



AGENDA INFRASTRUCTURE, PLANNING AND ENVIRONMENT COMMITTEE 9 MAY 2024

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

The meeting is scheduled to commence at 5.30 pm.

	Page
IPEC24/24 ACKNOWLEDGEMENT OF COUNTRY (ID24/90)	
IPEC24/25 LEAVE OF ABSENCE (ID24/91)	
IPEC24/26 CONFLICTS OF INTEREST (ID24/93) In accordance with their Oath/Affirmation under the Act, and Council's Code of Conduct, Councillors must disclose the nature of any pecuniary or non-pecuniary interest which may arise during the meeting, and manage such interests accordingly.	
IPEC24/27 BUILDING SUMMARY - APRIL 2024 (ID24/698) The Committee had before it the report dated 24 April 2024 from the Director Development and Environment regarding Building Summary - April 2024.	3
IPEC24/28 DRAFT INFRASTRUCTURE CONTRIBUTIONS PLAN - NORTH-WEST URBAN RELEASE AREA (ID23/2539) The Committee had before it the report dated 9 April 2024 from the Manager Growth Planning regarding Draft Infrastructure Contributions Plan - North-West Urban Release Area.	17

- IPEC24/29 DRAFT PLANNING AGREEMENT - DUBBO FIRING POWER STATION (ID24/509)** 76
The Committee had before it the report dated 1 May 2024 from the Manager Growth Planning regarding Draft Planning Agreement - Dubbo Firing Power Station.
- IPEC24/30 KERBSIDE BIN AUDIT REPORT (ID24/805)** 82
The Committee had before it the report dated 26 April 2024 from the Waste Contract and Collection Coordinator regarding Kerbside Bin Audit Report.
- IPEC24/31 TAMWORTH STREET DARLING STREET ROUNDABOUT PAVEMENT RECONSTRUCTION - PROPOSED CONTRACTOR ENGAGEMENT FOR REPLACEMENT OF EXISTING WATER MAINS WITHIN INTERSECTION (ID24/801)**
The Committee had before it the report dated 22 April 2024 from the Capital Programs Coordinator regarding Tamworth Street Darling Street Roundabout Pavement Reconstruction - Proposed Contractor Engagement for Replacement of Existing Water Mains within Intersection.
- In accordance with the provisions of Section 9 (2A) of the Local Government Act 1993 the Chief Executive Officer is of the opinion that consideration of this item is likely to take place when the meeting is closed to the public for the following reason: information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business (Section 10A(2)(c)).*
- IPEC24/32 NEW DUBBO ANIMAL SHELTER - NEGOTIATION OUTCOME (ID24/810)**
The Committee had before it the report dated 29 April 2024 from the Manager Environmental Compliance regarding New Dubbo Animal Shelter - Negotiation Outcome.
- In accordance with the provisions of Section 9 (2A) of the Local Government Act 1993 the Chief Executive Officer is of the opinion that consideration of this item is likely to take place when the meeting is closed to the public for the following reason: information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business (Section 10A(2)(c)).*



REPORT: Building Summary - April 2024

DIVISION: Development and Environment
REPORT DATE: 24 April 2024
TRIM REFERENCE: ID24/698

EXECUTIVE SUMMARY

Purpose	<ul style="list-style-type: none"> Provide review and update 		
Issue	<ul style="list-style-type: none"> Statistical overview of the number and type of development approvals for the Dubbo Regional Local Government Area (LGA) for the Financial Year 2023/2024. The 'total number of dwellings' approved in April was 26, including 8 single dwellings and 18 'other' dwellings. The projected number of residential approvals for the full Financial Year is 400 dwellings. The value of development applications approved for the financial year to date is over \$267M. The month of April included approval of: <ul style="list-style-type: none"> D2024-50 Serviced apartment (16 units), 136 Bourke Street Dubbo, valued at \$2.59M. D2024-60 Medical centre, 206-212 Macquarie Street Dubbo, valued at \$1.5M. 		
Reasoning	<ul style="list-style-type: none"> Provide data relating to approved Development Applications. Provide specific statistics of the number of dwellings and other residential development approved. Provide comparative data for corresponding period. 		
Financial Implications	<table border="1"> <tr> <td>Budget Area</td> <td>There are no financial implications arising from this report.</td> </tr> </table>	Budget Area	There are no financial implications arising from this report.
Budget Area	There are no financial implications arising from this report.		
Policy Implications	<table border="1"> <tr> <td>Policy Title</td> <td>There are no policy implications arising from this report.</td> </tr> </table>	Policy Title	There are no policy implications arising from this report.
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STRATEGIC DIRECTION

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

Theme: 1 Housing

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

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

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

RECOMMENDATION

That the report of the Director Development and Environment dated 30 April 2024, be noted.

SW
Director Development and
Environment

REPORT

Consultation

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

Resourcing Implications

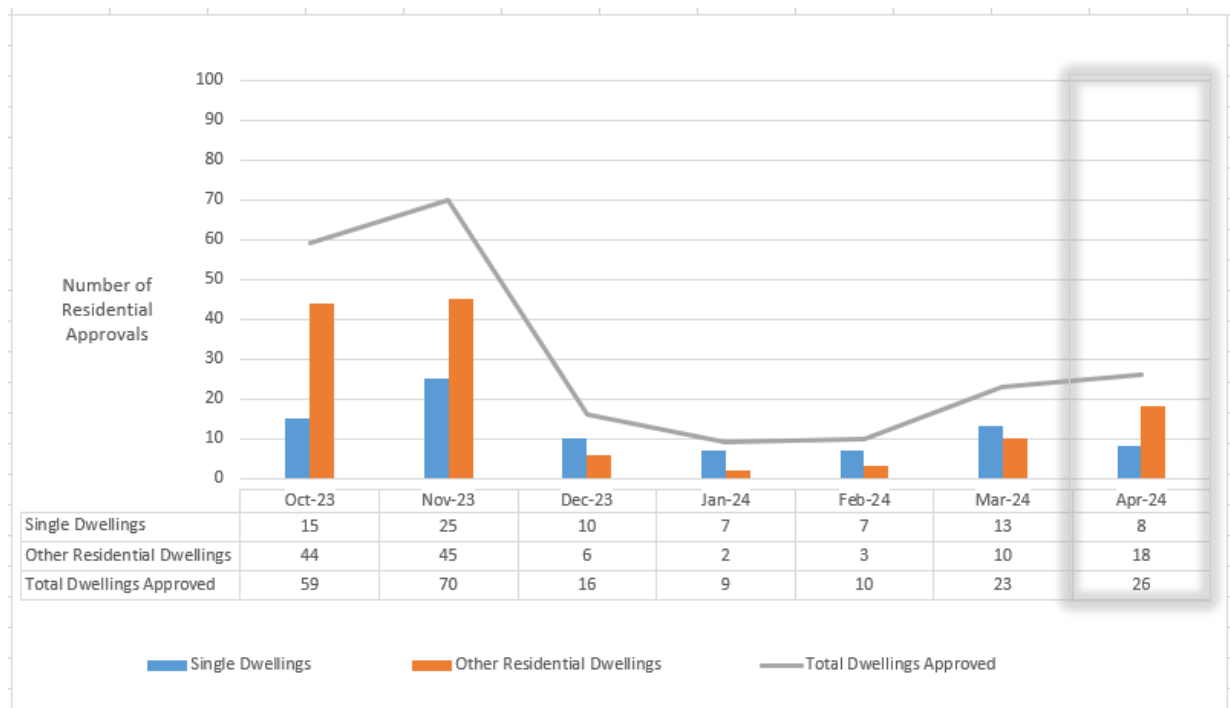
Council employ staff to receipt, lodge, assess, determine and monitor compliance of the determinations referred to in this report.

Building Summary

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

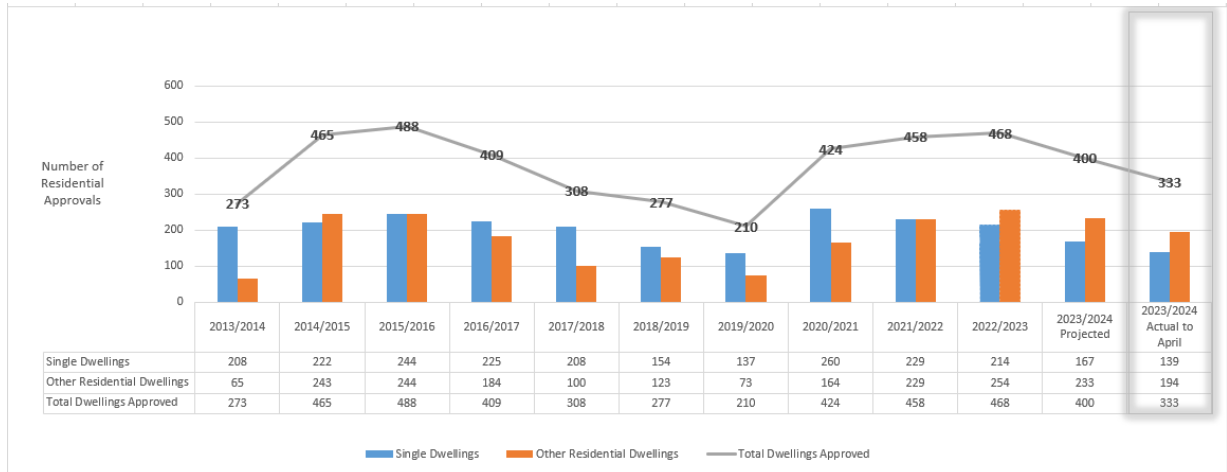
Residential Building Summary

Dwellings and other residential developments approved during April 2024, and for comparison purposes, the six month prior are shown in graph 1.



Graph 1: Residential Approvals Summary – October 2023 to April 2024

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



Graph 2: Residential Approvals Summary – Comparative Financial Years

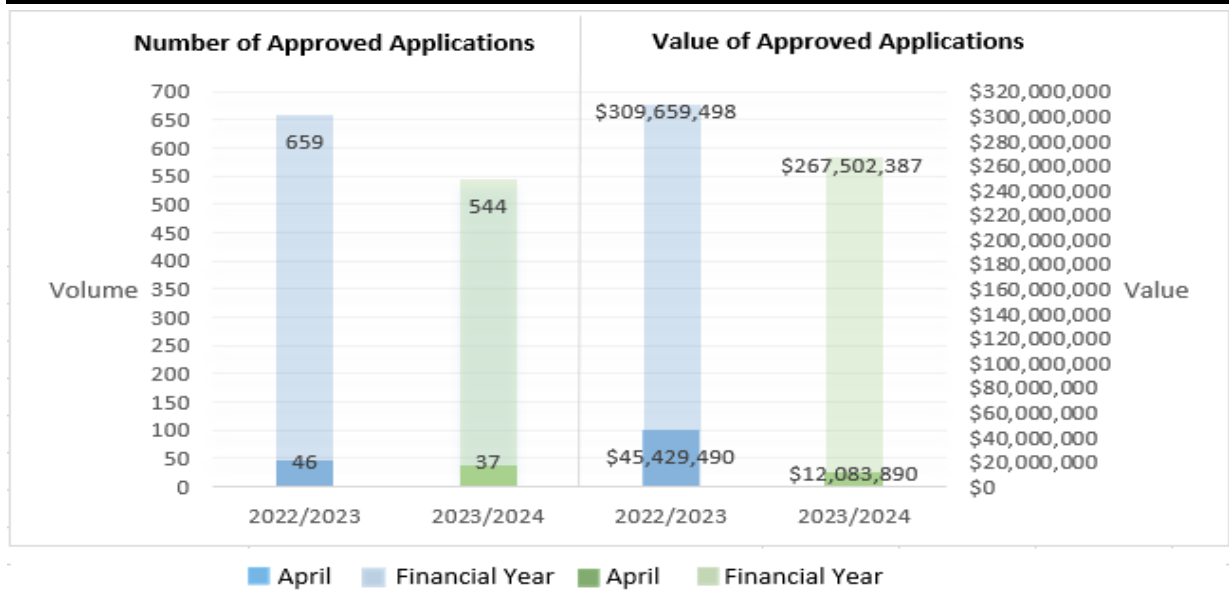
For consistency with land use definitions included in the Local Environmental Plan (LEP), residential development has been separated into ‘Single Dwellings’ (defined in the LEP as ‘dwelling house’) and ‘Other residential development’ (comprising ‘dual occupancies’, ‘secondary dwellings’, ‘multi dwelling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

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

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

Approved Development Applications

The total number of approved Development Applications (including Complying Development Certificates) for April 2024, a comparison with figures 12 months prior, together with the total for the respective financial years to date, are as follows:



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

Online Application Tracking

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

What information is available:

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

What information is not available:

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

The information included in this report is provided for notation.

