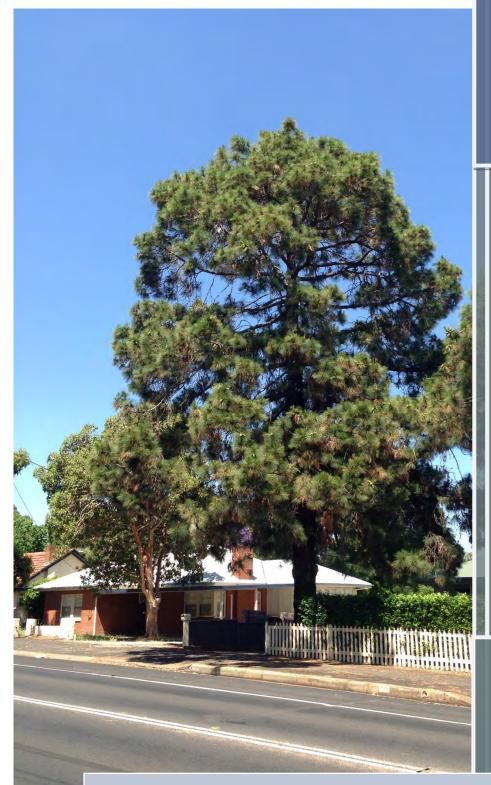
Delegations to provide determinations under the Tree Preservation Order will rest with:

- a) The Interim General Manager,
- b) The Director of Parks and Landcare Services, and
- c) Manager Horticultural Services.

Tree Preservation Order

APPENDIX NO: 1 - 2017 TREE PRESERVATION ORDER - SIGNIFICANT TRE REGISTER 29/11/2016

2017



Parks and Landcare Dubbo Regional Council 29/11/2016

2017 Significant Tree Register

WORKS AND SERVICES COMMITTEE

PART B

1. Significant Tree Register

Throughout Dubbo Regional Council Local Government Area there are individual trees and groups of trees to which are attached additional values that make them "significant." While these trees may be considered significant for differing reasons they require an additional and appropriate protection to ensure both their immediate protection and their long term persistence within the landscape.

2. Objective of the Significant Tree Register

To ensure the identification, preservation and proper management of significant trees and significant groups of trees within the Dubbo Regional Council.

3. Definition of a Significant Tree

Individual trees and Groups of Trees may be considered significant for a variety of reasons. The reasons in which a tree or a group of trees may be considered significant within Dubbo Regional Council Local Government Area are listed below:

A **<u>Single Tree</u>** may be listed as significant because:

a. <u>It may be a remnant of a previous landscape.</u>

As such, it should provide evidence of changes in the landscape that might have resulted from former human culture, environmental occurrences and changes to climatic conditions or human behaviour.

b. <u>It may have been planted by a famous person.</u>

The significance may be local, regional, national or international and may be enhanced or diminished by the number of trees planted by that particular person.

c. <u>It may be rare, old or magnificent etc</u>

The number of specimens should be greatly reduced and the future viability of the species is heavily dependent on this specimen.

Old trees are often removed in streetscapes and other public areas due to safety concerns. However, under good management regimes it is sometimes possible to retain these trees in an over mature state – and thus provide a rare example of a species in that state. A magnificent

APPENDIX NO: 1 - 2017 TREE PRESERVATION ORDER - SIGNIFICANT TREE REGISTER 29/11/2016

tree will gain significance through its position in the landscape and its association with buildings and other structures. Very often, a particularly fine specimen will be defined as magnificent.

It may represent a species that is not commonly used for amenity horticulture in the Dubbo Regional Council Local Government Area.

d. <u>It may be a particularly fine representation of its species.</u>

A tree should demonstrate all the typical characteristics generally associated with the species in greater magnitude than other trees. It should have shape, balance or symmetry that makes the tree distinctive.

e. <u>It may be a specimen of an endangered species.</u>

The future regeneration of the species should be such that the propagation of the tree through natural processes would be highly unlikely and the preservation of this tree is reliant to a large degree on this tree.

f. <u>It may be of cultural value eg: may have Aboriginal markings or</u> <u>early survey markings etc.</u>

The tree should be notable due to an association with a specific event, cultural story or as a result of markings that provide evidence of past events or social customs.

g. <u>It may be of a particular aesthetic value.</u>

The tree should be impressive due to uncharacteristic growth habit or combine within the landscape, place or architecture of a given area to further enhance these values.

h. <u>It may have biological value to the environment.</u>

The tree should be such that its loss to the environment would seriously threaten the natural biological processes of the immediate habitat.

A **Group of Trees** may be listed as significant for any of the following reasons:

a. <u>They collectively fulfil any of the criteria for single trees.</u>

b. <u>They may for an integral part of the landscape of a heritage</u> <u>building or precinct.</u>

As such, the trees should enhance or complement significant

architecture or provide evidence of social customs in association with traditional buildings and should constitute a representative site.

c. <u>They may be a group of trees which have some historic</u> <u>significance.</u>

The trees should be notable because of an association with a memorable event or provide evidence of past social customs, natural occurrence or human behaviour.

d. <u>The trees should co-exist or support another feature of the</u> <u>natural environment that would face extinction if this association was to</u> <u>cease.</u>

e. <u>The trees should provide a fundamental understanding of the</u> <u>customs or lifestyles of previous generations, either alone or in</u> <u>association with other elements.</u>

f. <u>The trees are integral component of the watershed and drainage</u> system (including the aquifer recharge system).

The trees should be such that they support the natural hydrological processes of a particular area and their retention is essential to the maintenance of those processes.

g. <u>The trees provide habitat for native wildlife.</u>

The importance of a group of trees to native wildlife, especially those as identified as "endangered" or "threatened" under State or Federal legislation, should be assessed on the ability of the native fauna to inhabit other areas in the event of loss of those trees.

The Tree Preservation Order does not apply to any tree or group of trees on private property which is not listed as "Significant."

4. Procedure for Nominating a Significant Tree or Group of Trees

- a) A tree or group of trees is nominated in accordance with the relevant criteria as previously defined. Nominations must be clearly supported by documentary evidence as to significance in terms of the criteria.
- b) Nominations can be made by any member of the public, Councillor, Council officer, statutory authority or interest group.
- c) Once a nomination is received, it is placed on an "Interim List" and the

provisions of the Tree Preservation Order apply until a determination is made otherwise. The land owner is advised of the nomination and may make a submission in support or otherwise of the nomination.

- d) Nominations are assessed by suitably qualified staff of the Parks and Landcare Services Division and transferred from the interim list to the Register or not registered and removed from the Interim List. The Register is then ratified by Council.
- e) The nominator and the land owner are advised of the decision.
- f) As circumstances change over time a periodic review of the Register is carried out to ensure that trees on the Register are still regarded as significant and worthy of protection.
- g) If a tree or group of trees is removed from the Register, the land owner and the original nominator are, where possible, advised of the decision and the reasons.

Applications may be made to deal with registered significant trees or groups of trees and in cases where approval is granted certain conditions may be imposed such as replacement plantings, restrictions on the amount of pruning, etc.

This process is represented diagrammatically through a flow chart labelled Appendix A.

Significant Tree Register

PART C. THE SIGNIFICANT TREE REGISTER

Nominator:	Location:	Species:	
J M Hosking	27L Durraween Lane / 22	Group of trees comprisi	ng;-
7 Pine Knoll Drive	Thornwood Road	Eucalyptus melliodora (`	Yellow Box)
DUBBO NSW 2830	DUBBO NSW 2830	Callistris columellaris (W	/hite Cypress)
		Eucalyptus albens (Whit	e Box)
		Acacia spp.	
Reason for Listing.		Same in the	
Group of Trees			
Wildlife			
Endemic			
		a constraint all a	
		1	
Date of last			
inspection.			
28/11/2016			
B.P			
Condition:	Good	Fair	Poor
Excellent			
General Summary:			
This block is scrubby bushland consisting mainly of <i>Eucalyptus melliodora, Eucalyptus albens</i> and <i>Callitris</i>			
-			spp. The <i>Callitris</i> have continued to
thicken and may need to be thinned out in the future to prevent them from dominating this bushland.			

This Group of Trees were inspected visually from the property boundary.

It is recommended that this Group of Trees remain on the Significant Tree Register.

Nominator:	Location:	Species:		
Megan Duncan		Scientific: Brachychiton rupest	ris	
12D Cunningham	Myall Street	Common: Bottle tree		
Street	DUBBO NSW 2830	Number: Five (5)		
DUBBO NSW 2830				
Reason for Listing:		A CARACTER		
Group of Trees			a sur that	
Specimen				
		Same and		
		- Faster 1		
Date of last				
inspection.				
28/11/2016				
B.P				
<u>Condition:</u>	Good	Eair	Poor	
Excellent	Good			
General Summary:				
All five trees are in good to excellent condition with minimal amount of deadwood identified.				
Trees were inspected visually from the property boundary.				
It is recommended that this Group of Trees remain on the Significant Tree Register.				

r			
Nominator:	Location:	Species:	
Tony George	Cnr Talbragar	Scientific: Jacaranda mimosifoli	a
Manager Horticultural Services	and Fitzroy Streets	Common: Jacaranda	
Dubbo City Council	DUBBO NSW 2830	Number: one (1)	
DUBBO NSW 2830			
Reason for Listing.			
Specimen.			
Historic – This tree was i Liberal) planted to mark War 2.			
Date of last			
<u>inspection.</u> 28/11/2016			
B.P			
<u>Condition:</u>	Good	Fair	Poor
Excellent			
General Summary:			
This tree appears to be structurally sound at the time of inspection. There remains a small amount of dead wood and stude within this tree, and there is evidence of opicermic growth that indicates that the			

dead wood and stubs within this tree, and there is evidence of epicormic growth that indicates that the tree has been under stress. Sandstone blocks have been placed under the drip zone of the canopy to exclude vehicles from parking underneath and causing compaction.

This tree was inspected visually.

It is recommended that this tree remains on the Significant Tree Register.

Nominator:	Location:	Species:		
Mrs Lynette Harrison 22 Sapphire Street DUBBO NSW 2830	Uniting Church Grounds Church Street DUBBO NSW 2830	Scientific: <i>Cinnamomum camphora</i> Common: Camphor Laurels Number: two (2)		
Reason for List	ing:			
	id War 1 plantings.			
local Methodist urday) afterno plant a number in the church g dedicated to th bers of the chi- fight for King :	and adherents of the Church to-morrow (Sat- on, at 4 o'clock, will of camphor laurel trees rounds. These will be the memory of the mem- urch who have gone to and Empire.			
	iberal and Macquarie iday 2 August 1918, page			

Methodist Church.

PLANTING OF MEMORIAL TREES.

Some weeks ago it was decided to take out the old pepper trees in front of the Methodist Church and Parsonage, and to plant camphor laurels in their places. Having had a large number of young men and one nurse go out-from the church to participate in the great struggle now taking plact in Europe, it was thought fitting to follow the lead set by the Municipal Council, and dedicate the trees to their memory. For the past three weeks working bees have been preparing the holes for the trees, with the result that the function came off on Saturday last. The front of the church was decorated with the flags of the Allies, and there was a very large attendance of members and adherents. After afternoon tea had been partaken of, the Bey. F. Walkden Brown explained the purpose for which they were assembled, and epcke of the heroism of the young men who had gone out to fight our battles. Three cheers were given for the King and the lads at the front, and then the planting took place.

The following are the names and by whom the trees were planted:—Walter England; (killed), planted by Mrs. J. B. England; Harold, Jack (killed) and Daniel Ison, by Mr. Alf. Ison; Thomas and George Boyle, by Miss Bessie Boyle; Les. Gartzell, by Mrs. Mylchreest; Clarence and Stanley Boud, by Mrs. Boul; Arnold Paol, by Mrs. Paul; Nurse Parker, by Miss Packer; Joseph J. Lang, (killed), by Mrs. Lang; Leslie Astley; by Mrs. G. D. Ison; Reg. Brace, by Miss Stelle Astley; by Mrs. Boud; Robert Etchells, by Miss Stella Astley; Ceril Blackwore, by Mrs. G. D. Ison; Reg. Brace, by Miss Stella Astley; Erie T. Cook (killed), by Mrs. Boud; Robert Etchells, by Miss Stella Astley; Erie T. Cook (killed), by Miss. F. Walkden Brown; Horace Benham, by Mrs. Alf. Benham; George E. Ellis (died of weunds), by Mrs. T. A. McGainness. Trees or also to be planted for the late Joseph Cox and Samuel Armstrong.

Cox and Samue	Armetrong.	
The Dubbo L	iberal and Macquarie	
Advocate, Tu	esday 6 August 1918,	
page 3		
Date of last		
inspection.		
28/11/2016		
B.P		
D.F		



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Condition:	Good		Fair	Poor	
Excellent					
General Summa	ary:				
These trees gen	nerally ap	opear to be good hea	lth.		
The Western tree has suffered substantial damage to the southern trunk which has led to decay and a cavity forming. This may be exacerbated by the changed soil conditions around its base as there is a raised garden bed up to its trunks. The southern trunk extends over the footpath and the removal of this trunk should be given some consideration by the owner.					
This tree has a s	small am	ount of deadwood th	nat should be removed to impro	ove the aesthetics of the tree.	
A number of cotton palms are growing in this garden bed (most likely distributed by birds) and these will start to come into conflict with this tree within the next few years. These should be removed.					
The Eastern tree, apart from a small amount of deadwood, appears to be in good health.					
These trees were inspected visually.					
t is recommended that these trees remain on the Significant Tree Register.					