APPENDICES:

- 1 [Building Summary - April 2024](#)
- 2 [Approved Applications - 1 April 2024 to 30 April 2024](#)
- 3 [Approved Applications - 1 April 2023 to 30 April 2023](#)

- 4 [↓](#) Approved Applications - 1 July 2023 to 30 April 2024
- 5 [↓](#) Approved Applications - 1 July 2022 to 30 April 2023

STATISTICAL INFORMATION ON SINGLE DWELLINGS AND OTHER RESIDENTIAL DEVELOPMENTS

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

	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2020/2021													
Single Dwellings	7	17	21	12	20	46	18	25	30	27	17	20	260
Other Residential Developments	5	2	5	6	3	15	2	6	5	5	7	9	70
(No of units)	7	4	11	10	4	35	5	10	8	9	47	14	164
2021/2022													
Single Dwellings	31	17	17	13	16	40	9	17	23	14	19	13	229
Other Residential Developments	9	7	3	4	5	8	9	9	7		3	4	68
(No of units)	84	63	5	6	13	12	12	16	9		4	5	229
2022/2023													
Single Dwellings	15	32	46	8	28	13	19	15	15	11	6	6	214
Other Residential Developments	4	3	3	4	9	4	7	13	2	6	5	4	64
(No of units)	7	3	5	6	84	8	14	19	3	8	62	35	254
2023/2024													
Single Dwellings	17	25	12	15	25	10	7	7	13	8			139
Other Residential Developments	5	7	5	5	19	4	2	2	5	3			57
(No of units)	45	12	9	44	45	6	2	3	10	18			194

Note 1. Single Dwellings = Single 'Dwelling House'

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



Approved Development and Complying Development Applications by Dubbo Regional Council and Private Certifiers - Period 1/4/2024 - 30/4/2024

Development Type	Number Of Applications	Estimate \$	Developments	Estimate \$	New Dwellings
Agriculture	1	176,100	1	176,100	0
Balconies, decks patios terraces or verandah	5	199,334	5	199,334	0
Commerical Facility	1	170,000	1	170,000	0
Demolition	2	23,000	2	23,000	0
Dual Occupancy	2	600,000	2	600,000	2
Dwelling House	9	5,730,762	9	5,730,762	8
Emergency services facility and bush fir	1	409,159	1	409,159	0
Health services facilities	1	1,500,000	1	1,500,000	0
Industrial Development	1	30,000	1	30,000	0
Multi-dwelling housing	1	2,575,200	1	2,575,200	16
Place of public worship	1	45,000	1	45,000	0
Pools / decks / fencing	4	232,445	4	232,445	0
Retail Premises	1	28,000	1	28,000	0
Shed	10	364,890	10	364,890	0
Subdivision of land	1	0	1	0	0
Total Value		12,083,890			

Total Number of Applications for this period: 37



Approved Development and Complying Development Applications by Dubbo Regional Council and Private Certifiers - Period 1/4/2023 - 30/4/2023

Development Type	Number Of Applications	Estimate \$	Developments	Estimate \$	New Dwellings
Balconies, decks patios terraces or verandah	1	18,220	1	18,220	0
Dual Occupancy	3	1,090,501	3	1,090,501	5
Dwelling House	16	6,279,709	11	5,626,709	11
Garages carports and car parking spaces	1	37,000	1	37,000	0
Mixed use development	1	601,440	1	601,440	0
Office Premises	1	35,787,134	1	35,787,134	0
Other	1	260,000	1	260,000	0
Pools / decks / fencing	6	332,194	6	332,194	0
Secondary Dwelling	2	452,317	2	452,317	2
Shed	9	359,423	9	359,423	0
Shop top housing	1	0	1	0	1
Signage	2	85,552	2	85,552	0
Subdivision of land	5	0	5	0	0
Take-away food and drink premises	1	126,000	1	126,000	0
Total Value		45,429,490			

Total Number of Applications for this period: 46



Approved Development and Complying Development Applications by Dubbo Regional Council and Private Certifiers - Period 1/7/2023 - 30/4/2024

Development Type	Number Of Applications	Estimate \$	Developments	Estimate \$	New Dwellings
Agriculture	1	176,100	1	176,100	0
Alterations and additions to commercial	7	5,817,878	0	0	0
Alterations and additions to industrial	1	145,000	0	0	0
Ancillary Structures	8	723,087	8	723,087	0
Balconies, decks patios terraces or verandah	36	1,093,308	36	1,093,308	0
Business Premises	5	1,825,694	5	1,825,694	0
Car park	1	0	1	0	0
Centre based childcare	1	3,175,000	1	3,175,000	0
Change of Use	5	52,000	5	52,000	0
Civic Infrastructure	1	35,200	1	35,200	0
Commerical Facility	1	170,000	1	170,000	0
Demolition	8	23,000	8	23,000	0
Dual Occupancy	26	16,450,556	26	16,450,556	50
Dwelling House	169	82,132,731	154	80,208,002	135
Earthworks / change in levels	1	440,000	1	440,000	0
Educational establishment	4	10,911,272	4	10,911,272	0
Emergency services facility and bush fir	1	409,159	1	409,159	0
Food and drink premises	3	4,417,928	3	4,417,928	0
Garages carports and car parking spaces	19	401,586	19	401,586	0
Group homes	1	1,760,000	1	1,760,000	3
Health services facilities	5	2,733,000	5	2,733,000	0
Industrial Development	17	17,262,384	17	17,262,384	0
Mixed use development	2	73,665,000	2	73,665,000	41
Multi-dwelling housing	5	13,808,126	5	13,808,126	71
Office Premises	5	3,376,801	5	3,376,801	0
Other	3	1,685,000	3	1,685,000	0
Place of public worship	1	45,000	1	45,000	0
Pools / decks / fencing	89	4,364,700	89	4,364,700	0
Recreational uses	1	20,000	1	20,000	0
Restaurant or cafe	3	460,000	3	460,000	0
Retail Premises	12	2,985,981	12	2,985,981	0
Retaining walls, protection of trees	1	0	1	0	0
Secondary Dwelling	23	4,123,173	23	4,123,173	23
Seniors housing	1	1,584,066	1	1,584,066	6
Shed	97	2,689,514	97	2,689,514	0

APPENDIX NO: 4 - APPROVED APPLICATIONS - 1 JULY 2023 TO 30 APRIL 2024**ITEM NO: IPEC24/27**

Signage	9	678,857	9	678,857	0
Stratum / community title subdivision	3	1,355,463	3	1,355,463	0
Subdivision - Strata	3	5,000	3	5,000	0
Subdivision - Torrens	19	190,000	19	190,000	0
Subdivision of land	27	5,107,824	27	5,107,824	1
Take-away food and drink premises	1	9,999	1	9,999	0
Telecommunications and communication facility	5	1,193,000	5	1,193,000	0
Total Value		267,502,387			

Total Number of Applications for this period: 544



Approved Development and Complying Development Applications by Dubbo Regional Council and Private Certifiers - Period 1/7/2022 - 30/4/2023

Development Type	Number Of Applications	Estimate \$	Developments	Estimate \$	New Dwellings
Alterations and additions to commercial	19	20,072,228	0	0	0
Alterations and additions to industrial	3	908,000	0	0	0
Balconies, decks patios terraces or verandah	34	823,296	34	823,296	0
Business Premises	2	650,000	2	650,000	0
Centre based childcare	3	6,727,991	3	6,727,991	0
Change of Use	4	6,001	4	6,001	0
Demolition	11	1,073,702	11	1,073,702	0
Dual Occupancy	27	14,093,148	27	14,093,148	50
Dwelling House	253	102,626,624	203	93,107,698	204
Earthworks / change in levels	8	274,560	8	274,560	0
Educational establishment	7	10,849,903	7	10,849,903	0
Emergency services facility and bush fir	1	165,000	1	165,000	0
Farm buildings	2	216,500	2	216,500	0
Food and drink premises	2	40,500	2	40,500	0
Garages carports and car parking spaces	26	648,753	26	648,753	0
Group homes	1	868,500	1	868,500	2
Health services facilities	3	855,461	3	855,461	0
Industrial Development	11	10,905,050	11	10,905,050	0
Mixed use development	2	991,440	2	991,440	0
Multi-dwelling housing	3	20,627,000	3	20,627,000	80
Office Premises	2	42,937,134	2	42,937,134	0
Other	6	11,279,024	6	11,279,024	0
Pools / decks / fencing	96	4,378,767	96	4,378,767	0
Pub	1	60,000	1	60,000	0
Recreational uses	3	27,882,657	3	27,882,657	0
Retail Premises	7	2,608,311	7	2,608,311	0
Retaining walls, protection of trees	3	12,320	3	12,320	0
Secondary Dwelling	21	4,813,143	21	4,813,143	21
Shed	96	3,947,084	96	3,947,084	0
Shop top housing	3	2,590,400	3	2,590,400	4
Signage	10	759,802	10	759,802	0
Stratum / community title subdivision	4	5,000	4	5,000	0
Subdivision of land	51	8,155,000	51	8,155,000	0
Take-away food and drink premises	5	3,783,645	5	3,783,645	0
Telecommunications and communication facility	3	3,023,554	3	3,023,554	0

Total Value	309,659,498				
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Total Number of Applications for this period: 659



REPORT: Draft Infrastructure Contributions Plan - North-West Urban Release Area

DIVISION: Development and Environment
REPORT DATE: 9 April 2024
TRIM REFERENCE: ID23/2539

EXECUTIVE SUMMARY

Purpose	Seek endorsement	Fulfil legislated requirement
Issue	<ul style="list-style-type: none"> Council adopted a Master Plan for the North-West Urban Release Area on 28 September 2023, which identifies the vision and desired future character of the Precinct. To help plan, fund and deliver the infrastructure required to support the Precinct, a draft Infrastructure Contributions Plan has been prepared (attached in Appendix 1) to allow Council and registered certifiers to levy infrastructure contributions. The infrastructure required to support the Precinct includes roads and transport, stormwater drainage systems, and open space and recreation facilities. The cost of infrastructure and ongoing administration identified in the Plan is \$102,042,200. The infrastructure contribution rates will initially be capped at \$20,000 per residential lot (or three or more bedroom dwelling). The rates for other development types are identified in the report. It is intended that Council will make a request to the NSW Minister for Planning and Public Spaces to increase the capped contribution amount beyond \$20,000. If approved, Council would levy up to a maximum of \$22,857.50 per lot or three bedroom or more dwelling. The Environmental Planning and Assessment Act 1979 allows Council to collect infrastructure contributions through development applications and complying development certificates. This is based on the demonstrated link and nexus between new development and the demand for new infrastructure. 	
Reasoning	<ul style="list-style-type: none"> Environmental Planning and Assessment Act 1979 Environmental Planning and Assessment (Local Infrastructure Contributions) Direction 2012 	
Financial Implications	Budget Area	Growth Planning
	Funding Source	Growth Planning budget
	Proposed Cost	There are no proposed costs associated with this report.

	Ongoing Costs	There are no ongoing costs associated with this report.
Policy Implications	Policy Title	There are no policy implications arising from this report.

STRATEGIC DIRECTION

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

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

RECOMMENDATION

1. That Council adopt the draft North-West Urban Release Area Infrastructure Contributions Plan (attached in Appendix 1) for the purpose of public exhibition.
2. That public exhibition be undertaken in accordance with the Environmental Planning and Assessment Act 1979.
3. That following conclusion of the public exhibition period, a further report be presented to Council for consideration, including the results of public exhibition.
4. That Council make a request to the NSW Minister for Planning and Public Places to increase the capped contribution amount of \$20,000 to a maximum of \$30,000, noting that the full \$30,000 will not be required to implement the infrastructure identified in the Plan.

Stephen Wallace
Director Development and Environment

TH
Manager Growth Planning

BACKGROUND

1. Previous Resolutions of Council

<p>28 September 2023 CCL23/256</p>	<p><i>In Part</i></p> <ol style="list-style-type: none"> 1. <i>That Council adopts the draft North-West Development Control Plan - Master Plan</i> 2. <i>That Council adopts the draft North-West Urban Release Area - Development Control Plan – Stage 1.</i>
<p>23 November 2023 CCL23/319</p>	<p><i>In Part</i></p> <ol style="list-style-type: none"> 1. <i>That Council endorse the Planning Proposal to amend the Dubbo Regional Local Environmental Plan 2022 for land in the North-West Urban Release Area.</i> 2. <i>That Council submit the Planning Proposal to the NSW Department of Planning and Environment for a Gateway Determination.</i>
<p>24 April 2024 CCL24/88</p>	<p><i>That Council delegate authority to the Infrastructure, Planning and Environment Committee to make a legally binding resolution in relation to placing the draft North-West Urban Release Area Infrastructure Contributions Plan on Public Exhibition when it is presented at the 9 May 2024 standing committee meeting.</i></p>

2. What are Infrastructure Contributions?

Infrastructure contributions are payments made by developers that help plan, fund and deliver the necessary infrastructure required as a result of new development, which includes road and transport infrastructure, stormwater drainage systems, and open space and recreation facilities. Infrastructure contributions are a key source of funding for Council to provide infrastructure to support our community whilst ensuring the existing community is not burdened by the provision of new infrastructure.

Infrastructure contributions are levied through conditions of development consent or complying development and require the payment of a monetary contribution towards infrastructure, the dedication of land free of cost, or both. Infrastructure contributions are administered in accordance with Part 7, Division 7.1, Subdivision 3 of the Environmental Planning and Assessment Act 1979.

Infrastructure contribution plans specify what infrastructure will be provided, when it is planned for delivery, and approximately how much it will cost. Infrastructure contribution rates can be charged on a per residential lot, per dwelling, per person or per square metre of development rate.

3. North-West Urban Release Area

The North-West Urban Release Area is a key residential growth area for Dubbo and will drive residential development opportunities, provide increased housing opportunities, and ensure the city can provide housing for our increasing urban population into the future. It is anticipated that when fully developed, it will have the potential to realise between 4,500 and

5,500 dwellings, with a population of 12,500 to 15,500 people. These assumptions are based on a Planning Proposal that is currently being progressed by Council and the NSW Department of Planning, Housing and Infrastructure.

REPORT

1. North-West Urban Release Area Infrastructure Contributions Plan

To help plan, fund and deliver the necessary infrastructure to support the North-West Urban Release Area, a draft Infrastructure Contributions Plan has been prepared (attached in **Appendix 1**), and will apply to land identified in **Figure 1**. The Plan will allow Council and registered certifiers to levy infrastructure contributions through a Development Consent or Complying Development Certificate.

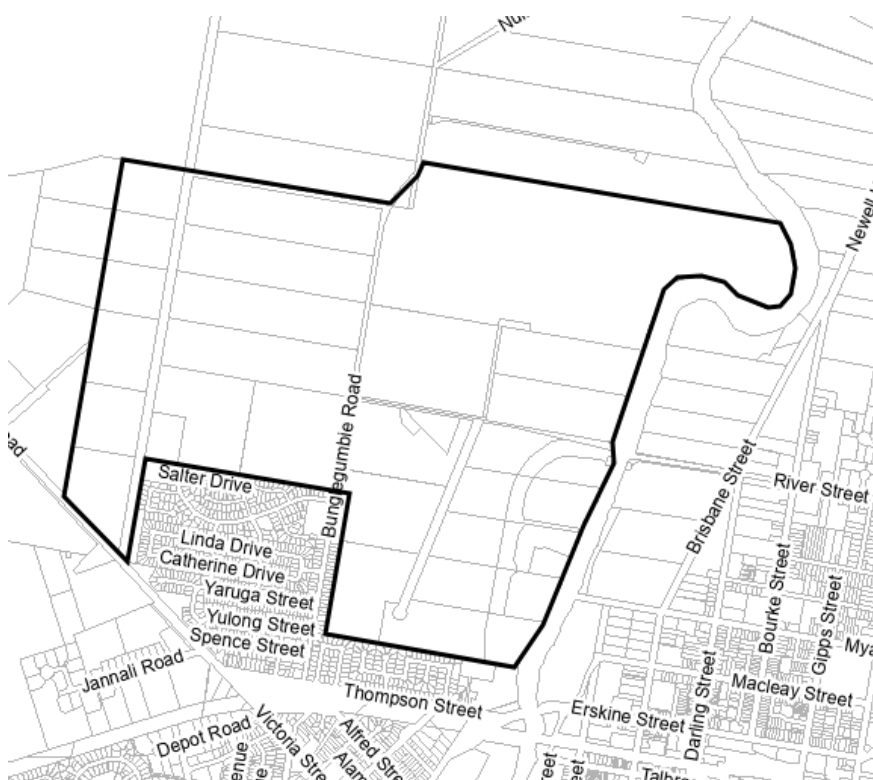


Figure 1 – Land to which the Plan applies

The Plan includes a schedule of infrastructure works valued at **\$102,042,200**, which is planned to be delivered between 2024 and 2039. The total cost of infrastructure is attributed to all future development within the Precinct.

Infrastructure	Cost
Roads and Transport	\$66,592,200
Open Space and Recreation	\$22,950,000
Stormwater	\$10,000,000
Plan Preparation and Administration	\$2,500,000

Infrastructure contributions are proposed to be applied using Section 7.11 contributions or a Section 7.12 levy, noting a development cannot be levied under both mechanisms.

(a) Section 7.11 contributions

Section 7.11 contributions will apply to residential lots at the subdivision stage, residential accommodation, and tourist and visitor accommodation, and be based on the number of persons or bedrooms. The contribution rates have been determined using the below formula, with final rates based on the mid-growth population scenario:

Contribution rate per new resident	=	Cost of infrastructure attributable to future development Additional residents		
<i>Growth scenario</i>		<i>Low-growth</i>	<i>Mid-growth</i>	<i>High-growth</i>
<i>Cost of infrastructure</i>		\$102,042,200	\$102,042,200	\$102,042,200
<i>Population</i>		10,500	12,500	15,500
Rate per person		\$9,718.30	\$8,163.40	\$6,583.40

The occupancy rates and contribution rates for various types of development are identified in the table below. These rates will be subject to the Consumer Price Index – Sydney All Groups over the life of the Plan.

Type of development	Occupancy rate*	Contribution
Residential subdivision:		
Subdivision into a single lot smaller than 250m ²	1.8 people	\$14,694.10
Subdivision into a single lot larger than 250m ²	2.8 people	\$20,000 (capped) \$22,857.50 (full)**
Residential accommodation:		
1 bedroom dwelling	1.3 people	\$10,612.40
2 bedroom dwelling	1.8 people	\$14,694.10
3 or-more bedroom dwelling	2.8 people	\$20,000 (capped) \$22,857.50 (full)**
Boarding house, co-living housing, group home, hostel, student housing, and seniors housing	1 person	\$8,163.40
Tourist and visitor accommodation:	1 person per bed	\$8,163.40

*These figures have been derived from an analysis of Australian Bureau of Statistics 2021 Census data.

** The Environmental Planning and Assessment Act 1979 limits the maximum payment of monetary contributions for each dwelling or subdivision into residential lots to \$20,000, unless approved by the NSW Minister of Planning.

(b) Section 7.12 levy

A Section 7.12 levy will apply to any development not subject to a Section 7.11 contribution. The levy is calculated based on the cost of works of the development.

Section 7.12 Levy	Levy rate
Cost of works of the development:	
Less than and including \$100,000	Nil
More than \$100,000 and up to and including \$200,000	0.5% of that cost
More than \$200,000	1.0% of that cost

This levy is likely to apply to the Village Heart as the majority of the precinct will be residential development.

(c) Mixed-use developments

A single development can only be the subject of either a Section 7.11 contribution or a Section 7.12 levy, not both. Where a single development comprises a mix of types covered by both Section 7.11 contributions and Section 7.12 levy, the component that represents the highest monetary contribution will apply.

2. Comparison to Existing Infrastructure Contributions Plans

Council currently has infrastructure contribution plans for road and transport, stormwater drainage systems, and open space and recreation facilities, with different rates applying to different areas within the Dubbo locality. These rates are shown below.

Suburb	Price per lot	Roads	Open space	Stormwater
North-West URA	\$13,197.44	\$7,335.35	\$5,862.09	Nil
Keswick Estate	\$17,380.08	\$7,335.35	\$5,506.28	\$4,538.45
Southlakes Estate	\$14,262.33	\$7,335.35	\$5,506.28	\$1,420.70
Central-West URA	\$14,033.42	\$7,335.35	\$5,998.07	0 - \$800

If the North-West Urban Release Area Infrastructure Contributions Plan is adopted at a later Council meeting, infrastructure contributions will increase by approximately up to \$6,800 per lot in this precinct and be higher than other urban release areas. If the Plan is not adopted at a later Council meeting, Council would only collect approximately \$60 million under the current contribution plans, and a lot of the works in the North-West Urban Release Area infrastructure schedule are not included in the existing contributions plans. As such, the infrastructure required to support the Precinct may not be provided when new households need it.

3. Feasibility Analysis of Infrastructure Contribution Rates

Council commissioned HillPDA to conduct a feasibility study of proposed infrastructure contribution rates.

The study compared contribution levels between different locations in Dubbo. As a result, there appears to be little competitive advantages or disadvantages with any particular release area. All release areas are reasonably price competitive and any variation in end sale values is likely to reflect the desirability to live there rather than the cost of infrastructure and development.

A sudden rise in contributions in any release area, without similar increases in other areas, may put that release area at a competitive disadvantage. Under this scenario it may be difficult for a developer to pass the cost increase onto the buyers due competitive market forces. If that is the case, then the feasibility of development is weakened and the market take-up in the area may fall.

The feasibility analysis tested the following four options, with results presented in **Figure 2**:

- Option 1: Section 7.11 charge remaining at \$13,333 per lot (**feasible**)
- Option 2: Section 7.11 is charged at \$20,000 per lot (**marginally feasible**)
- Option 3: Section 7.11 is charged at \$30,000 per lot (**marginally weak**)
- Option 4: Same as Option 3 but the end sale value of the lots is **increased** by \$15,000 to cover infrastructure contributions increase (**marginally feasible**)

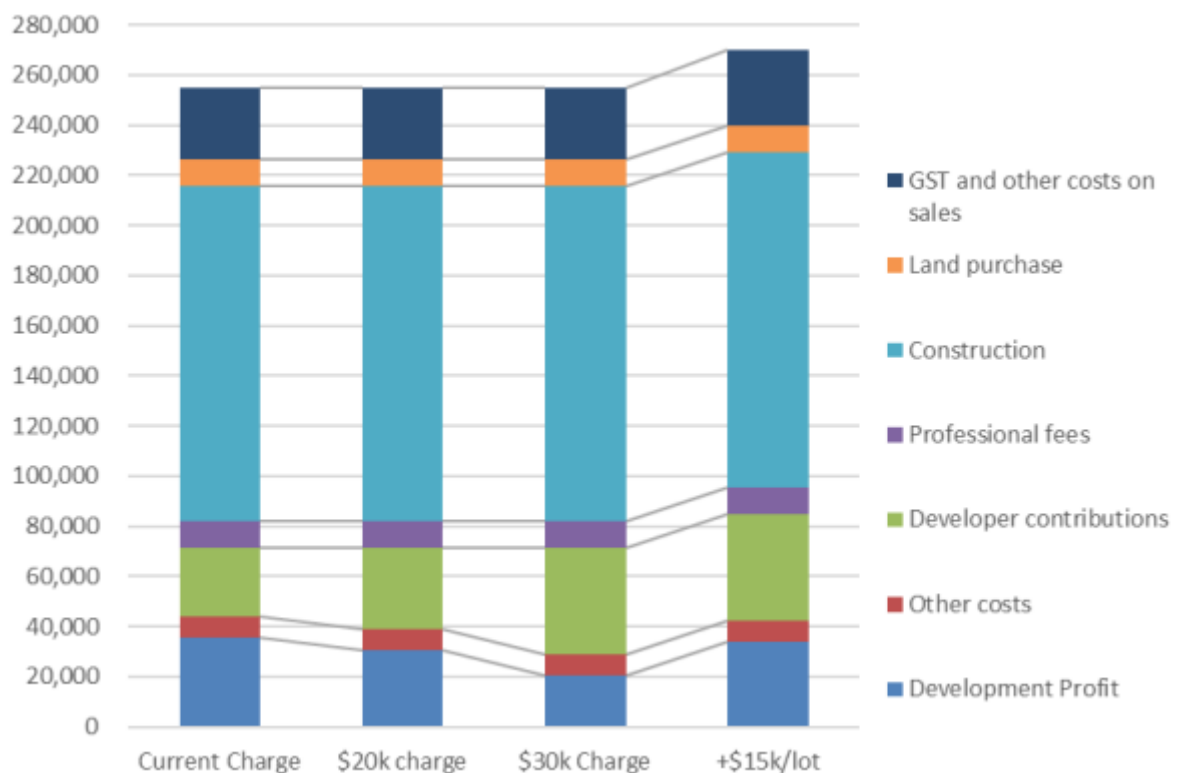


Figure 2 – Feasibility analysis of different contribution rates

Given the increase in value of the average house block in recent years, it is considered that the rise in the contribution rate would be easily absorbed in land price rises over time.

4. Comparison to other Councils

The infrastructure contribution rates are comparable to other regional cities, with their contributions identified below:

- Orange - \$10,300 - \$28,600
- Bathurst - \$11,863 - \$30,000
- Tamworth - \$2,500 - \$9,141 and 7.12 plan
- Albury - \$3,933 - \$11,712

5. Maximum Payment of Infrastructure Contributions

The Environmental Planning and Assessment Act 1979 currently limits the maximum payment of monetary contributions for each dwelling or subdivision into a residential lot to \$20,000. In order to raise the maximum amount above \$20,000, Council must apply to the NSW Minister for Planning and Public Spaces. The Environmental Planning and Assessment (Local Infrastructure Contributions) Direction 2012 identifies \$30,000 as the next highest limit, but it is important to note the contribution rates would commence at \$22,857.50 per residential lot for a three or more bedroom dwelling and be subject to annual CPI adjustment.

The request must identify:

- The area of the land involved and its relationship to adjacent existing urban areas.
- Details of any rezoning demonstrating that the land is newly zoned for residential purposes, that is expected to be developed in the short term and will generate a high demand for infrastructure.
- Details of the infrastructure needs, proposed contribution rates, and expected timeframe for development.
- Why the proposed rate of \$20,000 isn't sufficient, and why up to \$30,000 is needed to cover additional costs.

6. Consultation

Following Council's consideration, the draft Infrastructure Contributions Plan will be placed on public exhibition for a minimum of 28 days in accordance with the Environmental Planning and Assessment Act 1979. A notice will be placed on Council's website and in Customer Experience Centres, and the Daily Liberal newspaper, and letters will be sent to adjoining landowners.

Following completion of the public exhibition period, a further report will be presented to Council for consideration, including any submissions received.