Nominator:	Location:	Species:		
Janis Hoskings 7 Pine Hill Drive DUBBO NSW 2830	Old RAAF Base Cnr Palmer and Cobra Streets DUBBO NSW 2830	Group of trees comprising;- <i>Callistris columellaris</i> (white cypress and <i>Eucalyptus microcarpa</i> (grey box	-	
Reason for Listing; Endemic Wildlife A Grassy Inland Grey Box Woodland Endangered Ecological Community forms part of the vegetation within this area.				
Date of last inspection. 28/11/2016 B.P				
Condition:				
Excellent	Good 📕	Fair	Poor	
General Summary:				
This woodland area appears t small amount of <i>Eucalyptus n</i>	-	ition, with recruitment of mainly <i>Calltr</i> rved.	ris columellaris and a	
This group of trees have been inspected visually from the property boundary.				
It is recommended that this group of trees remain on the Significant Tree Register.				

Nominator:	Location:	Species:	
Macquarie Regional Committee and National Trust P.O. Box 1713	Cnr Quinn and Fitzroy Streets DUBBO NSW 2830	Scientific: <i>Brachycition rup</i> Common: Bottle tree Number: one (1)	pestris
DUBBO NSW 2830			
Reason for Listing:		A Contraction	
Specimen			and the second sec
Street Tree			
Date of last inspection.			
28/11/2016			
B.P			
Condition:			
Excellent	Good	Fair	Poor
General Summary:			

Going back through the aerial photo archives, the earliest that the tree can be positively identified is 1975. It can not be identified in the 1971 aerial photograph. On this basis it is estimated that the specimen is approximately 40 years old.

The tree appears to in good health with the leaves exhibiting no signs of chlorosis, disease or pest infestation.

A large area on the southern face of the tree and smaller sections on both the eastern and northern faces shows a moderate level of past damage by borers. To a large degree there seems to adequate recovery, however there are small patches of dead / decayed wood on both the northern and southern faces. Upon further investigation some evidence of frass was discovered however this appeared to be old. Some minor sap exudations around these points of attack may be indicative of the plants response in trying to compartmentalise the injury and minimise its effects (Harris et.al 2004 (p 34)).

No major defects were observed on the scaffolds or branches of this B. *rupestris*. It was noted however that on the major western scaffold that a previous branch failure and a small dead branch had caused a small amount of deformation of the scaffold. Although this is not likely to be detrimental in the short term, this stub and branch should be removed in the near future to allow recovery.

A low level of dead wood was observed during the inspection and this will be scheduled to be removed.

This tree has been inspected visually.

It is recommended that this tree remains on the Significant Tree Register.

Nominator:	Location:	Species:	
Macquarie Regional Committee and National	275 Fitzroy Street	Scientific: Pinus pinea	
Trust	DUBBO NSW 2830	Common: Stone pine	
P.O. Box 1713		Number: one (1)	
DUBBO NSW 2830			
Reason for Listing:			
Specimen			
Heritage			
28/11/2016			
B.P			
Condition:			
Excellent 📃	Good	Fair	Poor
General Summary:			
This tree was inspected visually from the property boundary. It appears to be excellent condition with only minimal deadwood visible. Substantial new growth has been observed.			

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It is recommended that this tree remains on the Significant Tree Register.

Nominator:		Location:	Species:	
Macquarie Regi		287 Fitzroy Street	Scientific: Cedrus deodar	
Committee and National Trust		DUBBO NSW 2830	Common: Deodar cedar	
P.O. Box 1713			Number: one (1)	
DUBBO NSW 28	330			
Reason for Listi	ng:	I		
Specimen			and the	
Heritage				
				CANCE -
			Real Property	
			A State of	
			A Contraction	
Data aflast				
Date of last inspection.				
28/11/2016				
B.P				
Condition:		_		_
Excellent		Good	Fair	Poor
General Summary:				
This tree has been inspected from the property boundary. This tree remains in excellent condition and it				
appears that there has been some pruning under				
trucks, minimal deadwood was observed.				
It is recommended that this tree remains on the Significant			he Significant Tree Register.	
Nominator:	Locati	on:	Species:	

Nominator:	Location:	<u>Species:</u>
Macquarie Regional	327 Fitzroy Street	Scientific: Brachychiton acerifolius

Committee	DUBBO NSW 2830	Common: Flame tree	
and National			
Trust		Number: one (1)	
P.O. Box 1713			
DUBBO NSW			
2830			
Reason for List	ing:		2
Reason for List	ilig.		
Unusual specim	ien		
		Surger and the	
			TTT - Contraction of the contrac
Date of last			
inspection.			
28/11/2016			
B.P			
Condition:			
<u>condition.</u>	Good 📕	Fair	Poor
Excellent			
General Summary:			
The tree had the top pruned out in previous years, but has since largely recovered and a large amount of			
regrowth has developed. This tree has been inspected visually. It is recommended that this tree remains			

on the Significant Tree Register.

Nominator:	Location:	Species:
Macquarie Regional Committee and National	63 Tamworth Street	Scientific: Araucaria bidwillii
Trust	DUBBO NSW 2830	Common: Bunya Bunya pine
P.O. Box 1713		Number: one (1)

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REGISTER 29/11/2016	

DUBBO NSW 2830		Scientific: Calodendron	capense
		Common: Cape chestn	ut
		Number: one (1)	
Reason for Listing:		Photos:	
Specimen		No photos available.	
Date of last inspection.			
7/10/2010			
M.W			
Condition:			
Excellent	Good	Fair	Poor
General Summary.			
It is recommended that the <i>Araucaria bidwillii</i> and the <i>Calodendron capense</i> remain on the Significant Tree Register at this stage until an assessment can be arranged.			n on the Significant

Nominator:	Location:	Species:
Mr. M Fleming	178 Gipps Street	Scientific: <i>Cedrus libani</i>
6 Belmore Street	DUBBO NSW 2830	Common: Cedar of Lebanon
DUBBO NSW 2830		Number: one (1)
		Scientific: Livistonia australis

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		Common: Cabbage tree palm		
		Number: one (1)		
Dessen for Listing				
Reason for Listing:				
Specimen				
Unusual		5		
		Ma The		
		W AR		
		Alta and a second		
		A REAL		
		a start a star		
			and the second	
			-	
Date of last				
inspection.				
28/11/2016				
B.P				
Condition:				
Excellent	Good 📕	Fair	Poor	
General Summary: These trees have been visually inspected from the property boundary.				
The <i>Cedrus libani</i> is in good condition with no changes in its health status. Some dead stubs still remain				
	-	mmended to be removed. The		
remains in good condition	tion. It is recommende	ed that these trees remain on t	he Significant Tree Register.	

2014 Additions to the Significant Tree Register:

Nominator:	Location:	Species:
Rhonda Lang	Macquarie Street between Tamworth and	Scientific: Brachychiton populneus
316 Macquarie street	Bligh Streets	Common: Kurrajong
Dubbo 2830		Number: 1
Reason for Listing:		

One of a group of native	trees.		
Forms a historic and unio	que remnant landscape.		
Creates value for habita aesthetics.	t the environment and		
Report:DBH-580mmHeight-10.5 mtsCrown spread- 12mtsFoliage colour and cover is normal.There is an injury to the western side of the trunkwhich has been wrapped in hessian for protectionuntil healing is adequate.Minor remedial pruning is required to remove asmall amount of deadwood and epicormic growth.			
Date of last inspection.			
28/11/2016 (Visual) B.P Condition:			
Condition:	Cood		
Excellent Good		Fair	Poor
General Summary:			
has previously been perf	formed on the tree resulting	ood condition despite the injui in a small amount of epicormic he S/SW side of the tree which	growth at the pruning

This line of trees should be included in the Significant Tree Register.

health of the tree. There is a small amount of deadwood throughout the canopy of the tree.

Nominator:	Location:	Species:
Rhonda Lang	Macquarie Street between Tamworth and	Scientific: Brachychiton populneus
316 Macquarie street	Bligh Streets	Common: Kurrajong
Dubbo 2830		Number: 2
Reason for Listing:		
One of a group of native tree	S.	

Forms a historic and unique r	emnant landscape.		
Creates value for habitat the aesthetics.	environment and		
Report:			
DBH-410mm			
Height-8 mts			
Crown spread- 9mts			
Foliage colour and cover is no	ormal.	<u>6</u> 4	de as
Minor pruning has been prev	iously implementing	WAR AND	ar an take .
resulting in epicormic growth			PACE STREET
A branch tear on the souther	n lateral has healed		
adequately.			
Minor remedial pruning is rec			Charles and
amount of deadwood and ep	icormic growth.		A CONTRACTOR
			- Contraction of the second
			÷ *
Date of last inspection.			
28/11/2016			
B.P			
Condition:			
Excellent	Good 📕	Fair	Poor
General Summary: Upon visual inspection it is no	atod that the tree is in good a	andition docnito the inity	ny ta tha lataral an tha
southern side. Pruning has pr	•		
epicormic growth at the prun		_	
the tree which has no impact	• ·		
the canopy of the tree.	on the neutror the tree. In		
This line of trees should be in	cluded in the Significant Tree	e Register.	
Nominator:	Location:	Species:	
Rhonda Lang	Macquarie Street	Scientific: Brachychiton	populneus
	between Tamworth and		
316 Macquarie street	Bligh Streets	Common: Kurrajong	
Dukka 2020			
Dubbo 2830		Number: 3	
Reason for Listing:			

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One of a group of native trees	S.			
Forms a historic and unique r	emnant landscape.			
Creates value for habitat the	environment and			
aesthetics.				
Report:		Photos:		
DBH-880mm		and the second fill	and the second sec	
Height-20mts		Contraction of the second	190 Black	
Crown spread- 13mts		and the second		
Foliage colour and cover is no	ormal.			
Minor pruning has been prev	iously implementing			
resulting in epicormic growth	at the pruning points.			
Wound closure at the pruning	g points is excellent.			
Previous borer activity is evid	ent and maybe still active			
due to frass being present.				
Minor remedial pruning is rec	quired to remove a small		A REAL PROPERTY AND	
amount of deadwood and ep	-		The states on the	
	C		and the second sec	
Date of last inspection.				
25/9/2014				
23/3/2014				
Condition:				
<u></u>				
Excellent	Good	Fair	Poor	
General Summary:				
This tree was removed in 2015 due to the presence of advanced basal decay.				

Nominator:	Location:	Species:
Rhonda Lang 316 Macquarie street	Macquarie Street between Tamworth and Bligh Streets	Scientific: <i>Brachychiton populneus</i> Common: Kurrajong
Dubbo 2830		Number: 4
Reason for Listing:		
One of a group of native trees	5.	
Forms a historic and unique r	emnant landscape.	
Creates value for habitat the aesthetics.	environment and	

Report:

DBH-560mm Height-11.75mts Crown spread- 11mts

Foliage colour is normal and cover is sparse.

Minor pruning has been previously implemented resulting in epicormic growth at the pruning points. Wound closure at the pruning points is good. There is a moderate amount of deadwood evident. Minor remedial pruning is required to remove deadwood and epicormic growth. Lichen on southern side laterals observed which will have no impact on the health of the tree.



		in a second second	and the second s
Date of last inspection. 28/11/2016 (Visual)			
B.P <u>Condition:</u>			
Excellent	Good	Fair 📕	Poor
General Summary:	·		

The tree is in fair condition and this relates to the sparse canopy cover. There is a path and roadway adjacent to the tree and compaction over the root zone is evident as well. Moderate amount of deadwood was observed and will need removing.

This line of trees should be included in the Significant Tree Register.

Nominator:	Location:	Species:
Rhonda Lang	Macquarie Street	Scientific: Brachychiton populneus
316 Macquarie street	between Tamworth and Bligh Streets	Common: Kurrajong
Dubbo 2830		Number: 5
		Number. 5
Reason for Listing:		
One of a group of native trees.		
Forms a historic and unique remnant landscape.		
romis a mistoric and unique remnant landscape.		

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Creates value for habitat the	environment and		
aesthetics.			
Report:		<u>Photos:</u>	
DBH-380mm			
Height-7.5mts			
Crown spread- 8.5mts			
 Foliage colour is normal and cover is sparse higher in the canopy. Minor pruning has been previously implemented resulting in epicormic growth response at the pruning points. Wound closure at the pruning points is good. Lichen on S/W side of tree observed which will have no impact on the health of the tree. Minor remedial pruning is required to remove deadwood and epicormic growth. 			
Date of last inspection. 28/11/2016 (visual)			
B.P			
Condition:			
	Good	Fair	Poor
Excellent			
General Summary:			
The tree is in fair condition, with the canopy showing signs of previous stress, a large amount of regrowth			
was noticed upon visual inspection with recommendations of further investigation and monitoring			
required. There is a path and roadway adjacent to the tree, compaction over the root zone is evident with			oot zone is evident with
most of the trees in the line and this is impacting negatively on the trees.			