7. Options

Council has the following options:

- (a) Proceed with the draft Infrastructure Contributions Plan

If the Infrastructure Contributions Plan is adopted at a later Council meeting and Council is successful in its request to increase the contribution cap, infrastructure contributions will increase up to \$22,857.50 per residential lot in certain circumstances (such as for a 3 or-more bedroom dwelling) and be higher than other urban release areas.

- (b) Not proceed with the draft Infrastructure Contributions Plan

If the Infrastructure Contributions Plan is not adopted at a later Council meeting, Council would only collect approximately \$60 million under the current contributions plans, and a lot of the works in the infrastructure schedule are not included in the existing contributions plans. As such, the infrastructure required to support the precinct will not be provided to the level required by the proposed housing density.

8. Resourcing Implications

Council is currently assessing two development applications in the north-west urban release area for subdivision into 258 residential lots. A comparison between potential infrastructure contributions to be levied between the existing and draft infrastructure contribution plans is shown below.

Development application	Number of lots	Levied under existing plans	Levied under draft plan (capped)	Difference
D23-347	105	\$1,385,731	\$2,100,000	\$714,269
D23-628	153	\$2,019,208	\$3,060,000	\$1,040,792
Total				\$1,755,060

9. Timeframe

The below estimated timeline provides a mechanism to monitor and resource the various steps required to progress the draft infrastructure contributions plan:

Key Date	Explanation
24 April 2024	Consideration by Council
9 May 2024	Consideration by Infrastructure, Planning and Environment Committee
Mid-May to June 2024	Public exhibition period
July 2024	Consideration of submissions
15 August 2024	Consideration by Council

APPENDICES:

- [1](#) Draft Infrastructure Contributions Plan



North-West Urban Release Area Infrastructure Contributions Plan 2024

Acknowledgement:

Dubbo Regional Council wish to acknowledge the Wiradjuri People who are the Traditional Custodians of the Land. Council pay respect to the Elders past, present and emerging of the Wiradjuri Nation and extend that respect to other First Nations peoples.

Dubbo Regional Council North-West Urban Release Area Infrastructure Contributions Plan 2024 (NWURA)

Document Details: TRIM reference: **ED24/67583**

Date of public exhibition	Adoption date	Plan commencement Date

Enquiries

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EXECUTIVE SUMMARY

Between 2024 and 2039 Council forecasts an additional 12,500 - 15,000 residents, 4,500 - 5,500 residential lots and other forms of residential accommodation, and a commercial precinct in the North-West Urban Release Area (NWURA). The urban release area is a significant development precinct that will generate an increase in demand for roads, open space, and stormwater infrastructure.

This Plan is Council's Infrastructure Contributions Plan (2024) and has been prepared in accordance with the *Environmental Planning and Assessment Act 1979* and *Environmental Planning and Assessment Regulation 2000*. This enables Council or a registered certifier to impose conditions of consent requiring monetary contributions from development for the provision of infrastructure that is required to meet the demands of new development.

This Plan will ensure that adequate roads, open space, and stormwater infrastructure is provided to meet the demand generated by new development.

This Plan caters for a planning period from 2024 to 2039. This timing generally aligns with various NSW State Government and Council strategies and is within the horizon of residential population forecasts utilised by Council for planning and infrastructure purposes. This Plan will be monitored regularly to ensure that infrastructure is provided as development proceeds. Cost estimates will also be monitored during the life of the Plan to ensure that they reflect current costs. If necessary, amendments will be made to the Plan.

Summary of monetary contributions by development type

A development may be required to pay either Section 7.11 contribution or a Section 7.12 levy, depending on the type of development. A single development can only be subject to either a Section 7.11 contribution or a Section 7.12 levy, not both.

Table 1 and **Table 2** is a summary of the contribution mechanism and infrastructure contribution rates.

Table 1: Summary of infrastructure contribution rate by development type:	
Development type – Section 7.11 Contribution	Contribution
Small residential lot (subdivision) \leq 250m ²	\$14,694.10
Residential lot (subdivision) $>$ 250m ²	\$20,000.00
Dwelling with 1 bedroom	\$10,612.40
Dwelling with 2 bedrooms	\$14,694.10
Dwelling with 3 or-more bedrooms	\$20,000.00
Tourist and Visitor Accommodation – per bed	\$8,163.40

Note: other development is subject to a Section 7.12 levy. See Table 2 .	
Table 2: Summary of infrastructure levy by development type:	
Proposed cost of development – Section 7.12 Levy	Percentage of the cost of works
Less than and including \$100,000	Nil
More than \$100,000 and up to and including \$200,000	0.5%
More than \$200,000	1.0%
Note: For mixed use development, the contribution mechanism will be whichever is the greater contribution amount.	

Cost of infrastructure identified in this Plan

This Plan includes a schedule of infrastructure works valued at **\$102,042,200**, which is planned to be delivered between 2024 to 2039. The total cost of the infrastructure is attributed to all future development within the precinct.

Table 3 is a summary of the infrastructure included in the work schedule and the anticipated cost to new development:

Table 3: Summary of work schedule:	
Description	Cost to new development
Roads	\$66,592,200
Open Space	\$22,950,000
Stormwater	\$10,000,000
Plan Preparation and Administration	\$2,500,000
TOTAL	\$102,042,200
Note: The cost of works identified in the work schedules exceeds the capped \$20,000 contribution.	

Summary of the capped contribution rates

Table 4 shows the capped contribution rates and what will be collected under this Plan for Section 7.11 contributions.

Table 4: Capped contribution rates						
Description	Per person	Lot ≤ 250m²	Lot > 250m²	Dwelling with 1 bedroom	Dwelling with 2 bedrooms	Dwelling with 3 or more bedrooms
Roads	\$5,327.40	\$9,589.30	\$13,057.80	\$6,925.60	\$9,589.30	\$13,051.90
Open Space	\$1,836	\$3,304.80	\$4,496.80	\$2,386.80	\$3,304.80	\$4,498.10
Stormwater	\$800	\$1,440	\$1,955.40	\$1,040	\$1,440	\$1,960
Administration	\$200	\$360	\$490	\$260	\$360	\$490
Total	\$8,163.40	\$14,694.10	\$20,000	\$10,612.40	\$14,694.10	\$20,000

Note: Council will apply a \$20,000 cap to contributions. However, should Council be approved to levy in excess of \$20,000, this Plan will automatically charge at the higher rate.

Summary of the full costs and uncapped contribution rates

Table 5 shows the full costs and uncapped contribution rates and what will be collected under this Plan for Section 7.11 contributions.

Table 5: Full costs and uncapped contribution rates						
Description	Per person	Lot ≤ 250m²	Lot > 250m²	Dwelling with 1 bedroom	Dwelling with 2 bedrooms	Dwelling with 3 or more bedrooms
Roads	\$5,327.40	\$9,589.30	\$14,916.70	\$6,925.60	\$9,589.30	\$14,916.70
Open Space	\$1,836	\$3,304.80	\$5,140.80	\$2,386.80	\$3,304.80	\$5,140.80
Stormwater	\$80	\$1,440	\$2,240	\$1,040	\$1,440	\$2,240
Administration	\$200	\$360	\$560	\$260	\$360	\$560
Total	\$8,163.40	\$14,694.10	\$22,857.50	\$10,612.40	\$14,694.10	\$22,857.50

PART 1 INTRODUCTION

1.1 Name of this Plan

This Plan is known as the North-West Urban Release Area Infrastructure Contributions Plan (2024).

1.2 Land to which the Plan applies

This Plan applies to land in the North-West Urban Release Area (NWURA), identified in **Figure 1** below.



Figure 1 – Land to which this Plan applies

1.3 Objectives of this Plan

The objectives of this Plan are to:

- ensure that adequate transport, open space, and stormwater infrastructure is provided to meet the demands generated by new development;
- establish the relationship between the expected development and proposed local infrastructure to demonstrate that the section 7.11 contributions are reasonable.
- authorise Council or a registered certifier to impose Section 7.11 contributions or Section 7.12 levies on development consents or complying development certificates;
- provide an administrative framework under which specific infrastructure strategies may be implemented and coordinated;
- provide the framework for the assessment, collection, expenditure, accounting, and

- review of infrastructure contributions on an equitable basis; and
- ensure that the existing community is not burdened by the provision of infrastructure required by new development.

In order to impose a Section 7.11 contribution or Section 7.12 levy on a development consent or complying development certificate, Council or a registered certifier must be satisfied that the proposed development will or is likely to require the provision of or increase the demand for infrastructure for which the contribution is required as detailed in this Plan.

1.4 Commencement of the Plan

This Plan has been prepared by Council in accordance with the *Environmental Planning and Assessment Act 1979* (The Act) and the *Environmental Planning and Assessment Regulation 2000* (the Regulation).

This Plan was adopted by Council on XX/XX/2024 and commenced on **XX/XX/2024**.

1.5 Savings and transitional arrangements

A development application or complying development certificate which has been submitted but not determined prior to the commencement of this Plan shall be determined in accordance with this Plan.

1.6 Infrastructure addressed by this Plan

Infrastructure Contributions are required for the following types of public facilities and services:

- Roadworks and Transport Infrastructure;
- Open Space and Recreation;
- Drainage, Stormwater and Water Quality Control; and
- Plan Preparation and Administration.

Details of the public amenities and services required to satisfy the demand generated by the anticipated development, and the cost and proposed timing of these amenities and services, can be found in **Appendix A**.

1.7 Development to which this Plan applies

This Plan applies to development that is shown on the land in **Figure 1**, that requires consent, including complying development.

1.8 Exemptions and reductions

This Plan does not apply to development exempted by a direction made by the Minister for Planning under section 7.17 of the Act.

1.9 Glossary

The meanings of key words and terms used in this Plan are contained in the Glossary attached to this Plan.

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PART 2 HOW TO USE THIS PLAN

2.1 Determining the contribution type

A development may be required to pay either Section 7.11 contributions or a Section 7.12 levy, depending on the type of development. A single development can only be subject to either a Section 7.11 contribution **or** a Section 7.12 levy, not both.

The process for determining the contribution or levy is shown in **Figure 2** below.

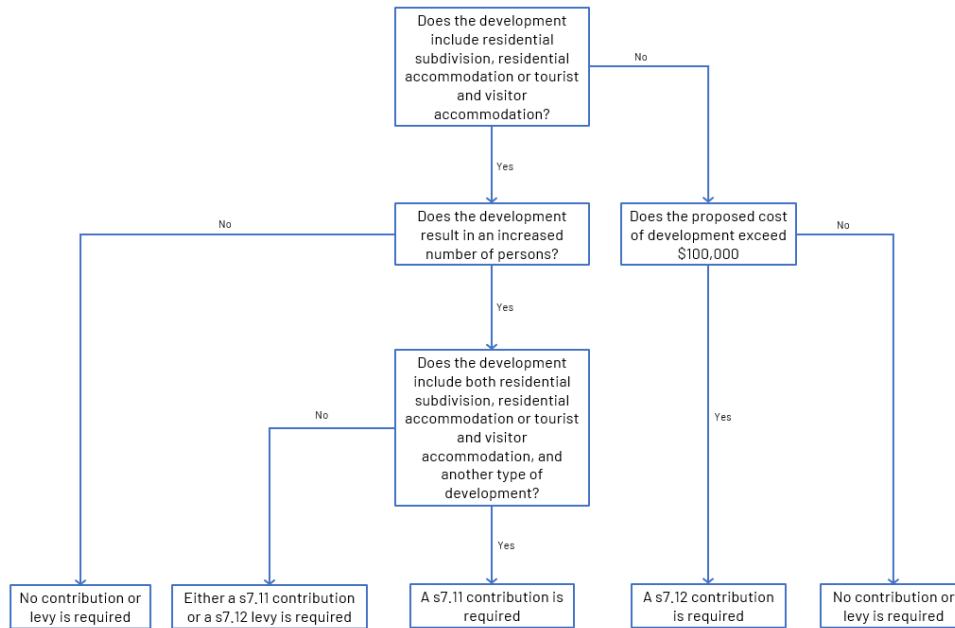


Figure 2 – Determining the contribution type

2.1.1 Section 7.11 Contribution

A Section 7.11 contribution applies to the following development types:

- **Subdivision** to create a lot for residential accommodation
- **Residential accommodation:**
 - dwelling house
 - dual occupancies
 - secondary dwelling (studio/granny flat)
 - attached dwellings
 - boarding houses
 - co-living housing

- group homes
- hostels
- multi-dwelling housing
- residential flat building
- semi-detached dwellings
- seniors housing
- shop-top housing

- **Tourist and visitor accommodation:**
 - backpackers' accommodation
 - bed and breakfast accommodation
 - hotel or motel accommodation
 - serviced apartments

The contribution rates are calculated by multiplying the **per person** contribution rate by the relevant **occupancy rate**, based on the mid-growth population scenario:

$$\text{Contribution rate per person} = \frac{\text{Cost of infrastructure attributable to future development}}{\text{Additional residents}}$$

Growth scenario	Low-growth	Mid-growth	High-growth
Cost of infrastructure	\$102,042,200	\$102,042,200	\$102,042,200
Population	10,500	12,500	15,500
Rate per person	\$9,718.30	\$8,163.40	\$6,583.40

The contribution rate is calculated based on a per lot, per person, per dwelling or per bed basis, based on the type of development and occupancy rate assumptions in **Table 6**.

Table 6: Summary of occupancy rates	
Development	Occupancy rate
Subdivision	
Single residential lot smaller than or equal to 250m ²	1.8 people per lot
Single residential lot larger than 250m ²	2.8 people per lot

Development	Occupancy rate
Residential accommodation	
Dwelling with 1 bedroom ¹	1.3 people per dwelling
Dwelling with 2 bedrooms ¹	1.8 people per dwelling
Dwelling with 3 or-more bedrooms ¹	2.8 people per dwelling
Boarding house, co-living housing, group home, hostel, student housing, and seniors housing	1 person per room
Tourist and Visitor Accommodation	
Tourist and Visitor Accommodation ²	1 person per bed

These figures have been derived from an analysis of Australian Bureau of Statistics 2021 Census data.

Table 7 is a summary of the infrastructure contribution rates.

Table 7: Summary of contribution rates by development type	
Development type	Contribution
Single residential lot smaller than or equal to 250m ²	\$14,694.10
Single residential lot larger than 250m ²	\$20,000.00
Dwelling with 1 bedroom	\$10,612.40
Dwelling with 2 bedrooms	\$14,694.10
Dwelling with 3 or-more bedrooms	\$20,000.00
Per person rate	\$8,163.40
Other Development: other development will be subject to a Section 7.12 levy. See Section 0	
Note: should a 3 bedroom dwelling be constructed on a lot that is < 250m ² the 3 bedroom levy will apply.	

¹ Includes attached dwellings, dwelling houses, residential flat buildings and secondary dwellings. For the purposes of this plan, examples of secondary dwellings levied under this plan include:

- granny flats;
- self-contained units of any type which have their own kitchen/bathroom;
- self-contained studios;
- Secondary dwellings under the SEPP (State Environmental Planning Policy (Housing) 2021).

To avoid doubt, a bedroom is defined as a room designed or intended for use as a bedroom or any room capable of being adapted to or used as a separate bedroom, for example a study/home office.

² Refer to the Glossary

Table 8 shows the capped contribution rates and what will be collected under this Plan for Section 7.11 contributions.

Table 8: Capped contribution rates						
Description	Per person	Lot ≤ 250m²	Lot > 250m²	Dwelling with 1 bedroom	Dwelling with 2 bedrooms	Dwelling with 3 or more bedrooms
Roads	\$5,327.40	\$9,589.30	\$13,057.80	\$6,925.60	\$9,589.30	\$13,051.90
Open Space	\$1,836	\$3,304.80	\$4,496.80	\$2,386.80	\$3,304.80	\$4,498.10
Stormwater	\$800	\$1,440	\$1,955.40	\$1,040	\$1,440	\$1,960
Administration	\$200	\$360	\$490	\$260	\$360	\$490
Total	\$8,163.40	\$14,694.10	\$20,000	\$10,612.40	\$14,694.10	\$20,000

Note: Council will apply a \$20,000 cap to contributions. However, should Council be approved to levy in excess of \$20,000, this Plan will automatically charge at the higher rate.

Table 9 shows the full costs and uncapped contribution rates and what will be collected under this Plan for Section 7.11 contributions.

Table 9: Full costs and uncapped contribution rates						
Description	Per person	Lot ≤ 250m²	Lot > 250m²	Dwelling with 1 bedroom	Dwelling with 2 bedrooms	Dwelling with 3 or more bedrooms
Roads	\$5,327.40	\$9,589.30	\$14,916.70	\$6,925.60	\$9,589.30	\$14,916.70
Open Space	\$1,836	\$3,304.80	\$5,140.80	\$2,386.80	\$3,304.80	\$5,140.80
Stormwater	\$80	\$1,440	\$2,240	\$1,040	\$1,440	\$2,240
Administration	\$200	\$360	\$560	\$260	\$360	\$560
Total	\$8,163.40	\$14,694.10	\$22,857.50	\$10,612.40	\$14,694.10	\$22,857.50

2.1.2 Section 7.12 Levy

A Section 7.12 levy applies to all developments not listed above. A section 7.12 levy is calculated based on the proposed cost of carrying out the development as follows:

Proposed cost of carrying out the development	Levy rate
Less than and including \$100,000	Nil
More than \$100,000 and up to and including \$200,000	0.5% of that cost
More than \$200,000	1.0% of that cost
Note: For mixed use development, the contribution mechanism will be whichever is the greater contribution amount.	

If a development requires a Section 7.12 levy to be paid, applicants must provide Council with the following information to assist with determining the costs of carrying out the development:

- Where the estimate of the proposed cost of carrying out the development is up to and including \$1,000,000, the application must be accompanied by a Cost Summary Report. This must be completed by a suitably qualified person such as a Project Architect or Project Manager.
- Where the estimate of the proposed cost of carrying out the development is more than \$1,000,000, a detailed cost report must be completed by a Quantity Surveyor registered with the Australian Institute of Quantity Surveyors or a person who can demonstrate an equivalent qualification.
- The report must be submitted to Council no more than 4 weeks from the date the costs on the form are originally estimated. Where more than 6 months has passed since the report has been submitted to Council, or where the applicant has amended the scope of the development that relates to the application, Council may require a new report to be submitted.
- Council may, at the applicants cost, engage a person referred to above to review a report submitted by an applicant. Copies of the cost summary report and detailed cost report are also available from Council's website at www.dubbo.nsw.gov.au.

2.1.3 Mixed use developments

A single development can only be the subject of either a section 7.11 contribution or a section 7.12 levy, not both. Where a single development comprises a mix of types covered by both Section 7.11 contributions and Section 7.12 levy, the component that represents the highest monetary contribution will apply.

PART 3 URBAN RELEASE AREA PROFILE

The North-West Urban Release Area is located in the north-western fringe of the Dubbo urban area. It is situated approximately 2km from the Dubbo Central Business District and Dubbo Regional Airport, and 4km from the Dubbo Health and Education Precinct.

The Urban Release Area is a key residential growth area for Dubbo and will drive residential development opportunities, provide increased housing opportunities, and ensure the city can provide housing for our increasing urban population into the future. It is anticipated that when fully developed, it will have the potential to realise between 4,500 and 5,500 dwellings, with a population of up to 15,500 people. These assumptions are based on a Planning Proposal that is currently being progressed by Council and the NSW Department of Planning, Housing and Infrastructure.

This section establishes the nexus between the anticipated development and the demand for additional or embellished transport.

3.1 Supporting strategies and documentation

The key documents supporting the need for infrastructure being provided due to demand resulting from new development are:

- North-West Urban Release Area Development Control Plan - Masterplan
- 2018 Open Space Masterplan
- 2020 Transportation Strategy
- Recreation Strategy 2030
- Community Strategic Plan – Towards 2040
- Remplan Population Projections

3.2 Forecast population growth

The area is expected to generate a residential population of approximately 12,500 – 15,500 people, based on an occupancy rate of 2.8 people per dwelling on a single lot. There may be other types of incoming population within the area which are likely to generate a need for infrastructure. **Table 10** is a summary of the estimated additional population on a five-yearly basis to 2039.

		2024	2029	2034	2039	Total Additional
Persons	Low series	-	3,500	3,500	3,500	10,500
	Mid series	-	4,100	4,200	4,100	12,500
	High series	-	5,000	5,000	5,000	15,000

		2024	2029	2034	2039	Total Additional
Dwellings	Low series	-	1,250	1,250	1,250	3,750 dwellings
	Mid series	-	1,500	1,500	1,500	4,500 dwellings
	High series	-	1,800	1,900	1,800	5,500 dwellings

3.3 Summary of infrastructure

Table 11 is a summary of the infrastructure included in this Plan for roads and transport, open space and recreation facilities, stormwater and administration.

Table 11: Summary of works included in this Plan		
Category	Summary of works	Cost
Roads and Transport Figure 3	<ul style="list-style-type: none"> • Intersection with New Dubbo Bridge (TFNSW) • Roundabouts with Bunglegumbe Road and River Street West • Roundabouts with Thompson Street and Bunglegumbe Road • Road infrastructure in River Street West - Stage 1, 2 and 3 • Road infrastructure in Blizzardfield Road • Upgrading Bunglegumbe Road • Land acquisitions 	\$66,592,200
Open Space and recreation facilities Figure 4	<ul style="list-style-type: none"> • Sporting precinct • Parks and open space throughout the precinct • Land acquisitions 	\$22,950,000
Stormwater Figure 5	<ul style="list-style-type: none"> • Pipe Infrastructure • Basins • Channels 	\$10,000,000
Administration and Plan Preparation	<ul style="list-style-type: none"> • Strategic infrastructure studies • Review of this Plan • Administration of this Plan 	\$2,500,000
Total		\$102,042,200

3.4 Demand for Infrastructure

One of the fundamental principles of infrastructure contributions is the relationship, or 'nexus', between the expected types of development and the demonstrated demand for new, augmented or embellished infrastructure created by that development.

Key aspects of determining nexus are:

- whether the anticipated development actually creates a demand or increases the demand for infrastructure;
- whether the estimates of demand for infrastructure to which the proposed development contribution relates are reasonable;
- what types of infrastructure will be required to meet that demand;
- whether the proposed development contribution is based on a reasonable estimate of the cost of proposed infrastructure; and
- when facilities will be provided to meet the demand of the development – often expressed as timing or thresholds.

The increased usage of and demand for new infrastructure as a consequence of future development will, in most cases, exceed the capacity of existing public facilities. Accordingly, it will be necessary for new and embellished infrastructure to be provided to cater for the anticipated demand of that development. It is also necessary to ensure that new development only contributes to its share of the total demand for public facilities and services, rather than any demand generated by the existing population, which may result out of a deficiency in existing facilities. This is known as 'apportionment'.

The area is projected to experience strong population growth through to 2039. To meet the identified shortfall in infrastructure for the current population and to ensure the demands of a growing population can be met, the contributions collected under this Plan will assist Council to deliver new facilities.

The work program included in the Plan is reviewed regularly to ensure the contributions income can best match the acquisition and embellishment activities proposed to be delivered in the Plan. From time to time the population growth of Dubbo may slow down or increase based on development and economic factors. In this case, works included in the Plan can be pushed back or brought forward as required and in line with the availability of funding.

3.4.1 Roads and transport infrastructure

The primary vehicular connections are the north-south Bunglegumbie Road, New Dubbo Bridge, and east-west River Street West. River Street West is a critical connection that will provide a flood-free vehicular connection over the Macquarie River to the northern end of the CBD and will create a strong east-west connection through the site to Westview Street and to the Mitchell Highway at the south-west of the site.

External to the site, the Mitchell Highway runs to the south, providing a connection to the Dubbo CBD over the LH Ford Bridge. The Newell Highway, also south of the site, provides vehicular

connection over the Emile Serisier Bridge. A localised road network within the residential estate to the south of the site has the potential to be integrated within the site in the future.

Figure 3 and **Table 12** is a summary of the road and transport infrastructure.

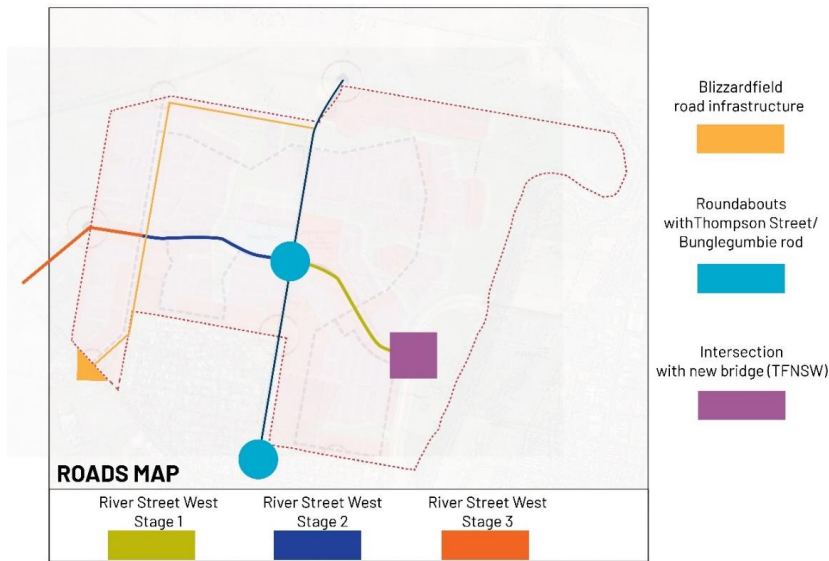


Figure 3 - Road and transport infrastructure

Table 12: Roads and Transport Infrastructure		
Item	Detail of inclusions	Timing
Intersection with New Dubbo Bridge (TFNSW)	Traffic lights	2026
Roundabouts with Bunglegumbie Road and River Street West, and Bunglegumbie Road and Thompson Street	Single lane roundabout	2026
Road infrastructure in River Street West Stages 1,2 and 3	<ul style="list-style-type: none"> Land acquisition Roundabout Road construction 	Stage 1 2026 Stage 2 2030
Road infrastructure in Blizzardfield Road	<ul style="list-style-type: none"> Land acquisition Road construction 	Long term
Upgrading Bunglegumbie Road	Road construction	Long term

The Dubbo Transportation Strategy demand will reduce the flow capacity of roads and intersections which may potentially result in a loss of levels of service of individual roads falling below acceptable standards.