This line of trees should be included in the Significant Tree Register.

Nominator:	Location:	Species:
Rhonda Lang 316 Macquarie street Dubbo 2830	Macquarie Street between Tamworth and Bligh Streets	Scientific: <i>Brachychiton populneus</i> Common: Kurrajong Number: 6
Reason for Listing:		
One of a group of native trees.		
Forms a historic and unique remnant landscape.		

Creates value for habitat the aesthetics.	environment and		
Report:		Photos:	
DBH-540mm			
Height-10mts			
Crown spread- 13mts		and the second	
		and the second second	Mich 11
Foliage colour is normal and c	cover is sparse throughout	State in	and the second second
the canopy.		And the second second second	
		Mar Robert L.	All and the second
Minor pruning has been previ	iously implemented	ALL SALAR	2 M. Phy &
resulting in epicormic growth	response at the pruning	MAT SALAY	Province of the second
points.			Le Bar Links
Wound closure at the pruning	g points is average.		VOYAN ANNA
Lichen on southern laterals observed which will have no			
impact on the health of the tree.			
Minor remedial pruning is required to remove deadwood			
and epicormic growth.			The second s
			and the second s
Date of last inspection.			
28/11/2016 (visual)			
Condition:			
Excellent	Good	Fair	Poor
Conorol Summonu			
General Summary:			
The tree is in fair to good con	dition with the canopy becon	ning sparse with enicorm	ic growth developing

There is a path and roadway adjacent to the tree, compaction over the root zone is evident with most of the trees in the line and this is impacting negatively on the trees.

This line of trees should be included in the Significant Tree Register.

Nominator:	Location:	Species:
Rhonda Lang	Macquarie Street between Tamworth and	Scientific: Brachychiton populneus
316 Macquarie street	Bligh Streets	Common: Kurrajong
Dubbo 2830		Number: 7
Reason for Listing:		

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One of a group of native trees	5.		
Forms a historic and unique remnant landscape.			
Creates value for habitat the environment and			
aesthetics.			
Report:		<u>Photos:</u>	
Report:DBH-530mmHeight-11.5mtsCrown spread- 12mtsFoliage colour is normal and cover is sparse throughout the canopy.Minor pruning has been previously implemented resulting in epicormic growth response at the pruning points.Wound closure at the pruning points is very good. Lichen on southern side of trunk and laterals observed which will have no impact on the health of the tree. Minor remedial pruning is required to remove deadwood and epicormic growth.			
Date of last inspection. 28/11/2016			
B.P			
Condition:			
	Good	Fair	Poor
Excellent			
General Summary:			
The tree overall is in good condition with the canopy becoming a little sparse. There is a path and			
roadway adjacent to the tree, compaction over the root zone is evident and this is impacting negatively			
on the tree.			
This line of trees should be in	cluded in the Significant Tree	Register.	

Nominator:	Location:	Species:
Rhonda Lang	Macquarie Street between Tamworth and	Scientific: Brachychiton populneus
316 Macquarie street	Bligh Streets	Common: Kurrajong
Dubbo 2830		Number: 8
Reason for Listing:		

One of a group of native trees.			
Forms a historic and unique re	emnant landscape.		
Creates value for habitat the aesthetics.	environment and		
Report:		Photos:	
DBH-550mm Height-13mts Crown spread- 12mts			
Foliage colour and canopy cov	ver is normal.	<u>A</u>	
Minor pruning has been previously implemented resulting in epicormic growth response at the pruning points.			
Wound closure at the pruning points is average to good. Minor remedial pruning is required to remove deadwood			*
and epicormic growth.			
Date of last inspection.			
28/11/2016			
B.P			
Condition:			
Excellent	Good	Fair	Poor
General Summary: The tree overall is in good condition. There is a path and roadway adjacent to the tree, however compaction over the root zone is less significant and the overall health and vitality of the tree is noticeable in comparison to some other trees in the line, small amount of lichen was noticed on S/W of truck, which will have no impact on the health of this tree.			

This line of trees should be included in the Significant Tree Register.

Nominator:	Location:	Species:
Rhonda Lang	Macquarie Street between Bligh and Cobra	Scientific: Brachychiton populneus
316 Macquarie street	Streets.	Common: Kurrajong
Dubbo 2830		Number: 9
Reason for Listing:		

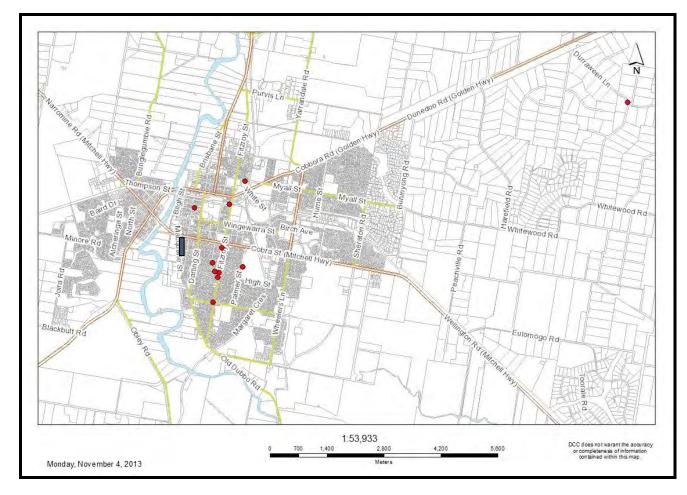
One of a group of native trees.			
Forms a historic and unique remnant landscape.			
Creates value for habitat the	environment and		
aesthetics.			
Report:		Photos:	
DBH-570mm			
Height-9.5mts			
Crown spread- 13.5mts		·	1990
			tan n.
Foliage colour and canopy co	ver is normal.	In South to	Chief m
0 17		The Part of the Pa	
Minor pruning has been previ	iously implemented	Contraction of the	
resulting in epicormic growth			No. No. of Astronomy
points.		Service Services 22	
Wound closure at the pruning points is normal.			
Minor remedial pruning is required to remove a small			and the second second
amount of deadwood and epicormic growth.			
Date of last inspection.			
28/11/2016			
B.P			
Condition:			
	Good 📕	Fair	Poor
Excellent			
General Summary:			
The tree overall is in good cor	ndition. There is a path and ro	adway adjacent to the tr	ee, however
compaction over the root zone is less significant and the overall health and vitality of the tree is			
noticeable in comparison to some other trees in the line.			

This line of trees should be included in the Significant Tree Register.

Nominator:	Location:	Species:
Rhonda Lang	Macquarie Street	Scientific: Brachychiton populneus
316 Macquarie street	between Bligh and Cobra Streets.	Common: Kurrajong
Dubbo 2830		Number: 10
Reason for Listing:		
One of a group of native trees.		
Forms a historic and unique remnant landscape.		

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Creates value for habitat the environment and			
aesthetics.			
Report:		Photos:	
DBH-780mm			
Height-12mts			
Crown spread- 17mts			
Crown spread- 17mts Foliage colour and canopy cover is normal. Minor pruning has been previously implemented resulting in epicormic growth response at the pruning points. Wound closure at the pruning points is average to good. Minor remedial pruning is required to remove a small amount of deadwood and epicormic growth.			
Date of last inspection. 28/11/2016 B.P Condition:			
Excellent	Good	Fair	Poor
General Summary: The tree overall is in good condition. There is a path and roadway adjacent to the tree, however compaction over the root zone is less significant and the overall health and vitality of the tree is noticeable in comparison to some other trees in the line. This line of trees should be included in the Significant Tree Register.			

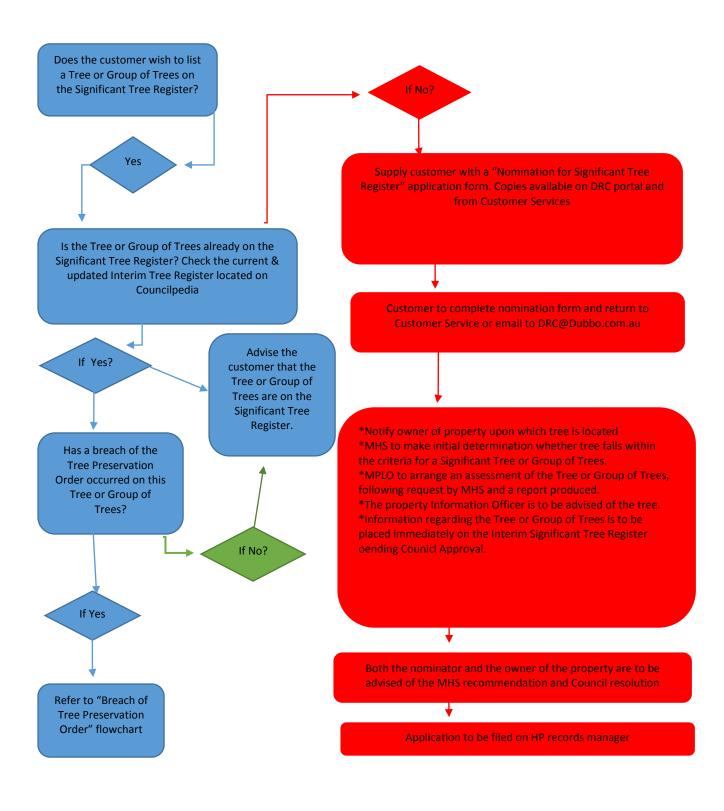


Location of Significant Trees within the City of Dubbo (30/11/2015). Red markers donate existing trees on the Significant Tree Register. The green rectangle donates the location of the original 10 *Brachychiton populneus* (kurrajongs) nominated for inclusion. One has since been removed due to basal decay.

APPENDICES

- A. PROCEDURAL FLOW CHART OF LISTING A SIGNIFICIANT TREE OR GROUP OF TREES ON THE SIGNIFICANT TREE REGISTER
- B. NOMINATION FOR SIGNIFICANT TREE REGISTRATION FORM
- C. SIGNIFICANT TREE REGISTRATION FORM TEMPLATE

APPENDIX A – TREE PRESERVATION ORDER



APPENDIX B. NOMINATION FOR SIGNIFICANT TREE REGISTRATION FORM

NOMINATION FOR SIGNIFICANT TREE REGISTER

I/We			
of(address)			
Contact phone number			
Wish to nominate: A Tree A Group of Trees	Please ✓ appropriate box		
For inclusion on the Significant Tree Register.			
DESCRIPTION OF TREE (for single tree)			
Scientific Name	Common Name:		
Size: Height (Estimate) metres	Width of Crown (Estimate)metres.		
Trunk Diametercm (at breast height)			
LOCATION OF TREE.			
	2 metres south of the front fence and 5 metres east of the western		
fence on the block at No. 315 Some Street. Attach a map if necess	sary).		
NAME OF OWNER OF PROPERTY ON WHICH TREE IS SITUA	TED ON:		
ADDRESS OF OWNER			
CONTACT PHONE NUMBER			
DESCRIPTION OF TREES (FOR GROUPS OF TREES)			

APPENDIX NO: 1 - 2017 TREE PRESERVATION ORDER - SIGNIFICANT TREE REGISTER 29/11/2016

1.	Scientific (species)	Common Name:
2.	Scientific (species)	Common Name:
3.	Scientific (species)	Common Name:
4.	Scientific (species)	Common Name:
5.	Scientific (species)	Common Name:
6.	Scientific (species)	Common Name:
7.	Scientific (species)	Common Name:
8.	Scientific (species)	Common Name:
9.	Scientific (species)	Common Name:
10.	Scientific (species)	Common Name:

LOCATION OF GROUP OF TREES.

(Provide details on the location of the group of trees.. Attach a map if necessary).

 NAME OF OWNER OF PROPERTY ON WHICH TREES ARE SITUATED ON:

 ADDRESS OF OWNER

 CONTACT PHONE NUMBER

 CONTACT PHONE NUMBER

 CATEGORY UNDER WHICH NOMINATION IS BEING MADE: (SEE BACK PAGE FOR LIST OF CATEGORIES)

 THIS NOMINATION IS SUPPORTED BY THEFOLLOWING INFORMATION: (LIST RELEVANT INFORMATION WHICH MAY SUPPORT YOUR NOMINATION IN TERMS OF THE CATEGORY NOMINATED ABOVE).

THIS INFORMATION IS SUPPORTED BY THE FOLLOWING DOCUMENTARY EVIDENCE: (LIST DOCUMENTARY EVIDENCE AND

APPENDIX NO: 1 - 2017 TREE PRESERVATION ORDER - SIGNIFICANT TREE ITEM NO: WSC16/36 REGISTER 29/11/2016 ITEM NO: WSC16/36				
ATTACH COPIES, EG: NEWSPAPER CLIPPINGS< PHOTOGRA	PHS, ETC.)			
▶				
۸				
≻				
I/We understand that this nomination will be assessed and or trees will be notified of the nomination and may make a				
Signature		Date / /20		
	OFFICE USE ONLY			
Nomination received://20	Received by:			
Owner notified:/	Notified by: Mail			
Gwner notineu/	In person: Public Notic			
	By:			
ASSESSMENT CARRIED OUT BY:	DATE OF ASSESSMENT:			
	/20			
ASSESSORS RECOMMENDATIONS AND REASONING				
PLACED ON INTERIM LIST: YES NO	DATE://20 BY:			
NOMINATOR NOTIFIED OF RECOMMENDATION BY:	Notified by: Mail Fax	Phone:		
	In person: Public Notic	e: Web:		
	Ву:			
OWNER NOTIFIED OF RECOMMENDATION BY:	Notified by: Mail 📃 Fax:	Phone:		
	In person: Public Notic	e: Web:		
	Ву:			
ENTERED INTO DATA BASE ON//20 BY:				
A <u>Single Tree</u> may be listed as significant because:				
i. It may be a remnant of a previous landscape.				