The loss of service of a given road segment or intersection generally relates to the stability of the flow of traffic and delay of vehicles. Accordingly, traffic from future development that results in a road or intersection falling below the desired standard, exacerbates the situation, which creates a nexus between future development and upgrades required to maintain acceptable standards.

3.4.2 Open space and recreation infrastructure

The North-West Urban Release Area Development Control Plan - Masterplan identifies that approximately 20% of the area will be dedicated as public open space, including sporting fields, park land, and river reserves. These areas will feature naturalised stormwater management and treatment systems, active open space, passive recreational zones, and a landscape that ties into the site's unique location and history. To ensure that public open space is accessible to the anticipated population, green space is within approximately 400 metres of residences.

Figure 4, Figure 3 and Table 13 is a summary of the open space and recreation infrastructure.

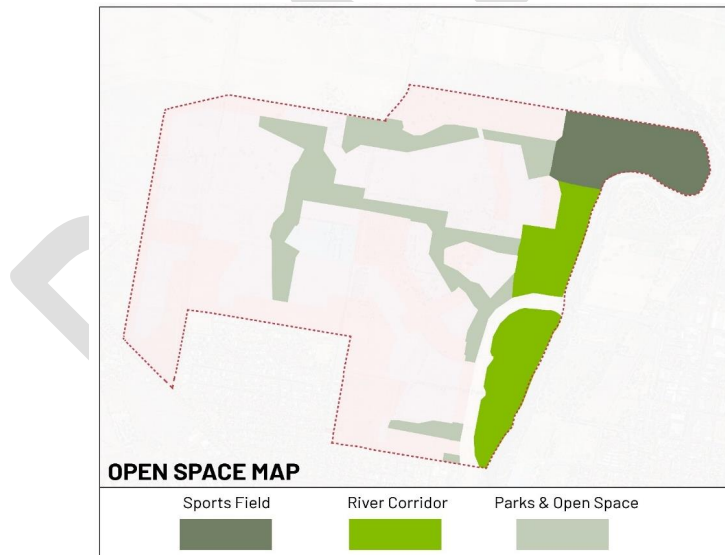


Figure 4 - Open space and recreation infrastructure

Table 13: Open space infrastructure		
Item	Indicative inclusions	Timing
Sportsfields	<ul style="list-style-type: none"> • Hard court surfaces and turf or synthetic surfaces for sporting fields • Playground, skate park or other active recreational area • Amenities and changerooms • Pathways - internal and connecting to the estates path system • Sports lighting / pedestrian lighting • Carparking facilities • Irrigation systems • Signage - Wayfinding, regulatory and advisory • Smart technology relating to the use of facilities • Other sports related infrastructure as identified in the master plan 	Medium/long term
Parks and open space	<ul style="list-style-type: none"> • Playground or other active recreational area • Pathways - internal and connecting to the estates path system • Signage - Wayfinding, regulatory & advisory • Litter bins • Park furniture • Irrigation systems • Pedestrian lighting 	Medium/long term
River Corridor	<ul style="list-style-type: none"> • Pedestrian bridge over the Macquarie River • Pathways - internal and connecting to the estates path system • Signage - Wayfinding, regulatory and advisory • Litter bins • Park furniture • Irrigation systems • Plantings of trees and shrubs • Pedestrian lighting 	Medium/long term

The Open Space Master Plan describes the existing rate of provision of open space and recreation facilities in the precinct and includes a normative, comparative, identified, and best practice assessment of the demand for additional and/or embellished infrastructure as a consequence of the future population growth. This analysis derives levels of service for various types of open space and recreation facilities, and these have been adopted for the purposes of this Plan.

The desired metric used to identify the average hectare of open space required per resident is as follows:

Park Category	Desired level of service (Ha/1000)
District	3.0
Regional	0.5
Sporting	2.8
TOTAL	7.8

This Master Plan concludes new facilities will be required to maintain the identified levels of service.

3.4.3 Stormwater infrastructure

Overland flow paths overlap with green corridors to create integrated and innovative green infrastructure. Where possible, typical pit and pipe stormwater solutions are avoided, using the network of green spaces to filter, retain and direct stormwater catchments before reaching the river.

Figure 5 **Figure 3** is a summary of the stormwater infrastructure.

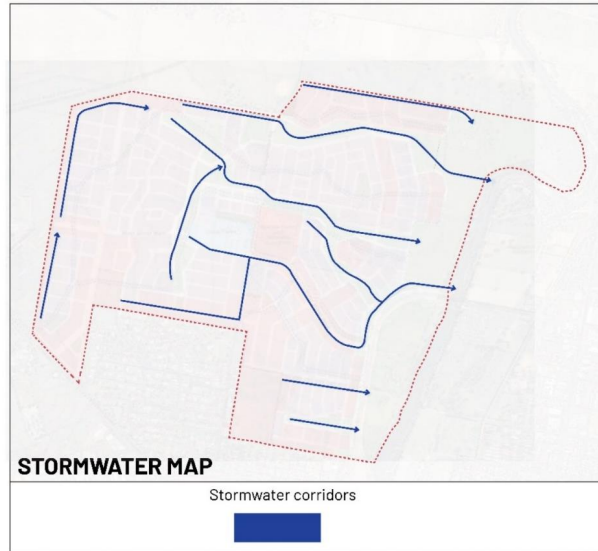


Figure 5 - Stormwater infrastructure

3.4.4 Village centre

Development types such as educational facilities, aged care, health facilities, retail and office and business premises are subject to Section 7.12 levies under this Plan as they are not identified in Section 2.1.1. The area for the commercial precinct is zoned E1 allowing for a range of business and community facilities.

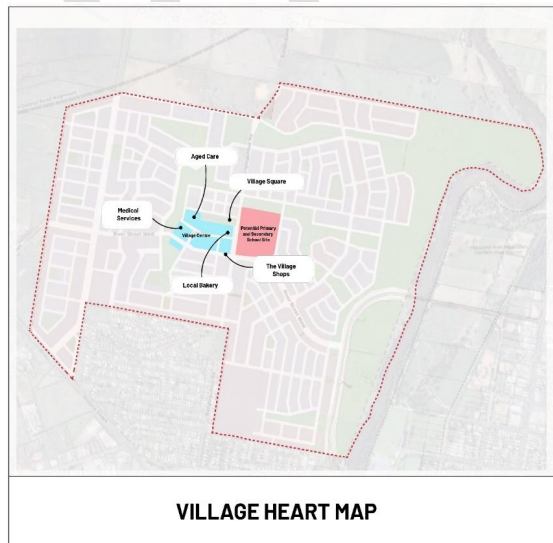


Figure 6 - Village Heart and other permissible development

3.4.5 Plan preparation and administration

Council will incur the following costs in the preparation and administration of this Plan:

- Staff time to prepare and review this Plan, account for contributions receipts and expenditure, and coordinate implementation of works programs, including involvement in negotiating works-in-kind and material public benefit agreements;
- The costs of consultant studies to determine the value of land to be acquired, the design and cost of works, as well as the review of development and demand assumptions in this Plan; and
- The costs of engaging legal professionals to provide advice on implementing the plan.

As these costs arise directly as a result of this Plan, it is reasonable that they will be recouped through infrastructure contributions.

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PART 4 ADMINISTRATION OF THIS PLAN

4.1 How will Contributions be imposed?

In accordance with the Act, if a contribution is required for development, the consent authority including registered certifiers is responsible for imposing a condition in the consent or complying development certificate.

The relevant proforma conditions specified in **Appendix C, D and E** must be used. They include:

- Section 7.11 conditions of consent;
- Section 7.11 complying development certificate condition;
- Section 7.12 conditions of consent and complying development certificate condition.

The condition will specify:

- Which contribution is applicable (Section 7.11 contribution or Section 7.12 levy);
- How the contribution amount will be indexed for inflation (CPI);
- The contribution amount payable;
- When the contribution needs to be paid; and
- How to pay (acceptable payment methods).

4.2 Timing of payments

Contributions levied under this Plan must be paid to Council in accordance with:

- In the case of subdivision - **prior** to the issue of the Subdivision Certificate for each stage;
- In the case of development involving building work - **prior** to the issue of the first Construction Certificate;
- In the case of development that involves both subdivision and building work - **prior** to issue of the Subdivision Certificate or first Construction Certificate, whichever occurs first; or
- In the case of development that does not involve subdivision or building work - **prior** to occupation or the issue of an Occupation Certificate, whichever occurs first.

In the case of Complying Development:

- where works are proposed - **prior** to any works commencing; or
- where there are no works proposed - prior to occupation or the issue of an Occupation Certificate, whichever occurs first.

It is the responsibility of a registered certifier to ensure that a condition is imposed on a complying development certificate in accordance with the above timeframes.

4.3 Deferred or periodic payments

Council will not accept the deferred or periodic payment of a monetary contribution or levy imposed under this Plan.

4.4 Methods of payment

An obligation to provide contributions toward infrastructure can be satisfied by one or more of the following methods:

- Payment of a monetary contribution;
- The dedication of land; or
- Provision of a material public benefit.

4.5 How to pay monetary contributions

Payment of contributions can be made by BPAY (preferred), endorsed bank cheque, credit card or cash at Council's Customer Experience Centre's by eftpos or any other means acceptable by Council.

4.6 Dedication of land

Council may require that land be dedicated as a form of contribution toward the provision of infrastructure. Where such dedication is required, it must be undertaken in accordance with the following:

- The process for dedication of land is to occur in conjunction with the payment of monetary contributions applicable to any development consent or complying development certificate granted for the land;
- The dedication of land is to be 'free of cost', meaning that all costs associated with the dedication of the land and its transfer to Council's ownership are to be borne by the applicant/developer;
- At the time of transfer, the land is to be in a condition which is suitable for its identified public purpose (as determined by Dubbo Regional Council) and is to be cleared of all rubbish and debris and have separate title; and
- The land is to be free of all caveats and easements.

4.7 Material public benefit/'works in kind'

Council may accept an offer by the applicant to:

- provide an 'in-kind' contribution (for example, the applicant completes part, or all of the work/s identified in the Plan) or;
- through provision of another material public benefit (other than the dedication of land) in lieu of the applicant satisfying its obligations under this Plan.

Council is under no obligation to accept works-in-kind (WIK) or material public benefit (MPB) offers. When considering any such offer, Council will assess the benefits to Council and the community and give due consideration to relevant matters including the following:

- the extent to which the works/MPB satisfies the purpose for which the contribution was sought;
- the extent to which the MPB satisfies a community need or may reduce the demand for items within the works schedule;
- the impending need to construct the works for which the contributions are to be offset;
- the provision of the works/MPB will not prejudice the timing, the manner or the orderly provision of items included in the works program or the financial integrity of Council's Plan;
- an assessment of the shortfall or credit in monetary contributions as a result of the proposal;
- the availability of supplementary funding to make up the shortfall in contributions;
- locational and other factors that may affect usability;
- impact of recurrent operational and maintenance costs; and
- the provision of the works/MPB must not result in piecemeal delivery of infrastructure or likely to result in the need to reconstruct the works due to future nearby development (i.e normally the works will need to relate to a whole street block or a defined precinct/area).

In accepting MPBs other than a WIK, Council must be satisfied that the offer provides a substantial benefit to the community not envisaged by the Plan and that this benefit warrants Council accepting responsibility in fulfilling the intent of the Plan notwithstanding a reduction in expected cash contributions.

A 'works in-kind' relates to the undertaking of a specific or equivalent work specified in the Plan, and is therefore more readily capable, in comparison to other material public benefits of meeting the above criteria. However, Council may not accept an off-set to the cash otherwise required to be paid which exceeds the quantum of cash payable under the infrastructure category that relates to the works-in kind.

4.8 Planning Agreements

An applicant may voluntarily offer to enter into a planning agreement with Council in connection with a development application. Under a planning agreement, the applicant may offer to pay money, dedicate land, carry out works, or provide other material public benefits for public purposes. The applicant's provision under a planning agreement may be additional to or instead of making contributions provided for by the Act.

An applicant's offer to enter into a planning agreement, together with the draft agreement, will generally need to accompany the relevant development application or an application to modify the development consent. Council may also consider an offer to enter into a planning agreement where an applicant has sought a change to an environmental planning instrument (commonly referred to as a planning proposal) however Council is under no obligation to accept an offer to enter into a planning agreement.

4.9 Construction certificates and the obligation of registered certifiers

In accordance with the Act and the Regulation, a certifying authority must not issue a Construction Certificate or an Occupation Certificate, whichever is applicable under a development consent, **unless** it has verified that each condition requiring the payment of monetary contributions has been satisfied.

In particular, the certifier must ensure that the applicant provides a receipt(s) confirming that contributions have been **paid in full** and copies of such receipts must be included with copies of the certified plans provided to Council in accordance with the Regulation.

Failure to follow this procedure may render such a certificate invalid. The only exceptions to this requirement are where an alternate payment method has been agreed by Council. In such cases, Council will issue a letter confirming that an alternative payment method has been agreed with the applicant.

4.10 Complying development and the obligation of registered certifiers

In accordance with the Act, registered certifiers must impose a condition on a Complying Development Certificate, requiring monetary contributions in accordance with this Plan.