As such, it should provide evidence of changes in the landscape that might have resulted from former human culture, environmental occurrences and changes to climatic conditions or human behaviour.

j. It may have been planted by a famous person.

The significance may be local, regional, national or international and may be enhanced or diminished by the number of trees planted by that particular person.

k. <u>It may be rare, old or magnificent etc</u>

The number of specimens should be greatly reduced and the future viability of the species is heavily dependant on this specimen.

Old trees are often removed in streetscapes and other public areas due to safety concerns. However, under good management regimes it is sometimes possible to retain these trees in an over mature state – and thus provide a rare example of a species in that state. A magnificent tree will gain significance through its position in the landscape and its association with buildings and other structures. Very often, a particularly fine specimen will be defined as magnificent.

It may represent a species that is not commonly used for amenity horticulture in the Dubbo Local Government Area.

I. It may be a particularly fine representation of its species.

A tree should demonstrate all the typical characteristics generally associated with the species in greater magnitude than other trees. It should have shape, balance or symmetry that makes the tree distinctive.

m. It may be a specimen of an endangered species.

The future regeneration of the species should be such that the propagation of the tree through natural processes would be highly unlikely and the preservation of this tree is reliant to a large degree on this tree.

n. It may be of cultural value eg: may have Aboriginal markings or early survey markings etc.

The tree should be notable due to an association with a specific event, cultural story or as a result of markings that provide evidence of past events or social customs.

o. <u>It may be of a particular aesthetic value.</u>

The tree should be impressive due to uncharacteristic growth habit or combine within the landscape, place or architecture of a given area to further enhance these values.

p. <u>It may have biological value to the environment.</u>

The tree should be such that its loss to the environment would seriously threaten the natural biological processes of the immediate habitat.

A **Group of Trees** may be listed as significant for any of the following reasons:

- h. <u>They collectively fulfil any of the criteria for single trees.</u>
- i. They may for an integral part of the landscape of a heritage building or precinct.

As such, the trees should enhance or complement significant architecture or provide evidence of social customs in association with traditional buildings and should constitute a representative site.

j. <u>They may be a group of trees which have some historic significance.</u>

The trees should be notable because of an association with a memorable event or provide evidence of past social customs, natural occurrence or human behaviour.

- k. The trees should co-exist or support another feature of the natural environment that would face extinction if this association was to cease.
- I. The trees should provide a fundamental understanding of the customs or lifestyles of previous generations, either alone or in association with other elements.
- m. <u>The trees are integral component of the watershed and drainage system (including the aquifer recharge system).</u>

The trees should be such that they support the natural hydrological processes of a particular area and their retention is essential to the maintenance of those processes.

n. <u>The trees provide habitat for native wildlife.</u>

The importance of a group of trees to native wildlife, especially those as identified as "endangered" or "threatened" under State or Federal legislation, should be assessed on the ability of the native fauna to inhabit other areas in the event of loss of those trees.

The Tree Preservation Order does not apply to any tree or group of trees on private property which is not listed as "Significant."

APPENDIX C. SIGNIFICANT TREE REGISTRATION FORM TEMPLATE

Nominator:	Location:	Species:
		Scientific:

		Common:	
		Number:	
Reason for Listing:			
Neason for Listing.			
Report:		Photos:	
Date of last inspection.			
Condition:			
Excellent	Good	Fair	Poor
<u>General Summary:</u>			



REPORT: Environmental Control Policies Review

AUTHOR:Manager Environmental ControlREPORT DATE:7 December 2016TRIM REFERENCE: ID16/2271

EXECUTIVE SUMMARY

The attached policies (**Appendices 1 to 5**) have been reviewed for applicability to the newly merged Council area. All of the policies were former Dubbo City Council policies and there have been no significant changes made, other than to extend their application to the former Wellington Local Government Area. The following Council policies are recommended to be placed on public exhibition prior to adoption by Council:

- Management of Feral Infant Companion Animals;
- Keeping of Birds and Erection of Bird Enclosures and Lofts;
- Greywater/Recycled Water Reuse;
- Legionella Management; and
- Food Act Compliance and Enforcement.

FINANCIAL IMPLICATIONS

There are no financial implications arising from this report.

POLICY IMPLICATIONS

All policies will replace existing policies of the former Dubbo City Council and will now apply to the newly merged Dubbo Regional Council Local Government Area.

RECOMMENDATION

- 1. That the Council policies provided as Appendices 1 to 5 be placed on public exhibition for a period of not less than 28 days; and
- 2. That at the conclusion of the public exhibition period a further report be prepared for consideration.

Debbie Archer Manager Environmental Control

REPORT

As a result of the merger Wellington and Dubbo City councils it was necessary to review relevant Environmental Control policies to ensure consistency across the new Local Government Area. Consequently, a review has now been undertaken as follows:

• Management of Feral Infant Companion Animals (Appendix 1)

To manage the high number of feral and infant companion animals that come into the care of Council in a timely manner by permitting euthanasia where there are no alternative options.

• Keeping of Birds and Erection of Bird Enclosures and Lofts (Appendix 2)

Provides general guidelines for the keeping of birds and clear criteria for the assessment of any applications for the erection of bird enclosures or pigeon lofts that do not require development consent from Council. This policy covers birds that are not enforceable by Local Government Regulation Standards.

• Greywater/Recycled Water Reuse Policy (Appendix 3)

This policy aims to integrate the regulatory requirements for greywater and recycled water management, provide guidance for users of greywater and recycled water systems, ensure that cumulative effects do not contribute to salinity, and provide standards and guidelines.

• Management of Legionella (Appendix 4)

The purpose of the Legionella Management Policy is to minimise the risk of transmission of Legionellosis (Legionnaires' Disease) from the built environment to susceptible hosts.

• Food Act Compliance and Enforcement (Appendix 5)

Provides general guidance to Council's authorised officers on how to undertake enforcement and compliance action with a consistent approach.

As can be seen from the attached appendices no significant changes have been made other than extending their application to the former Wellington Local Government Area and clarifying some minor details. Once adopted, these policies will be the new, adopted policies for Dubbo Regional Council.

This report recommends public exhibition of these policies for a period of not less than 28 days and that a further report be prepared at the conclusion of the exhibition period.

Appendices:

- 1 Council Policy Management of Feral/Infant Companion Animals
- 2 Council Policy Keeping of Birds and Erection of Bird Enclosures and Pigeon Lofts
- 3 Council Policy Legionella Management
- 4 Council Policy Food Act Compliance and Enforcement
- 5 Council Policy Greywater/Recycled Water Reuse





Management of Feral/Infant Companion Animals

Date	September	2016
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Council Resolution Date

Clause Number

Responsible Position	Manager Environmental Control
Branch	Environmental Control
Division	Environmental Services
Version	One
TRIM Reference Number	ED16/19582
Review Period	Every two (2) years
Review Date	September 2018
Consultation	Public consultation (from/to dates)

te
June 2014

DUBBO REGIONAL COUNCIL

POLICY

PURPOSE

To manage the high numbers of feral and infant companion animals that come into the care of Council in a timely manner by permitting euthanasia where there are no alternative options.

BACKGROUND AND RELATED LEGISLATION

This Policy is in accordance with the provisions of the Companion Animals Act, 1998 (the Act), as detailed below:

- Subsection 64(5) of the Act which cites before destroying a seized or surrendered animal as authorised by Subsection 64(1) of the Act, it is the duty of the council concerned to consider whether there is an alternative action to that of destroying the animal and (if practicable) to adopt any such alternative; and
- Subsection 64(2) of the Act which cites the council may, in accordance with any policy that has been adopted by the council in relation to the management of feral or infant companion animals, destroy the seized or surrendered animal concerned before the end of any such period referred to in Subsection 64(1) of the Act.

SCOPE

The policy applies to infant and feral companion animals that are seized by, or come into possession of Council.

DEFINITIONS

Term	Definition
Infant animal	An animal less than eight (8) weeks of age
Feral animal	An animal in a wild or untamed state
Companion Animal	A dog, cat or other animal as defined by the Act
Associated organisation	Animal welfare organisations and like-minded community groups (which are sometimes referred to as 'rescue groups')

To assist in the interpretation of this Policy, the following definitions apply:

POLICY

In line with the provisions of the Companion Animals Act 1998, Council will take the most appropriate course of action in accordance with the following agreed outcomes:

 To facilitate the humane euthanasia of feral and/or infant animals deemed unsuitable for rehoming, or where it is in the best interest for the welfare of the animal. In addition the

DUBBO REGIONAL COUNCIL

euthanasia of infant animals is permitted where resources do not allow alternate options to be considered.

The Manager Environmental Control, Shelter Supervisor or delegated representative may authorise such euthanasia prior to the legislated holding period being surpassed.

- As it is Council's intention to comply with Subsection 64 (5) of the Act wherever possible, in the case of healthy infant animals and as resources permit, Council endorses that the animals be placed:
 - a. In temporary care with an RSPCA NSW sanctioned foster carer until such time as the animal's legislated holding period is surpassed; or
 - b. In temporary care of an eligible associated organisation until such time as the animal's legislated holding period is surpassed.

RSPCA or associated organisations/community groups that foster animals will be required to agree in writing that costs of care will not be Council's responsibility and that the organisation will ensure adequate traceability and monitoring of each animal for the duration of the legislated holding period.

RESPONSIBILITIES

This Policy is to be enacted by Environmental Control officers with all euthanasia to be conducted by appropriately qualified officers at the Dubbo City Animal Shelter or by qualified veterinarians.

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The Keeping of Birds and Erection of Bird **Enclosures and Pigeon Lofts**

Date

September 2016

Council Resolution Date

Clause Number

Responsible Position	Manager Environmental Control
Branch	Environmental Control
Division	Environmental Services
Version	One
TRIM Reference Number	ED16/19573
Review Period	Every two years
Review Date	September 2018
Consultation	Public consultation (from/to dates)

Description	
	Date
Dubbo City Council Policy – Clause WSC15/117	21/12/2015
Notes	

DUBBO REGIONAL COUNCIL

POLICY

PURPOSE

The purpose of this policy is to provide general guidelines for the keeping of birds and clear criteria for the assessment of any applications for the erection of bird enclosures or pigeon lofts that do not require development consent from Council. Further information about structures requiring consent can be obtained by contacting Council's Planners on (02) 6801 4000.

BACKGROUND AND RELATED LEGISLATION

- Local Government (General) Regulation 2005, Schedule 2 Standards enforceable through orders are listed. These include standards for the keeping of birds or animals and in particular for the keeping of fowls and poultry;
- Local Government Act, 1993, Part 2, Orders Orders that can be issued by Council are outlined and include orders to protect public health and the environment; and
- Dubbo LEP 2011, Wellington LEP 2012 and SEPP (Exempt and Complying Development Codes) 2008 – outline what development is permitted, when Council approval is required and what structures are exempt from approval.

SCOPE

This Policy applies to all urban land within the City of Dubbo and the town of Wellington. The Policy aims to:

- Ensure birds are kept under such conditions as not to cause or create a nuisance or to be dangerous or injurious to human health;
- Ensure consistency and fairness in the manner in which Council deals with applications for the erection of bird enclosures and pigeon lofts; and
- Ensure that any structure used for the keeping or housing of birds is appropriately constructed.

DEFINITIONS

To assist in the interpretation of this Policy, the following definitions apply:

Term	Definition
Bird	Means all birds (including both domestic, native and wild) including racing and non-racing pigeons
SEPP	State Environmental Planning Policy
LEP	Local Environmental Plan

DUBBO REGIONAL COUNCIL

POLICY

Criteria Council must consider when determining applications to keep birds and for the erection of bird housing.

Council will assess all applications to keep birds and/or erect a bird enclosure in accordance with this Policy and its aims. Bird enclosures or pigeon lofts constructed in accordance with the following criteria are deemed to have achieved the aims of this policy.