The conditions imposed must be consistent with Council's standard condition for Complying Development Certificates (**Appendix C, D and E**) and be strictly in accordance with this Plan. It is the responsibility of a registered certifier to inform themselves of any amendments to this Plan (including current indexed rates), to accurately calculate the contribution and to apply the development contribution condition correctly in accordance with Council's current consent condition requirements.

Registered certifiers should contact Council for a copy of the current consent condition requirements.

It is also the responsibility of a registered certifier to ensure that any applicable monetary contributions have been paid to Council prior to authorising works to commence.

4.11 Indexation of contributions

The contributions stated in this Plan will be indexed at the time of payment to reflect changes in the cost of facilities in the following manner:

$$\$C_{py} = \frac{\$C_{pc} \times CPI_{py}}{CPI_{pc}}$$

Where:

- \$Cpy** is the amount of the contribution at the date of Payment.
- \$Cpc** is the amount of the contribution for works schedule items at the date of the Plan Commencement (or date of development consent – see below).
- CPIpy** is the Consumer Price Index (Sydney – All Groups) (CPI) as published by the Australian Bureau of Statistics (ABS) for the financial quarter at the date of Payment.
- CPIpc** is the CPI (Sydney – All Groups) as published by the ABS for the financial quarter at the date of the Plan Commencement (or date of development consent – see below).

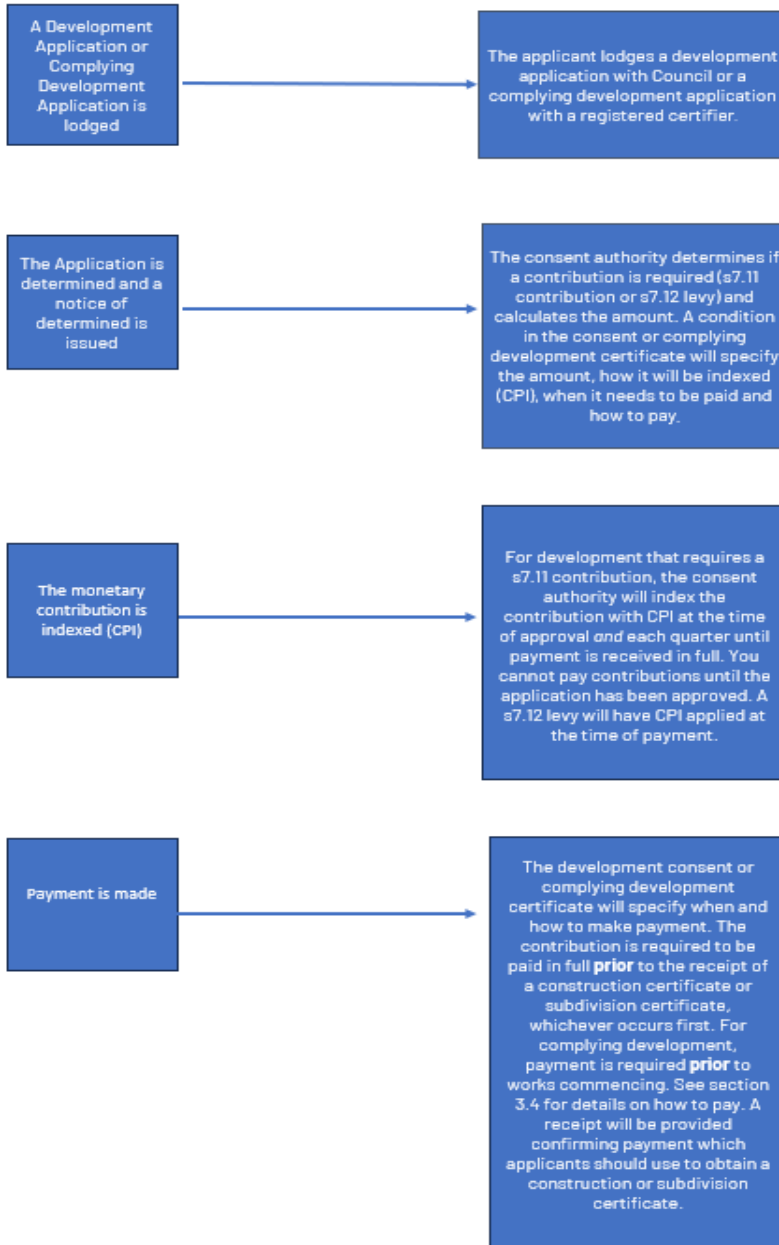
A development consent or complying development certificate will show the contribution payable at the date the consent or certificate is issued. In this circumstance, if the contribution is not paid within the same financial quarter as the date of the consent/certificate, the payment shall be further indexed in accordance with the above formula.

Contribution rates under this Plan and the estimated costs upon which they are based will also be indexed by Council on a regular basis consistent with the above methodology.

The adjustment of contribution rates and estimated costs will occur by way of an amendment without the need to prepare a new contributions plan, in accordance with the Regulation. Applicants and registered certifiers should inquire with Council for information on the latest contribution rates.

The **current** contributions rates are available on Council's website.

4.12 Key steps in the process



4.13 Credits

A credit may be provided by Council where the net contributions provided by any particular development exceed that required by the Plan.

This could arise where an applicant proposes the provision of a work or dedication of land, at a value determined by Council to exceed the amount of cash otherwise payable in accordance with the Plan. However, credits will only be provided at Council's absolute discretion.

A credit will be provided only against the same facility category for which the surplus contribution relates. For example, if the applicant proposes to dedicate more public open space that would otherwise be required under the Plan, then a credit could be accrued against open space contributions requirements of future development. Consequently, if an applicant dedicates more public open space than would otherwise be required under the Plan, the value of the additional open space cannot be used to offset the cash contribution otherwise payable under a different contribution category, such as roads or stormwater infrastructure. The objective is to ensure that Council maintains an adequate flow of contributions across the range of infrastructure facilities to be funded under this Plan and to provide for the orderly and staged delivery of all infrastructure requirements

The amount and terms of the credit are to be negotiated prior to the dedication of land or commencement of works and will be for the additional value only as agreed by Council. If agreed, Council will advise the applicant of the credit which would be redeemable in lieu of contributions in the same facility category otherwise payable by the applicant for future development in the area to which this Plan applies.

Council reserves the right to require payment of a monetary contribution or to terminate the "credit agreement" should the applicant be unwilling or unable to meet its terms.

No credit will be given for land or works which are not nominated in the works schedule in this contributions plan. If an applicant seeks to offset a credit against the cash payable under a different facility category or to be reimbursed in cash, then this would need to be negotiated with Council as part of a planning agreement or a works-in-kind/material public benefit agreement in accordance with the provisions of this Plan.

Council will not support proposals for works or land in kind that is inconsistent with the approved Infrastructure priorities list unless it can be demonstrated that it will result in a net community benefit and not adversely impact Council's cash flow and operational budget.

4.14 Refunds

Council is under no obligation under legislation to refund development contributions. However, should a request for a refund that has been paid be made, it must be **in writing** and is at the sole discretion of Council. To be considered for a refund the applicant must either:

- Lodge a modification application pursuant to s4.30, s4.55 or s4.56 of the Act, which seeks to amend or delete the contributions condition; or
- Surrender the development consent pursuant to s4.17 or s4.63 of the Act in the form

required by cl97 of the Regulation; and

- The application for a refund is **within 12 months** of Council receiving the contribution for which a refund is sought.

The administration component of the contribution paid will not be refunded under any circumstances.

4.15 Monitoring and review of the plan

It is intended to monitor and review this Plan on a regular basis as it contains forecasts of future development including likely future population and the likely demand and cost of providing community infrastructure for the increase in population. Monitoring actual developments, population changes and community demand will allow appropriate updating and amendment as necessary. The cost of works proposed in this Plan may also need review over time if there is a concern that the indexation of costs do not adequately reflect actual costs at the time.

Council's aim is that all forecasts, costs, and assumptions are reviewed and adjustments and/or amendments are made approximately every four years after the date of adoption of this Plan.

In accordance with Clause 32(3) of the Regulation, Council may also make minor amendments to this Plan such as minor typographical corrections and adjustment of contribution rates due to indexation as specified in this Plan. Such amendments may be made without public exhibition and/or adoption by Council.

4.16 Relationship to other plans

Funds levied and received under previous plans will be used toward the delivery of the specific works identified in this Plan.

4.17 Accounting and Management of Funds

4.17.1 Accounting standards and contributions register

Separate accounting records are maintained for all development contributions made to Council under this Plan and a development contributions register will be maintained by Council in accordance with the Regulation. Council is also required to publish details of development contributions accounts annually.

4.17.2 Investment of funds

To maintain the time-value of monetary contributions received under this Plan, Council will invest these funds until the time of expenditure for infrastructure specified in this Plan.

Council will report all investment returns as part of its annual infrastructure contribution accounts reporting and all investment returns will be retained within the development contributions accounts, to be used for the purpose for infrastructure specified in this Plan.

4.17.3 Pooling of contributions

Subject to any prevailing Ministerial Direction, this Plan expressly authorises monetary contributions received under this Plan, any previous plans and any other current infrastructure contributions plans to be pooled and applied (progressively or otherwise) for the purposes for which the contributions were made.

4.17.4 Other funding sources

All works proposed in this Plan represent infrastructure to be funded pursuant to the development contributions provisions of the Act.

There were no grants or other external funding sources secured for the works proposed in this Plan, at the time of its adoption. Should such funding become available in the future, the cost of the relevant project will be reviewed, and the contribution rates will be adjusted accordingly.

4.17.5 Goods and Services Tax

At the date of preparing this Plan, monetary development contributions were exempt from the Federal Government Goods and Services Tax (GST).

In addition, at the date of preparing this Plan, non-monetary contributions by way of dedication of land, works-in-kind or material public benefit in lieu of contributions that would be exempt under Section 81-5 of the GST Act, do not constitute a taxable supply.

Therefore, there are no GST implications for non-monetary contributions. However, if legislative changes (including Australian Tax Office tax rulings) determine otherwise, contributions in this Plan will be adjusted to include GST.

APPENDIX A – Infrastructure work schedule

Roads and Transport Infrastructure:

Facility Ref	Description	Land Acquisition Cost	Construction Cost	Cost Attributable to New Development	Timing
River Street West Stage 1	New Dubbo Bridge to Bunglegumbie Rd Intersection with New Dubbo Bridge (traffic lights)		\$3,100,000 \$11,000,000	100%	Short term
Roundabout	14L Bunglegumbie Rd 9L Bunglegumbie	\$108,600		100%	Short term
Thompson Street	Intersection with Bunglegumbie Road		\$3,000,000	100%	Short term
River Street West Stage 2	14L Bunglegumbie Rd 5R Westview Street	\$2,592,000	\$10,800,000	100%	Medium term
Roundabout	Blizzardfield Rd and River St West		\$3,000,000	100%	Medium term
River Street West Stage 3	12R Narromine Road	\$291,600	\$2,700,000	100%	Long term
Blizzardfield Road			\$15,000,000	100%	Long term
Bunglegumbie Road	Road widening		\$15,000,000	100%	Long term
TOTAL		\$2,992,200	\$63,600,000		

Open Space and Recreation Infrastructure:

Facility Ref	Description	Land Acquisition Cost	Construction Cost	Cost Attributable to New Development	Timing
Sportsfield			\$6,000,000	100%	Medium/long term
District Park		\$7,500,000	\$3,000,000	100%	Medium/long term
River Corridor		\$3,450,000	\$3,000,000	100%	Medium/long term
TOTAL		\$10,950,000	\$12,000,000		

Stormwater Infrastructure:

Facility Ref	Description	Land Acquisition Cost	Construction Cost	Cost Attributable to New Development	Timing
Stormwater infrastructure	Pipe infrastructure		\$4,000,000	100%	Continuous
	Basins		\$4,000,000	100%	Continuous
	Channels		\$2,000,000	100%	Continuous
TOTAL			\$10,000,000		

Plan Preparation and Strategy Review:

Facility Ref	Description	Cost	Cost Attributable to New Development
Plan Administration	Plan preparation, administration and staff salary	\$2,000,000	100%
Strategy review	Transportation Strategy Open Space and Recreation Strategy Stormwater Strategy	\$500,000	100%
TOTAL		\$2,500,000	

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APPENDIX B – Working examples

Example development:	
Dual Occupancy - (two dwellings on a single lot, no subdivision of land). Both dwellings have 3 x bedrooms.	
Calculation methodology:	A 3 or-more bedroom dwelling is capped at \$20,000 per dwelling. The calculation is: $\$20,000 \times 2 = \mathbf{\$40,000}$ A credit is applied for the existing lot or dwelling where contributions have previously been paid for that lot or dwelling.
Contribution:	The total contribution is \$40,000 - \$20,000 credit (if applicable) = \$20,000 total contribution to pay
Example development:	
10 lot subdivision (from 1 existing lot):	
Calculation methodology:	A single lot is capped at \$20,000 per lot. The calculation is: $\$20,000 \times 10 \text{ lots} = \mathbf{\$200,000}$ A credit is applied for the existing lot where contributions have previously been paid for that lot.
Contribution:	The total contribution is \$200,000 - \$20,000 credit (if applicable) = \$180,000 total contribution to pay.
Example development:	
Dual Occupancy - (two dwellings on a single lot, no subdivision of land). One dwelling has 2 x bedrooms and 1 dwelling has 4 x bedrooms:	
Calculation methodology:	A 2 bedroom dwelling is \$14,694.10 per dwelling and a 3 or-more bedroom dwelling is capped at \$20,000 . The calculation is: $\$14,694.10 (2 \text{ bed dwelling}) + \$20,000 (4 \text{ bed dwelling}) = \mathbf{\$34,694.10}$ A credit is applied for the existing lot where contributions have previously been paid for that lot.
Contribution:	The total contribution is \$34,694.10 - \$20,000 credit (if applicable) = \$14,694.10 total contribution to pay
Note: uncapped contributions are subject to CPI. Please ensure the <u>current</u> rates are used to calculate contributions.	