- 1. Applications for the erection of aviaries, pigeon lofts or poultry houses
 - Where the proposal does not meet the exemption criteria outlined in Subdivision 4 -Aviaries or Subdivision 21 - Fowl and Poultry Houses of the SEPP (Exempt and Complying Development Codes) 2008, Council will require a development application. All applications should be made by completing a development application form, including a site plan indicating the location of the proposed structure, and indicating elevations and specifications.
 - Applicants should also advise the reason for wanting to keep birds or pigeons such as recreation or racing and the proposed number of birds or pigeons to be kept on the premises.
 - The appropriate fee must also be paid at the time of lodging the application.
- 2. Location

Where possible bird housing should be located in the rear yard of the premises and must be:

- A minimum of 3.6 metres from the side or rear boundary (except the side boundary of corner blocks where the side boundary adjoins the roadway); and
- A minimum of 4.5 metres from every dwelling, public hall, school, or premises used for the manufacture, preparation, sale or storage of food.
- 3. Methods of construction
 - a) Structures must be constructed of non-reflective materials;
 - b) Walls within 4 metres of the property boundary must be of solid construction;
 - c) Floors:
 - Where wooden floors are used, a clear air space not less than 400mm between the ground level and the underside of the flooring timbers must be provided;
 - Where concrete floors are used, a smooth easy-to-clean surface must be provided; and
 - Earth floors are permitted in circumstances where such floors are reasonable for the type of bird eg native Australian birds and must be kept in a clean, dry and vermin-free manner.
 - d) Lofts are to have a maximum height of 2.5 metres above natural ground level;
 - e) An appropriate size of enclosure must be selected to house a maximum number of birds. The maximum number of birds per enclosure should be reasonable taking into consideration the type of birds and the space each bird requires for the welfare of the

DUBBO REGIONAL COUNCIL

bird. As a guide only, the maximum number of birds per cubic metre of air space should not exceed (5); and

- f) Roof water and wastewater must be disposed of in an environmentally responsible manner without causing a nuisance or hazard to neighbouring premises.
- 4. Guidelines for keeping birds
 - a) In addition to these guidelines, relevant State and Commonwealth legislation will also be taken into account.
 - b) The operator of any racing pigeon loft shall be a current bona fide member of a recognised Pigeon Racing or Fanciers' Association or other recognised bird club.
 - c) Pigeons are permitted to be exercised for no more than one hour in the morning and one hour in the evening. The hours permitted to exercise the pigeons are between 7.00 am and 8.30 am in the mornings and between 4.00 pm and 5.30 pm in the evenings. The applicant must notify immediate neighbours in writing of the permitted times so that any possibilities of nuisances occurring are minimised.
 - d) All feed must is kept in vermin-proof containers and must be stored appropriately so as to avoid attracting vermin. All birds must be fed within the enclosure and at no times shall feed be made available outside of the enclosure.
 - e) Enclosures must be regularly cleaned and maintained in a healthy condition so that food scraps, faeces or feathers do not create odours or attract vermin.
 - f) Health and noise nuisances must not be created which may adversely impact on persons in the immediate vicinity. (Should Council receive notification of justified nuisances the owner of the birds may be directed to remove the birds from their premises.)
 - g) The keeping or breeding of birds shall not be undertaken for any business or commercial purpose or financial gain without prior development consent from Council.
 - Standards for the Keeping Birds and Animals, which may be enforceable by Order under the Local Government Act are available in <u>Part 5, Schedule 2 Local Government (General)</u> <u>Regulation 2005</u>.
- 5. Maximum number of birds or pigeons

The number of birds to be kept on a property will be determined by Council in each instance. Council will take into consideration the type of bird, the welfare of the birds, the wishes of the applicant, any submissions by relevant parties and any other reasonable factors, such as health and environment, when making such a determination.

In the case of pigeons, no more than 120 racing pigeons including 40 breeding stock birds shall be kept per premises.

RESPONSIBILITIES

This Policy is to be referred to by Building and Development Services officers when assessing applications. Instances of non-compliances are to be investigated by Environmental Control officers.

DUBBO REGIONAL COUNCIL



Council Resolution Date

Date

Legionella Management

September 2016

Clause Number	
Responsible Officer	Prue Galvin
Position	Senior Environment and Health Officer
Branch	Environmental Control
Division	Environmental Services
Version	One
TRIM Reference Number	
Review Period	Every two (2) years
Review Date	September 2018
Consultation	Public consultation (from/to dates)

Document Revision History	
Description	Date
Notes	

POLICY

PURPOSE

The purpose of the Legionella Management Policy is to minimise the risk of transmissions of Legionellosis (Legionnaires Disease) from the built environment to susceptible hosts.

The principal goals of the Management Policy are to ensure that:

- All regulated water-cooling systems and warm-water systems are registered in accordance with the Public Health Act, 2010 and the Public Health Regulation, 2012;
- All regulated systems as defined by the Public Health Act, 2010 shall comply with legislation in respect to installation, commissioning, operation and maintenance;
- Building owners and occupiers understand and adhere to their responsibilities of installing, operating and maintain a regulated system in accordance with the Public Health Act, 2010 and the Public Health Regulation, 2012.
- All regulated systems are audited and inspected for compliance with Public Health legislation at least every third year.
- Annually all regulated systems are reviewed to ensure Council's register information is current and accurate and all information is provided in accordance with the Public Health legislation.

BACKGROUND AND RELATED LEGISLATION

Within most local government areas the built environment will contain water-cooling systems and warm-water systems. These systems can provide an ideal breeding ground for *Legionella* bacteria. The *Legionella* bacteria can cause a type of pneumonia (an infection of the lung), which can be fatal, known as Legionnaires' disease and/or Pontiac fever (a mild flu-like illness). The disease has an incubation period from 2 to 10 days for the symptoms to develop after inhaling the bacteria. The *Legionella* bacteria are transmitted through aerosols.

Outbreaks of Legionnaires' disease occur from time-to-time but are preventable. *Legionella* bacteria can grow in poorly operated and maintained water-cooling systems and warm-water systems, particularly those systems which are not maintained in a clean condition and continuously treated with a biocide to control *Legionella* bacteria, algae and biofilms.

Hundreds of residents, workers and visitors may be potentially exposed to this health hazard on a daily basis if systems are not properly installed, commissioned, operated and maintained.

The Public Health Act, 2010 (the Act) and the Public Health Regulation, 2012 (the Regulation) control various water and air systems in the built environment. These systems are known as 'regulated systems' and include:

- Water-cooling systems;
- Hot-water systems;
- Humidifying systems;
- Warm-water systems; and
- Air-handling systems.

The purpose of the Act and Regulation is to ensure owners and occupiers of buildings comply with minimum legislative responsibilities in order to prevent or prohibit the growth of micro-organisms in these regulated systems that are liable to cause Legionnaires' disease and other diseases.

Related legislation includes:

- NSW Public Health Act, 2010;
- NSW Public Health Regulation, 2012;
- NSW Code of Practice for the Control of Legionnaires Disease;
- AS/NZS 3666.1: 2011 Air-handling and water systems of buildings—Microbial control—Design, installation and commissioning;
- AS/NZS 3666.2: 2011 Air-handling and water-systems of buildings—Microbial control—Operation and maintenance; and
- AS/NZS 3666.3 2011 Air-handling and water-systems of buildings—Microbial control— Performance-based maintenance of cooling water systems.

SCOPE

This Policy applies to all buildings in the local government area utilising a regulated system as defined by the Public Health Act. The Policy will assist Council to inform the following persons to ensure compliance with the regulatory requirements in order to minimise the potential for outbreaks of Legionnaires' disease:

- Developers;
- Architects;
- Building owners and building manager/caretaker/agent;
- Council's authorised officers; and
- Other government agencies.

DEFINITIONS

To assist in interpretation, the following definitions apply:

Term	Definition
Regulated system	As defined by the Public Health Act, 2010 means any of the following:
	 (a) an <i>air-handling system</i>, being a system designed for the purpose of directing air in a positive and controlled manner to and from specific enclosures by means of air-handling plant, ducts, plenums, air- distribution devices and automatic controls;
	 (b) a hot water system, being a system designed to heat and deliver water at a temperature of at least 60°C at each outlet point;
	 (c) a <i>humidifying system</i>, being a system for adding moisture to air in order to raise its humidity;
	 (d) a warm-water system, being a system designed to heat and deliver water at a temperature of less than 60°C at each outlet point;
	(e) a water-cooling system, being:
	 a device for lowering the temperature of water or other liquid by evaporative cooling, or
	 (ii) an evaporative condenser that incorporates a device containing a refrigerant or heat exchanger, together with its associated equipment and pipe work,
	(f) any other system for the treatment of air or water that is declared by the regulations to be a regulated system for the purposes of this Division

POLICY

1. Regulation of regulated systems

Council will regulate regulated systems through an annual review and inspections as required.

1.0 Annual Review of Warm Water Systems

All building managers will be required to complete a Water Cooling System Registration Form (see **Appendix A**) to ensure Council's register is maintained up to date and accurate.

1.1 Annual Review of Water Cooling Systems

All building managers will be required to complete a Water Cooling System Registration Form (see **Appendix B**) to ensure Council's register is maintained up to date and accurate. In addition to completing the form the building manager will be required to provide a current certificate for the Process of Disinfection. (An exemption for completing the form will be given to building Managers whereby no details have changed from the previous year).

1.2 Inspection of Water Cooling Systems

In addition to the annual review, water cooling systems will be inspected at least once every third year. When conducting the inspection, Council's authorised officer should:

- Make an appointment with the appropriate person responsible for the regulated system, or in the case of an emergency
- present themselves at reception, advise that they are at the premises to conduct an inspection and request to speak to an appropriate person.
- Conduct the inspection at a reasonable time.
- Provide proof of identity when requested.
- Adhere to any occupational heath and safety requirements applicable whilst in attendance.
- Record all non-compliances.
- Provide a written report on all outcomes from the inspection.
- Answer any questions relating to the report or other related matters.
- Be courteous and fair throughout the inspection.
- Exercise discretion when required in all of the above matters.

1.3 Re-Inspection

Council will undertake a re-inspection (where required) to enforce compliance with legislation. A re-inspection will be undertaken for all non-compliances where the risk is considered greater than low and the non-compliance cannot be immediately rectified.

1.4 Verbal Warnings

Council's Authorised Officers may issue verbal warnings for non-compliances where the risk of the non-compliance is considered low or can be immediately rectified.

1.5 Written Warnings

Council may issue a written warning (letter) for non-compliances where the risk of the noncompliance is considered low, is the first offence and not an immediate risk to public health.

1.6 Improvement Notice

Council may issue an improvement notice for non compliance with the Public Health Act 2010 where non compliance/s present a medium to high risk or where a warning has previously been issued.

1.7 Penalty Notice

Council may issue a penalty notice where a business fails to rectify non compliances or where the risk of non compliance is considered medium to high.

1.8 Prohibition Order

A prohibition order may be issued on a business failing to comply with Public Health Act 2010 where continued operation of a business, use of specific rooms or equipment presents a serious risk to publish health.

2. Council's responsibilities and requirements

2.1 Register

Council must maintain a register of all cooling towers throughout the local government area and warm water systems installed within nursing homes and hospitals only.

2.2 Inspections

Environment and Health Officers are authorised under the NSW Public Health Act to undertake inspections of regulated systems and take action where they believe a system does not comply with applicable legislation.

2.3 Reporting

Council is required to provide a report of its legionella management activities as required to NSW Health.

3. Responsibilities and requirements for building owners and occupants

The responsibility for a regulated system varies according to the circumstances. Generally, the prime responsibility for a regulated system rests with the owner and/or occupier of the premises where the regulated system is located unless a competent person is engaged.

3.1 Owner

The owner has responsibilities only when the owner controls the part of premises (operation area) on which the regulated system is situated.

3.2 Occupier

The occupier of the part of premises (operation area) on which the regulated system is situated is responsible for the proper installation, commissioning, operation and maintenance of the regulated system unless:

- The installation is carried out by an installer who might reasonably be expected to be competent to install and commission the system; or
- The operation and maintenance is carried out by a contractor who might reasonably be expected to be competent to operate and/or maintain the regulated system.

The occupier is also required to register the regulated system with the local authority. The building manager, if engaged by the occupier, is the agent of the occupier and the occupier still bears the legal responsibility for the regulated system.

3.3 Installation

A regulated systems must be installed and commissioned in accordance with AS/NZ3666.1.2011. If a regulated system is not installed as required, then both the installer and the occupier of that part of the building where the system is installed (whether the occupier is the owner or not) are both guilty of an offence.

The occupier must be given both an operation manual and a maintenance manual for the system by the installer, each of which must comply with the requirements for such manuals set out in AS/NZS 3666.2:2011. The operating manual should depict the water treatment process and include:

- Physical details (drawing);
- Operating procedures;
- Shut down procedures;
- Certification of the disinfection process;
- Emergency contact details;
- Contractor contact details; and
- Decontamination procedures

Manuals should be periodically reviewed by site owners/occupiers to incorporate amended legislation, standards, codes and industry practices. Manuals shall be kept onsite adjacent to the regulated systems or in a clearly identified location in proximity to the installation. A person in charge of the facility must be familiar with the location of these manuals.

3.4 Operation and Certification

Regulated systems must be operated in accordance with AS/NZS 3666.2:2011. A water cooling system must be equipped with a process designed to control microbial growth. The process:

- Must be in operation at all times independently of the water cooling system. The water cooling system must still be effectively disinfected even though the water cooling system may not be operating continuously. Further, the biocide does not have to be added at all times but rather the process must be in operation; and
- Must be certified by a competent person (a tertiary qualified chemist, chemical engineer, engineer or microbiologist and who has expertise in the relevant field) annually as being an effective process of disinfection under the range of conditions that could ordinarily be expected. The competent person is certifying the process, not its performance under installed field conditions.
- Must be sufficiently effective so that no sample taken from any part of the system subjected to a test in accordance with the relevant Australian Standard has:

- o A level of Legionella of more than 10 colony forming units per millilitre; or
- o A Heterotrophic Plate Count of more than 100,000 colony-forming units per millilitre
- Must be supplemented by remedial action taken by a competent person after any test where the levels set out above are exceeded. Remedial action could include recommendations regarding the disinfection process which could then be implemented by the competent operator.

The Occupier must keep a copy of the most recent Certificate for the Process of Disinfection at the premises and make it available for inspection on request by an authorised officer. The occupier will also be responsible of ensuring the certificate is provided to Council during the annual review process.

If the occupier fails to ensure that the regulated system is operated and maintained properly then the occupier is guilty of an offence.

3.5 Maintenance

Records must be kept whenever maintenance is performed. This includes the date, details of maintenance and the name of the contractor. The person carrying out the work needs to review the documentation and to sign the record document.

The Public Health Regulation 2012, Clause 8 Prescribed maintenance requirements, outlines the required Australian Standards for the maintenance of regulated systems. These are:

- AS/NZS 3666.2:2011 which is a prescriptive approach to operation and maintenance. Essentially the prescriptive approach requires monthly inspection and cleaning at six monthly intervals; or
- AS/NZS 3666.3:2011 but only where the local authority has been notified in writing.
 Performance based monitoring relies on a risk assessment and risk management approach based on monthly bacteriological sampling, water quality management and operating water temperature.

Records shall be kept onsite adjacent to the regulated systems or in a clearly identified location in proximity to the installation. A person in charge of the facility must be familiar with the location of these records.

If the occupier fails to ensure that the regulated system is operated and maintained properly then the occupier is guilty of an offence.

3.6 Registration

Under legislation the occupier of the part of the premise where a regulated system is installed must notify the local council of the following particulars:

- The address and telephone number of the premise on which the system is installed,
- The name and contact details of the occupier of the premise (including residential address, e-mail address and home, business and mobile telephone numbers),
- The Australian Business Number (ABN) or Australian Company Number (ACN) if any, of the occupier of the premise,
- The type of regulated system,

 Details of any inspections carried out by the local government authority for the purposes of the Act.

These particulars must be notified to the Council within one month after the person becomes the owner or occupier of the premise or if there is an alteration of the above details.

4. Disease management and outbreak responses

The NSW Health and its Public Health Unit are responsible for coordinating a case investigation and outbreak response under the relevant notifiable disease protocols. Notification is affected by medical practioners and laboratories to the Director General of NSW Health.

Council Officers should notify the local Public Health Unit when:

- Multiple failures occur or when a water-cooling tower has been unregistered and/or has incomplete/outdated maintenance records; or
- If a member of the public notifies Council of a health concern regarding Legionnaire's disease.
- 5. Fees and charges

In accordance with section 608(3) of the Local Government Act 1993, Council is able to recover costs of inspecting water-cooling systems and warm-water systems. A fee for these inspections can be adopted by Council each year and any applicable fees can be listed in Council's Revenue Policy for that year.

- 6. Training, appointment and competency of Authorised Officers
 - 6.1 Appointment of Authorised Officers

An Authorised Officer is a person appointed under the Public Health Act.

6.2 Powers of Authorised Officers

For the purposes of this Act, an authorised officer may, at any reasonable time, do any one or more of the following:

- Enter the premises at any reasonable time in order to find out whether or not a system on the premises is a regulated system, and
- Inspect and test any system on the premises, and
- Investigate whether or not the prescribed operating requirements, and the prescribed maintenance requirements, have been complied with in relation to any regulated system on the premises, and
- Require the production of, and inspect, any records required by the regulations to be kept in relation to the operation and maintenance of any regulated system on the premises.
- 6.3 Competency and training of Authorised Officers

Environment and Health officers have a key role in auditing premises and assisting NSW Health in outbreak investigations during which local knowledge is essential.

Council will support the attendance of relevant officers at training courses, as they become available.

Work Health and Safety applies in all situations involving the inspections of water-cooling towers, all Officers shall be provided with appropriate PPE (eye protection, P2 rated respirator and gloves) to safely conduct inspections.

RESPONSIBILITIES

This Policy is to be enacted by Environmental Control officers who are authorised under the Public Health Act 2010. Council is required to report to NSW Health as requested or required by the legislation.

APPENDICES

Appendix A Please attach the regulated premises rego form

U:\ES\Business Support\Forms\Environmental Control

Appendix B

Please attach the Regulated water cooling system rego form in

U:\ES\Business Support\Forms\Environmental Control



Council Resolution Date

Clause Number

Date



Food Act Compliance and Enforcement

September 2016

Responsible Position	Manager Environmental Control
Branch	Environmental Control
Division	Environmental Services
Version	One
TRIM Reference Number	
Review Period	Every two (2) years
Review Date	September 2018
Consultation	Public consultation

Document Revision History	
Date	
26 April 2005	
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POLICY

PURPOSE

The purpose of the Policy is to:

- To provide transparency to consumers and industry on how the Council will make decisions on enforcement action;
- To guide decision-making and action by staff in the use of enforcement options;
- To use regulatory implements in such a way as to best achieve Organisational objectives;
- To promote compliance with the legislative provisions of NSW food regulation consistent with the objects of the Act; and
- To have a risk-based approach to compliance and enforcement activities through adoption of a graduated and proportionate response to legislative non-compliance.

BACKGROUND AND RELATED LEGISLATION

The Policy was created in 2005 to provide general guidance to Council's authorised officers on how Council will undertake enforcement and compliance action with a consistent approach. Due to amendments to the legislation and developments in the food industry, the Policy has been updated accordingly.

Relevant legislation:

- Food Act, 2003;
- Food Regulation, 2010;
- Australia New Zealand Food Standards Code;
- Food Standards Australian New Zealand Act, 1991.

SCOPE

Council administers the Food Act 2003 (NSW) within the Local Government Area. The Council is defined by Section 4 of the Act as an enforcement agency. The objectives of the Act as defined in Section 3 include:

- Ensure food for sale is both safe and suitable for human consumption;
- Prevent misleading conduct in connection with the sale of food; and
- Provide for the application in this state of the Food Standards Code.

The Food Standards Code means the Australia New Zealand Food Standards Code as defined in the Food Standards Australia New Zealand Act, 1991 of the Commonwealth of Australia.

Enforcement of the Act is essential for the effective management of food safety risks and the prevention of misleading conduct in connection with the sale of food. Accordingly, the Council is committed to ensuring there is a high level of compliance with the Act and the Food Regulation.

This Policy sets out compliance and enforcement that will facilitate the effective achievement of the regulatory goals of the Act.

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Breaches of the Act are classified as criminal offences and penalties of up to \$550,000 and/or two years imprisonment may apply. The range of offences under the Act and Regulation vary greatly in their seriousness and, accordingly, a variable range of penalties and enforcement options are available. This Policy describes the graduated options and provides details of the matters that will be considered in their application toward achieving the objects of the Act.

The Policy also sets out the principles Council will apply in its compliance and enforcement activities.

POLICY

Council's authorised officers will conduct at least one inspection per year of medium and high risk food premises. The inspection will be conducted using the Food Premises Assessment Report and will result in either a satisfactory outcome or a result requesting further Council action for compliance.

This policy sets out the guiding principles the Food Authority will apply when conducting regulatory and enforcement activities and includes an approach that is:

- Graduated and proportionate;
- Authorised by law;
- Impartial and procedurally fair;
- Accountable and transparent;
- In the public interest; and
- Allowing for application of multiple enforcement tools under appropriate circumstances.

1. A graduated and proportionate response to legislative noncompliance

Council will apply a graduated and proportionate approach to the application of enforcement tools upon food businesses. This approach envisages the application of mild enforcement tools to businesses in the first instance, to be followed by more severe tools should the business continue the noncompliant activity.

Examples of mild enforcement tools that may be employed include improvement notices or warning letters. Examples of more severe tools include prohibition orders, penalty notices, licence suspension/cancellation or prosecution. The Enforcement Toolbox is attached to this Policy as **Appendix 1**.

Council may at times consider using mediation and conciliation as preliminary steps in enforcement processes. Mediation and conciliation provide the proprietor of the business with the opportunity to explain mitigating circumstances of the legislative non-compliance. Following this explanation, Council may make a determination on an appropriate course of action.

Through employment of a graduated approach, it is considered that offences may be appropriately managed and allow Council to use its resources to the greatest effect.

2. Proportionate response

Notwithstanding No. 1 above, the Council will select an enforcement response that is proportionate to the identified noncompliance and capable of providing sufficient incentive to the business to amend the noncompliant behaviour.

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Furthermore, should the circumstances surrounding an offence be considered sufficiently serious (eg an imminent risk to public health and safety), the Council may elect to employ multiple enforcement tools at the same time. This Policy should not be interpreted as preventing Council from exercising such powers.

Factors that Council will consider in making decisions concerning the choice of enforcement tool to respond to a particular incident include:

- Impact of the alleged offence on the consumer or to competitors of the offending business;
- Circumstances of the alleged offence and the individual circumstances of the business and persons associated with the business that is subject to enforcement action;
- Compliance history of the business that is subject to enforcement action, both in general and with respect to the incident that is the subject of enforcement action;
- Cooperation demonstrated by the alleged offender, both in relation to investigations conducted on the offender's premises relating to the offence and in respect to the cooperation demonstrated by the alleged offender following commencement of enforcement action;
- Remedial action implemented by the alleged offender to address the non-compliance that is the subject of enforcement action;
- The degree of care and due diligence exercised by the food business to avoid noncompliance
- Timeframe over which the offence was committed; and
- The need to provide Council officers with a safe working environment within the requirements of work, health and safety laws, particularly in relation to matters involving assaults and intimidation.

3. Authorised by law

Authorised officers are required to act within their legal remit of statutory power when undertaking enforcement activity. Businesses should not be required, either directly or by inference, to observe requirements that are not authorised by law.

The following advice is offered concerning the collection of evidence:

- Evidence obtained by authorised officers relating to actual or alleged offences should be obtained within the requirements of food legislation, and also within the requirements of criminal law;
- Decisions should be based on evidence. That is, enforcement action is to be supported by
 evidence that is appropriate in the circumstances. Generally that evidence should be
 admissible and sufficient to establish that an offence has been committed (this will assist in
 ensuring that enforcement action is only taken under appropriate circumstances); and
- Evidence should also be sufficient to support a case against appeal (eg a penalty notice referred to a court for a defended hearing).

4. Impartiality and procedural fairness

Council will undertake enforcement activity against food businesses in a timely manner that is procedurally fair and impartial. This will assist in minimising opportunities for arbitrary or inexplicable differences between the handling of individual cases, or classes of cases, to occur.

Discrimination (eg with regard to ethnicity, religion, age or gender) by authorised officers when undertaking enforcement action is unacceptable practice.

Decision-making about applying enforcement provisions should not be influenced by:

- Political advantage or disadvantage to a government or any political party or group;
- The consequences of a decision to undertake enforcement action on the personal or professional circumstances of staff of the Council; or
- The personal feelings of the decision-makers towards the offenders.

Many juveniles (10 to 18-year-olds) work in (or operate) food businesses and may therefore be subject to enforcement action under some circumstances. Under these circumstances, legislation for dealing with children between the ages of 10 and 18 years (young offenders' legislation) applies to compliance and enforcement activity.

5. Accountable and transparent

To ensure Council is accountable and transparent in the application of enforcement tools, Council officers will:

- Ensure that legislation, enforcement policies, complaints' procedures and relevant information are readily accessible to food businesses and the public;
- Use plain language to communicate with the public and the food industry and utilise interpreter resources where required;
- Ensure that policies and procedures that will be followed in addressing stakeholder issues associated with enforcement action are readily available;
- Advise of available complaint or appeal processes associated with enforcement action inclusive of timeframes applicable to these processes; and
- Provide advice on fees and charges that may be applied in discharging enforcement obligations or providing services under the relevant legislation.

The constraints of any privacy legislation and confidentiality provisions when initiating enforcement action against food businesses (unless a statutory requirement exists to disclose the information) will be observed.

6. The public interest

The overriding consideration in taking enforcement action should always be the protection of public health and safety.

7. Application of multiple enforcement tools

A graduated approach to the application of individual enforcement tools does not preclude the simultaneous application of multiple enforcement tools. For example, there are circumstances, such as a serious hygiene breach, where the concurrent issue of a Penalty Notice and Prohibition Order would be appropriate.

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RESPONSIBILITIES

The Council officers responsible for this Policy are those officers who are authorised under the NSW Food Act, 2003. Council is required to report to the NSW Department of Primary Industries Food Authority, as required by the legislation.

APPENDICES

Appendix 1 - Enforcement Toolbox

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APPENDIX 1

ENFORCEMENT TOOLBOX

The following list of tools, ranked in order of graduating severity, provides guidance in the application of enforcement provisions against food businesses:

- Warning letter;
- Statutory Improvement Notice which may consider issues such as cleaning of premises, equipment or transport, repair or replacement of equipment or transport, or request revision of a food safety management system;
- Prohibition Order which controls certain activities, the use of certain appliances or prevents operation of the food business entirely. May be used in situations where there is failure to comply with an Improvement Notice or to prevent or mitigate a serious danger to public health;
- Seizure of food, vehicles, equipment and labelling or advertising material that does not comply with the legislation or as evidence of an offence;
- Penalty Notice;
- Prosecution in the Local Court;
- Publication of the names of offenders on the Food Authority's website registers;

1. Verbal warnings

Authorised officers are recommended to routinely provide food safety advice to food businesses. Advice should be presented in a way that businesses may readily determine the difference between general advice and directed compliance advice (ie a legal requirement). Such advice should not extend beyond the level of expertise of the authorised officer.

Verbal warnings, as they are not accompanied by formal notification, are prone to improper documentation by the regulator and the business, or misinterpretation or being completely forgotten. Due to the informal nature of verbal warnings, it is suggested that they are only used for issues of a minor technical nature.

2. Written warnings

Generally speaking, warning letters should only be used for breaches where the issuing of an Improvement Notice is not appropriate or warranted in the first instance. When issued, it is suggested that warning letters detail the following:

- Nature of the offence;
- Relevant legislation and clauses breached;
- Required remedial action; and
- Timeframe for implementation of the proposed remedial action.

Warning letters are to be followed-up within three (3) months of the expiry timeframe to ensure the required actions have been undertaken.

It is likely that failure to comply with a warning letter may, in most cases, result in the implementation of more serious enforcement action.

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3. Improvement notices

Improvement Notices are statutory notices issued by authorised officers upon food businesses that address prescribed issues and have prescribed content.

An authorised officer may issue an Improvement Notice to a food business if it is believed that the business is acting in contravention to the food legislation or to particular instruments associated with the legislation. Improvement notices should only be issued when considered to be an appropriate tool, ie capable of providing sufficient incentive to the business to address the matter.

Improvement notices may be issued to businesses for cleaning, sanitation and maintenance issues (including repair and replace) for premises, food transport vehicles or processing equipment within premises. Improvement notices may also be issued in relation to compliance with the Food Safety Standards of the Food Standards Code (ie Standards 3.2.2 and 3.2.3), or concerning a business's particular practice for handling food.

Improvement notices should include the following information:

- Provision(s) of the appropriate legislation that the authorised officer reasonably believes is being, or has been, contravened;
- Brief description of how the relevant legislative provision(s) have been, or are being, breached; and
- Particular action that the business should undertake in order to rectify the observed legislative non-compliance.

The timeframe in which the legislative contravention should be resolved by the business. For more serious issues this period is likely to be 24 hours and for less serious issues, a period considered appropriate by the authorised officer, but normally longer than 24 hours.

Advise the business that it is an offence not to comply with a notice without reasonable cause.

Follow up inspections are to occur at the timeframe nominated in the Improvement Notice.

Extensions to the date of compliance provided in an Improvement Notice may be granted at the discretion of an authorised officer. However, it is recommended that extensions are only provided in instances where the business requests an extension before the expiry date of the Notice. Extensions may only be considered for more minor matters such as repairs to equipment or replacement of equipment parts. Exceptions may be granted by authorised officers at their discretion subject to the business satisfying the officer that exceptional circumstances prevail.

Businesses are advised that failure to comply with an improvement notice will generally result in implementation of more serious enforcement action such as a prohibition order, penalty notice or both.

4. Prohibition orders

A Prohibition Order forbids the handling of food on a specified premises, vehicle or equipment or requires that food may not be handled in a specified way or for a specified purpose.

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Prohibition orders may be issued where it is necessary to prevent or mitigate a serious danger to public health or where an Improvement Notice has not provided sufficient incentive to a business to address an issue of legislative non-compliance. A Penalty Notice may also be issued to businesses that have not addressed matters listed in an Improvement Notice within the prescribed timeframe.

Prohibition orders may be specifically directed, such as to apply to a specific piece of equipment or part of the premises or be more-broadly directed and applied to an entire premises.

Breach of a Prohibition Order is a serious matter that will likely result in prosecution.

A Prohibition Order will remain in place until a Certificate of Clearance is issued following a request for inspection from the business. An inspection is to take place within 48 hours of receiving a written request for inspection from the proprietor of a food business. Should an inspection not be undertaken within this timeframe, the Food Act, 2003 requires that a Certificate of Clearance be automatically issued to a business under a prohibition order.

5. Seizure powers

Authorised officers generally have legislative seizure powers to seize food, vehicles, equipment and labelling or advertising materials which the authorised officer reasonably believes do not comply with a provision of the relevant legislation or may form part of evidence that an offence has been committed.

Seized goods that are forfeited to the Crown should be destroyed or disposed of in a manner that ensures there can be no allegation of improper conduct. Records should be kept of how, when and where seized goods are disposed. It is further advisable to have disposals of seized goods witnessed.

While seizures are undertaken to collect evidence or prevent further offences being committed, they effectively impose a penalty upon the person from whom the food, vehicle, equipment and labelling or advertising material has been seized.

The person from whom items have been seized must be provided at the time of seizure, with a statement that describes the items seized, the reasons for those items being seized, the address where those items will be held, as well as be informed of their right of appeal.

Should subsequent investigation reveal that the business has not contravened the legislation, all seized materials should be returned to the business as soon as possible.

It should be noted that the Act provides for compensation to be paid to food businesses where materials (ie food, equipment etc) have been seized should the grounds for making the seizure be proven to be inadequate.

Penalty notices

A Penalty Notice is issued to a person who has committed a specific offence against the Act or Regulation. If the person does not wish to have the matter dealt with before a court, they will need to pay a specified amount for the offence within a specific timeframe. Alternatively, the person may elect to have the matter heard before a court.

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Penalty notices provide an efficient method of dealing with breaches of food legislation that may otherwise require presentation to a court.

As penalty notices may be referred to a court for hearing, authorised officers are advised to collect sufficient evidence to prove the elements of the alleged offence before issuing penalty notices. It is suggested that this evidence be appropriately logged and secured as for a prosecution.

7. Cautions

In accordance with Council's Enforcement and Prosecution Policy a caution may be issued instead of a Penalty Infringement Notice if the officer believes:

- On reasonable grounds that a person has committed an offence under a statutory
 provision for which a penalty notice may be issued; and
- It is appropriate to give a caution in the circumstances.

The Enforcement and Compliance Policy advocates the use of a graduated approach to enforcement and allows for not only cautions to be given but the use of less severe enforcement tools if warranted.

8. Prosecution

Prosecution will generally be utilised for more serious legislative breaches or for matters where less severe enforcement action has not been sufficient to convince the business to address the observed noncompliance. It should be noted that matters heard in the Local Court are subject to jurisdictional limitations in relation to the maximum penalties available under the Food Act, 2003 and therefore may not attract the full penalties provided by the legislation.

Submissions to the court on penalties will generally include details about the risk to public health, including the severity of the possible harm that may result (where appropriate) and take account of the economic benefit gained by the food business in not complying with the legislation.

As a prosecution always proceeds before a court or related tribunal, it is recommended that all supportive evidence concerning enforcement action taken be made available. Evidence supporting enforcement action should be objective and as comprehensive as possible.

9. Publication of the names of offenders

The NSW Food Authority publishes lists of businesses that have breached or are alleged to have breached the Food Act, 2003 or Food Regulation, 2010. Individuals and businesses may receive either a Penalty Notice for their alleged offence or be prosecuted before a court. The Food Authority publishes a register of penalty notices and a register of offences (prosecutions).

The information, which can be published, is set out in ss133A to 133F of the NSW Food Act, 2003. Decisions about which penalty notices are published are made according to the Food Authority's 'Penalty Notice Publication Protocol' which is available on the Food Authority's website. A mechanism for having information changed or removed from the registers is also available on the website.

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Greywater/Recycled Water Reuse

Date	September 2016
Council Resolution Date	
Clause Number	
Responsible Position	Manager Environmental Control
Branch	Environmental Control
Division	Environmental Services
Version	One
TRIM Reference Number	ED14/29833
Review Period	Every two (2) years
Review Date	September 2018
Consultation	Public consultation (from/to dates)

Document Revision History		
Description	Date	
Dubbo City Council Policy - WSC14/115	24 November 2014	
Notes	l.	

DUBBO REGIONAL COUNCIL

POLICY

PURPOSE

The principle purpose of this Policy is to:

- Integrate the regulatory requirements for greywater and recycled water management;
- Provide guidance for users of greywater and recycled water systems to prevent any adverse or cumulative impact on the environment and its sustainability;
- Ensure that the cumulative effects of greywater/recycled water reuse, particularly in the urban area, does not contribute significantly to the occurrence of salinity; and
- Provide council officers with specific standards and guidelines to enable them to answer enquiries or assess applications on greywater reuse systems.

BACKGROUND

The use of greywater has many advantages including conserving our drinking water resources. Greywater reuse also carries a number of health and environmental risks which cannot be ignored.

Advantages of reusing water

Greywater/recycled water is a significant water resource, provided it is managed in an environmentally sensitive manner. Reuse reduces pressures on drinking water supplies from:

- Drought;
- Urban growth; and
- Environmental flow requirements in rivers.

Greywater can be used to water gardens and lawns and if treated appropriately, flush toilets, and wash clothes. Reuse can:

- Reduce water bills;
- Conserve drinking water resources;
- Reduce the need for water restrictions;
- Reduce load on existing sewerage systems;
- Use less energy and chemicals;
- Recycle nutrients; and
- Recharge depleting groundwater sources.

Risks of Reuse

Although not as contaminated as raw sewage; greywater/recycled water still presents a risk to public health and the environment by:

- Containing faecal contamination or micro-organisms, many of which are pathogenic and cause disease;
- Being chemically polluted by dissolved salts from detergents and cleaning products, nutrients or by organic chemicals such as oils, fats, milk, etc.
- Containing particles of dirt, lint, food and human waste products.

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Therefore, the level of treatment required depends on the potential end use.

a) Public health issues

All forms of greywater/recycled water are capable of transmitting disease, either through:

- Indirect ingestion by contact with contaminated items;
- Inhalation of irrigated spray or contact with broken skin, insects and vermin, or
- Tracking by, or contact with, exposed household pets.
- b) Environmental issues

Some chemical pollutants that greywater/recycled water contains may be valuable fertilizer for lawn and watered gardens. However, others may be harmful to vegetation and soils. These include sodium, total salts, chloride and boron. Greywater may harm the environment by:

- Overloading the land application system with nutrients;
- Accumulation of contaminants, such as salts becoming detrimental to the soil and vegetation;
- Degradation of the soil with chemical impurities that affect the soil's capability to assimilate nutrients and water;
- Altering the soil salinity, permeability, ph level, electrical conductivity, sodicity, dispersiveness or phosphorus absorption capacity;
- Causing surges in the system or runoff that overflows to stormwater drains, rivers, streams and neighbouring properties; and
- Raising the water table, water logging the soil and increasing salinity which may affect infrastructure such as buildings and roads.
- c) Maintenance issues

Ongoing maintenance is essential to ensure environmental and public health concerns are properly managed. The following needs to be stressed as some property owners may not be as committed to maintaining systems as others.

- Regular monitoring and maintenance must be undertaken as determined by the manufacturer and any approval issued; and
- All greywater treatment systems (as opposed to diversion systems) and recycled water treatment systems must obtain 'approval to operate' (as outlined in Council's Onsite Sewage Management Strategy) from Council to ensure effective regulation of systems and monitoring of the cumulative impacts. Council should also be notified where Greywater Diversion Systems are installed.

RELATED GUIDELINES/LEGISLATION

<u>Guidelines</u>

- Council Water Connection, Backflow Prevention and Pricing Policy
 This Policy deals with the prevention of backflow of water from private properties back into
 Council's cold water potable supply
- <u>NSW Guidelines for greywater reuse in sewered, single household residential premises</u> (NSW Greywater Reuse Guideline, NSW Water and Energy, May 2008)

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The guidelines relate to single, detached households only and do not include premises comprising of more than one dwelling. The guideline covers the three methods for distributing greywater, being manual bucketing, greywater diversion and greywater treatment.

<u>NSW Guidelines for Management of Private Recycled Water Schemes</u> (NSW Recycled Water Guidelines, NSW Water & Energy, May 2008)

This guideline aligns the principles outlined in the Australian guideline to the approvals process for private recycled water schemes that are larger than a single household (requiring section 68 approval) in NSW. The guideline provides practical advice, including some examples, for obtaining approval to install and operate a private recycled water scheme within the existing NSW legislative framework.

<u>NSW Guidelines for Recycled Water Management Systems, NSW DPI, May 2015</u>
 Provides guidance on the development and implementation of a Recycled Water Management System for recycled water suppliers in NSW

Legislation

- Environmental Planning and Assessment Act 1979 for development approval
- Environmental Planning and Assessment Regulation 2000 for further development approval details
- Food Act 2003 for suitability of food for sale for human consumption
- Local Government (General) Regulation 2005 clause 45 for technical matters in relation to Section 68 approvals
- Local Government Act 1993 Section 60 for council schemes
- Local Government Act 1993 Section 68 for private schemes
- Plumbing Code of Australia for work carried out
- Plumbing and Drainage Act 2011 for work carried out
- Work Health and Safety Act 2011 for workplace health, safety and welfare
- Protection of the Environment Operations Act 1997 for pollution matters and environment protection licences
- Public Health Act 2010 for prevention of public health risks
- Water Industry Competition Act 2006 licensing of private water recycling schemes.

SCOPE

This Policy applies to the Dubbo Regional Council Local Government Area. The aims and objectives of this Policy are to:

- Reduce consumption of treated drinking water for purposes other than drinking;
- Maintain ecologically sustainable practice through long term management of water reuse;
- Protect the environment by ensuring that the impacts of greywater/recycled water use is considered in a cumulative context;
- Ensure greywater and recycled water systems are designed, installed and maintained correctly.
- Ensure that lands, surface and ground waters are protected;
- Ensure that the health of human, animal and vegetation communities are not at risk from water reuse in the short or long term.

DEFINITIONS

To assist in the interpretation of this Policy, the following definitions apply:

Term	Definition	
Backflow Prevention Device	as defined within Council's Water Connection, Backflow Prevention and Pricing Policy	
Drinking Water	Refers to water intended primarily for human consumption	
Greywater	Refers to waste water from washing machines, laundry tubs, showers, hand basins and baths. Greywater does not include wastewater (sewage) from kitchens, toilets, urinals or bidets	
Domestic Greywater Diversion	Refers to the redirection of household greywater to subsurface irrigation without storage or treatment	
Domestic Greywater Treatment	Refers to the collection, storage and treatment of greywater to a secondary treatment standard allowing for reuse for garden, toilet or washing machine use	
Reclaimed Water	Refers to water that has been derived from sewerage systems or industry processes and treated to a standard that is appropriate for its intended use	
Recycled Water	Refers to water taken from sewage, greywater or stormwater systems and treated to a level suitable for its intended use. Recycled water can include reclaimed water.	
Residential Premises	Refers to single detached household residential premises. It does not include premises comprising more than one dwelling.	
Multi-unit dwellings	Refers to those dwellings not defined as a single dwelling but with occupancy less than 2,500 persons.	

POLICY

1. Water reuse and Salinity

Across the Local Government Area salinity is an issue that is being monitored, particularly throughout the Dubbo urban area. Greywater reuse has a potential to contribute to the occurrence of salinity due to the increased volume of water being applied to land and the addition of salts from detergents. Salinity may have adverse effects on vegetation growth, soil structure, buildings and other infrastructure.

Council allows residential greywater reuse within the sewered urban area as provided for in the current legislation. Priority hydrogeological landscapes (HGL) listed in the Dubbo Urban Salinity Management Strategy and Implementation Plan, or areas with known or suspected salinity, are not permitted to dispose of greywater by any form of land application without prior Council approval.

Prior to considering the installation of reuse irrigation systems, it is advisable to check with Council if the proposed location is in a priority hydrogeological landscape (HGL), as indicated in the Dubbo Urban Salinity Management Strategy and Implementation Plan, or considered to be at risk of saline soil.

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Greywater or recycled water reuse in larger integrated developments is permitted and will be assessed on a case by case basis. These proposals will be considered in the development application for the overall development which should include a full analysis of the system proposed including a land capability and risk management assessment.

2. Sizing the greywater reuse systems

It is important to determine how much greywater will be generated by occupants before treatment or land application systems are designed. The amount of greywater generated by households will vary depending on the number of occupants, age distribution, lifestyle and water usage patterns.

NSW Guidelines for Greywater reuse in sewered, single household residential premises (May 2008) estimate that an average of household (3-4 people) with standard water saving fixtures produces 2,031-2,752 litres of greywater per week (290-393L/day). Tables indicating water use are available in Appendix B of the guideline.

Details of the proposed land application area and any other proposed reuse (e.g. toilet, washing machine) must be included in any application for approval submitted to Council.

3. Diversion and treatment of greywater/recycled water

There are two main options for greywater reuse for single dwellings - a greywater diversion device (GDD) or a domestic greywater treatment system (DGTS). Commercial greywater treatment systems or recycled water systems are recommended for developments larger than single dwellings due to the risks associated with untreated greywater.

Reuse Method	Greywater Reuse Application
Manual bucketing	Limited irrigation
Greywater diversion device (GDD)	Sub-surface irrigation (at least 100 mm below surface)
Greywater treatment system (GTS)	Surface or sub-surface irrigation Toilet flushing Washing machine

Table 1 outlines the options and reuse applications for single dwellings.

Table 1. Reuse applications for single dwellings

3.1 Greywater Diversion Devices (GDD)

Greywater diversion devices (GDD) allow the redirection of household greywater through specialised plumbing fixtures to sub-surface irrigation pipes within the garden. Flows are usually controlled by a tap or switch, allowing the discharge to be directed to sewer during wet weather or when water is not needed. These devices can be gravity fed, or can rely on a pump and surge tank arrangement which will automatically regulate flows during sudden surges. The surge tank should never be used as a storage tank. The system does not allow for storage or treatment, apart from a coarse screen filter to remove coarse particles.

Greywater Diversion Devices (GDD) can be installed without Council approval providing the conditions outlined in section 3.1 are met. Council does not recommend the use of GDDs in locations that have limited area available for disposal or where salinity is or is likely to be an issue. GDDs must not be connected to any fixtures or irrigation systems that are connected or used with a domestic water supply.

3.2 Domestic Greywater Treatment Systems (GTS)

Domestic Greywater Treatment Systems (GTS) collect, store and treat greywater to a secondary treatment standard which will allow reuse of the treated greywater for garden purposes or toilet flushing and washing machine use. The treatment process varies according to the reuse option of the treated greywater. The treatment process may include aeration, clarification, membrane filtration and disinfection using chlorine or UV.

Greywater Treatment Systems require approval from Council for their installation and operation as outlined in section 3.2. All domestic GTS must be accredited by NSW Department of Health.

Note: The primary treatment will only reduce the solids in the wastewater, secondary treatment is necessary to remove pollutants from the remaining liquid. Disinfection is usually the last treatment process commonly consisting of chlorination of clarified water, and it is undertaken to eliminate pathogenic micro-organisms.

3.3 Recycled Water Systems

Recycled Water is water taken from sewage, greywater or stormwater systems and treated to a level suitable for its intended use. Recycled water can include reclaimed water. Potential uses may include:

- Garden irrigation (with uncontrolled access)
- Toilet flushing
- Car washing and similar outdoor use
- Fire fighting
- External ornamental bodies (not involving water contact)
- Cooling towers
- Laundry and clothes washing machines on a case by case basis

Recycled water schemes may be considered for developments larger than single residential dwellings and require approval from Council for their installation and operation. The treatment required will vary depending on the source of the recycled water and its intended use. A risk management approach is required to manage the environmental and health risks associated with its use. An example risk management framework is provided in the Interim NSW Guidelines for Management of Private Recycled Water Schemes (May 2008). This framework should be considered prior to lodging an application with Council.

- 4. Installation and Operation Approvals
 - 4.1 Residential Greywater Diversion Conditions for exemption of approval

(a) Local Government Act 1993

Under Section 68 of the Local Government Act 1993, domestic greywater diversion is prescribed as an activity that requires the prior approval of Council. However, Section 75A of Local Government (General) Regulation 2005 allows domestic greywater diversion to be carried out without the prior approval of Council (or are 'exempt' development) if:

- 1) It is carried out in accordance with the Plumbing Code of Australia, and
- 2) A sewage management facility is not installed on the premises concerned, and
- 3) The following performance standards are achieved:
 - i) The prevention of the spread of disease by micro-organisms,
 - ii) The prevention of the spread of foul odours,
 - iii) The prevention of contamination of water*,
 - iv) The prevention of degradation of soil and vegetation*,
 - v) The discouragement of insects and vermin,
 - Ensuring that persons do not come into contact with untreated sewage or effluent (whether treated or not) in their ordinary activities on the premises concerned,
 - vii) The minimisation of any adverse impacts on the amenity of the premises concerned and surrounding lands.

*Contamination of water and the prevention of degradation of soil and vegetation include potential effects on groundwater and soil salinity. Approval from Council is therefore required in priority HGLs in the Dubbo Urban Salinity Management Strategy and Implementation Plan or areas with known or suspected salinity issues.

b) Plumbing Code of Australia

The requirements of the Plumbing Code of Australia must be satisfied to be exempt from obtaining Council approval. The *Plumbing Code of Australia* states that whilst on-site wastewater management systems (Part F1) are regulated under the *Local Government Act 1993* and the *Local Government (General) Regulation, 2005* that the *NSW Plumbing and Drainage Act, 2011* applies to the plumbing and drainage system as defined by that Act.

c) Council's Water Connection, Backflow Prevention and Pricing Policy

The requirements of the Council Water Connection, Backflow Prevention and Pricing Policy must be complied with when installing and operating any domestic grey water diversion system, particularly in relation to backflow prevention devices.

4.2 Residential Greywater Treatment

Council approval is required for the installation and operation of all residential greywater treatment systems as detailed in item C6 of Section 68 of the Local Government Act, 1993 and Part 2, Division 4 Local Government (General) Regulation, 2005.

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The system to be installed must be accredited by the NSW Department of Health. A list of accredited systems is available of the NSW Health website.

Installation approval must be obtained by lodging a *Sewage Management Facility Application* with Council. The application must include details of the system to be installed, intended use of treated greywater (e.g. toilets, irrigation), and any other information detailed on the application.

Operational approval must also be obtained by lodging an Application for Approval to Operate an On-site Sewage Management System with Council.

Failure to obtain approval or comply with the conditions of an approval is an offence. Council has the authority to issue on the spot fines for these offences.

- 4.3 Recycled Water Schemes
 - (a) Local Government Act, 1993: Section 68 Approval

An approval is required from Council, under Section 68 of the Local Government Act, 1993, for water supply, sewerage and storm water drainage work as well as the installation and operation of a sewage management system. A section 68 approval may also be required for the installation of other types of recycled water schemes but approval to operate is only required where the source includes greywater or sewage.

Council approvals for installation and operation are not required where an environmental protection license under the Protection of the Environment Operations Act 1997 is in force. Where Council is the proponent, the approving authority is the NSW Office of Water. The Local Government (General) Regulation 2005 provides detail on the approval to operate as well as the broad performance standards and other criteria for the operation of a recycled water scheme (clauses 42 to 47).

(b) Environmental Planning and Assessment Act, 1979: Development Approval

Recycled water schemes undertaken by a private developer (not being a public authority) require a development application to be lodged with and approved by Council in accordance with the provisions of the *Environmental Planning and Assessment Act 1979*. Any development application will be assessed in accordance with the Act and Council's Local Environmental Plan.

A recycled water scheme may be classed as designated development depending on capacity, or location. Further information is available under *Item 29, Schedule 3, Environmental Planning and Assessment Regulation, 2000.*

The risk management framework suggested in *Interim NSW Guidelines for Management of Private Recycled Water Schemes* should be considered prior to lodging an application with Council.

RESPONSIBILITIES

This Policy is to be referred to by Building and Development Services when assessing applications for installation. Approvals to operate and non-compliances are managed by Environmental Control staff.

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FURTHER INFORMATION AND FACT SHEETS

For further information please refer to the following information sources:

NSW Office of Water

The NSW Department of Primary Industries – Office of Water has information and fact sheets on greywater reuse for households available online.

NSW Ministry of Health

Copies of Accreditation Guidelines and Accredited Greywater Diversion and Greywater Treatment Systems are available from NSW Health online.

Master Plumbers Association

The Master Plumbers Association offers training programs designed to assist plumbers to understand their role in relation to environmental and public health issues, and to provide their customers with up to date information and advice.

Dubbo Regional Council

Council's Onsite Sewage Management Strategy outlines further information regarding Sewage Management Applications and Approvals to Operate. The Dubbo Urban Salinity Management Strategy and Implementation Plan outline priority landscapes for salinity issues in the Dubbo area. The strategies are available on Council's website.

APPENDICES

Appendix A - Additional information for development applications for greywater/water reuse systems

APPENDIX A

ADDITIONAL INFORMATION FOR DEVELOPMENT APPLICATIONS FOR GREYWATER/WATER REUSE SYSTEMS

- 1. Detailed hydraulic diagram showing:
 - Location and design of pipework and disposal area and trenches
 - Location and design of other fittings such as filters and valves
 - Connection for overflow to sewer
 - Method for automatically switching off the subsurface disposal device when the disposal area has become saturated.
- Assessment of capacity of diversion area to receive recycled water (identifying a maximum daily diversion flow)
- Measures to ensure that all pipes and fittings and the diversion area are adequately identified as being used for wastewater reuse purposes
- 4. Maintenance regime to ensure that the device is in good working order
- 5. In the case of multi-unit dwellings and commercial premises a management plan detailing:
 - The treatment process
 - Risk Assessment
 - Routine sampling program
 - Maintenance emergency contact numbers
 - System failure procedures
 - Auditing procedures to detect cross-connections and contingency plans for the management of sewerage and water requirements in the event of system failure.