APPENDIX C - Pro forma Condition of Consent for S7.11 Contribution

- a) In accordance with Section 4.17(1) of the *Environmental Planning and Assessment Act 1979* and the Dubbo Regional Council North-West Urban Release Area Infrastructure Contributions Plan 2024, the following monetary contributions shall be paid to Council for the increased demand for infrastructure:

SECTION 7.11 CONTRIBUTION FEE SCHEDULE

Description	Contribution (\$)
Roads	INSERT AMOUNT
Open Space	INSERT AMOUNT
Stormwater	INSERT AMOUNT
Plan Preparation and Administration	INSERT AMOUNT
TOTAL	INSERT AMOUNT

- a) From the date this determination is made until payment, the contribution will be indexed and adjusted at the close of business on:

- 14 August
- 14 November
- 14 February, and
- 14 May

in each year in accordance with the Consumer Price Index – Sydney All Groups published by the ABS.

The first date for indexation and adjustment shall be the date above, which is closest to but *follows* the date on which the Notice of Determination becomes effective.

- b) The contributions payable will be the amounts last indexed and adjusted in accordance with the above dates.

If no amount has been indexed and adjusted because the first date for indexation and adjustment has not arrived, the contributions payable shall be those in clause (a) above.

The contributions shall be paid to Council as follows:

- Development Applications involving subdivision – **prior** to the issue of the Subdivision Certificate for each stage.
- Development Applications involving building work – **prior** to the issue of the first Construction Certificate.

- Development Applications involving both subdivision and building work – **prior** to the issue of the Subdivision Certificate or first Construction Certificate, whichever occurs first.
- Development Applications where no Construction Certificate or Subdivision Certificate is required – **prior** to the works commencing. Please note that should payment be made by cheque or electronic transfer the release of any documentation will be subject to the clearing of those funds.

It is the responsibility of the Registered Certifying Authority to ensure that the monetary contributions have been paid to Council in accordance with the above timeframes.

Council's Infrastructure Contributions Plan may be viewed online at www.dubbo.nsw.gov.au or a copy may be inspected at Council's Administration Centre during normal business hours.

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APPENDIX D - Pro forma CDC Condition for S7.11 Contribution

- a) In accordance with Section 4.28(6) of the *Environmental Planning and Assessment Act 1979* and the Dubbo Regional Council North-West Urban Release Area Infrastructure Contributions Plan 2024, the following monetary contributions shall be paid to Council for the increased demand for infrastructure:

SECTION 7.11 CONTRIBUTION FEE SCHEDULE

Description	Contribution (\$)
Roads	INSERT AMOUNT
Open Space	INSERT AMOUNT
Stormwater	INSERT AMOUNT
Plan Preparation and Administration	INSERT AMOUNT
TOTAL	INSERT AMOUNT

- b) From the date this determination is made until payment, the contribution will be indexed and adjusted at the close of business on:
- 14 August
 - 14 November
 - 14 February, and
 - 14 May
- in each year in accordance with the Consumer Price Index – Sydney All Groups published by the ABS.
- The first date for indexation and adjustment shall be the date above, which is closest to but *follows* the date on which the Notice of Determination becomes effective.
- c) The contributions payable will be the amounts last indexed and adjusted in accordance with the above dates.
- d) The monetary contributions shall be paid to Council:
- (i) **prior** to the works commencing where the development requires building works;
 - (ii) **prior** to occupation or the issue of an occupation certificate, whichever occurs first, where no works are required.

It is the professional responsibility of the Registered Certifying Authority to ensure that the monetary contributions have been paid to Council in accordance with the above timeframes.

Council's Infrastructure Contributions Plan may be viewed online at www.dubbo.nsw.gov.au or a copy may be inspected at Council's Administration Centre during normal business hours.

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APPENDIX E - Pro forma Condition for s7.12 Levy

- a) In accordance with Section 7.12 of the *Environmental Planning and Assessment Act 1979* and the Dubbo Regional Council North-West Urban Release Area Infrastructure Contributions Plan 2024 (the Plan), a monetary contribution of \$ **[INSERT FIGURE]** shall be paid to Council for the purposes of the provision of infrastructure identified in the Plan.
- b) The monetary contributions shall be paid to Council:
- **prior** to the works commencing where the development requires building works;
 - **prior** to occupation or the issue of an occupation certificate, whichever occurs first, where no works are required.

At the time of payment, the monetary contribution payable will be adjusted for inflation in accordance with the indexation provisions in the Plan.

Indexation has been applied to the above levy based on CPI for the **[insert latest quarter and year]**.

Note: The contribution payable will not be less than the contribution specified in this condition.

It is the responsibility of the Registered Certifying Authority to ensure that the monetary contributions have been paid to Council in accordance with the above timeframes.

Council's Infrastructure Contributions Plan may be viewed online at www.dubbo.nsw.gov.au or a copy may be inspected at Council's Administration Centre during normal business hours.

Glossary

Terms used in this Plan have the following meanings except where the meaning of a term is inconsistent with the Act or the Standard Instrument—Principal Local Environmental Plan (SILEP), in which case the definition in the Act or SILEP will prevail:

ABS means the Australian Bureau of Statistics.

Act means the Environmental Planning and Assessment Act 1979.

Affordable housing means housing for very low income households, low income households or moderate income households, being such households as are prescribed by the regulations or as are provided for in an environmental planning instrument.

Applicant means the person(s) or organisation(s) submitting a development application.

Apportionment means the adjustment of a contribution (usually a percentage) to ensure the contributing population only pays for its share of the total demand for the facility.

Attached dwelling means a building containing 3 or more dwellings, where:

- each dwelling is attached to another dwelling by a common wall, and
- each of the dwellings is on its own lot of land, and
- none of the dwellings is located above any part of another dwelling.

Backpackers' accommodation means a building or place that:

- provides temporary or short-term accommodation on a commercial basis, and
- has shared facilities, such as a communal bathroom, kitchen or laundry, and
- provides accommodation on a bed or dormitory-style basis (rather than by room);

Bed and breakfast accommodation means an existing dwelling in which temporary or short-term accommodation is provided on a commercial basis by the permanent residents of the dwelling and where:

- meals are provided for guests only, and
- cooking facilities for the preparation of meals are not provided within guests' rooms, and
- dormitory-style accommodation is not provided;

Boarding house means a building that:

- is wholly or partly let in lodgings, and
- provides lodgers with a principal place of residence for 3 months or more, and
- may have shared facilities, such as a communal living room, bathroom, kitchen or laundry, and
- has rooms, some or all of which may have private kitchen and bathroom facilities, that accommodate one or more lodgers,

but does not include backpackers' accommodation, a group home, hotel or motel accommodation, seniors housing or a serviced apartment;

Co-Living means a building or place that has at least 6 rooms, some or all of which may have private kitchen and bathroom facilities and provides occupants with a principal place of residence for at least 3 months and has shared facilities but does **not include** backpackers' accommodation, a boarding house, a group home, hotel or motel accommodation, seniors housing or a serviced apartment.

Consumer Price Index (CPI) is a standard measure of price movements published by the Australian Bureau of Statistics.

Contribution means the same as "development contribution";

Contributions plan means a contributions plan referred to in the Act.

Council means Dubbo Regional Council.

DCP means a Development Control Plan adopted by Council under the Act.

Development has the meaning under Section 4 of the Act which in relation to land means:

- the use of land; and
- the subdivision of land; and
- the erection of a building; and
- the carrying out of a work; and
- the demolition of a building or work; and
- any other act, matter or thing that may be controlled by an environmental planning instrument.

Development consent means consent under Part 4 of the Act to carry out development and includes, unless expressly excluded, a complying development certificate.

Development contribution means the making of a monetary contribution, dedication of land or the provision of a material public benefit (including a work-in-kind), or any combination of these as referred to in the Act for the provision of transport and social infrastructure.

Dual occupancy means a dual occupancy (attached) or a dual occupancy (detached).

Dual occupancy (attached) means 2 dwellings on one lot of land that are attached to each other but does not include a secondary dwelling.

Dual occupancy (detached) means 2 detached dwellings on one lot of land but does not include a secondary dwelling.

Dwelling means a room or suite of rooms occupied or used or so constructed or adapted as to be capable of being occupied or used as a separate domicile;

Dwelling house means a building containing only one dwelling;

Educational establishment means a building or place used for education (including teaching), being:

- a school, or
- a tertiary institution, including a university or a TAFE establishment, that provides formal education and is constituted by or under an Act;

Exhibition home means a dwelling built for the purposes of the public exhibition and marketing of new dwellings, whether or not it is intended to be sold as a private dwelling after its use for those purposes is completed and includes any associated sales or home finance office or place used for displays.

GFA means the same as gross floor area.

Gross floor area means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes:

- the area of a mezzanine, and
- habitable rooms in a basement or an attic, and
- any shop, auditorium, cinema, and the like, in a basement or attic,

but **excludes:**

- any area for common vertical circulation, such as lifts and stairs, and
- any basement:
- storage, and

- vehicular access, loading areas, garbage and services, and
- plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and
- car parking to meet any requirements of the consent authority (including access to that car parking), and any space used for the loading or unloading of goods (including access to it), and
- terraces and balconies with outer walls less than 1.4 metres high, and
- voids above a floor at the level of a storey or storey above.

Group home means a permanent group home or a transitional group home;

Group home (permanent) or permanent group home means a dwelling:

- that is occupied by persons as a single household with or without paid supervision or care and whether or not those persons are related or payment for board and lodging is required, and
- that is used to provide permanent household accommodation for people with a disability or people who are socially disadvantaged,

but does not include development to which State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 applies;

Group home (transitional) or transitional group home means a dwelling:

- that is occupied by persons as a single household with or without paid supervision or care and whether or not those persons are related or payment for board and lodging is required, and
- that is used to provide temporary accommodation for the relief or rehabilitation of people with a disability or for drug or alcohol rehabilitation purposes, or that is used to provide half-way accommodation for persons formerly living in institutions or temporary accommodation comprising refuges for men, women or young people,

but does not include development to which State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 applies;

Hospital means a building or place used for the purpose of providing professional health care services (such as preventative or convalescent care, diagnosis, medical or surgical treatment, psychiatric care or care for people with disabilities, or counselling services provided by health care professionals) to people admitted as in-patients (whether or not out-patients are also cared for or treated there), and includes ancillary facilities for (or that consist of) any of the following:

- day surgery, day procedures or health consulting rooms,
- accommodation for nurses or other health care workers,
- accommodation for persons receiving health care or for their visitors,
- shops, kiosks, restaurants or cafes or take-away food and drink premises,
- patient transport facilities, including helipads, ambulance facilities and car parking,
- educational purposes or any other health-related use,
- research purposes (whether or not carried out by hospital staff or health care workers or for commercial purposes),
- chapels,
- hospices,
- mortuaries

Hostel means premises that are generally staffed by social workers or support providers and at which:

- residential accommodation is provided in dormitories, or on a single or shared basis, or by a combination of them, and
- cooking, dining, laundering, cleaning and other facilities are provided on a shared basis.

hotel or motel accommodation means a building or place (whether or not a licensed premises under the *Liquor Act 2007*) that provides temporary or short-term accommodation on a commercial basis and that:

- comprises rooms or self-contained suites, and
- may provide meals to guests or the general public and facilities for the parking of guests' vehicles,

but does not include backpackers' accommodation, a boarding house, bed and breakfast accommodation or farm stay accommodation.

LEP means a Local Environmental Plan made by the Minister under the Act.

LGA means the local government area.

Material public benefit means a facility or work which is offered by a developer as a finished entity either in return for a reduction in the amount of monetary contributions required for the same category of contribution or as an additional or partial additional benefit under a Planning Agreement.

Minister means the Minister administering the Environmental Planning and Assessment Act 1979.

Multi dwelling housing means 3 or more dwellings (whether attached or detached) on one lot of land, each with access at ground level, but does not include a residential flat building

Neighbourhood shop means premises used for the purposes of selling general merchandise such as foodstuffs, personal care products, newspapers and the like to provide for the day-to-day needs of people who live or work in the local area but does not include supermarkets or restricted premises.

NWURA means the North-West Urban Release Area.

Planning Agreement means a planning agreement referred to in the Act.

Public infrastructure means:

- public amenities and public services, and
- affordable housing, and
- transport infrastructure but does not include water supply or sewerage services.

Regulation means the Environmental Planning and Assessment Regulation 2000.

Residential accommodation means a building or place used predominantly as a place of residence, including:

- attached dwellings;
- boarding houses;
- dual occupancies;
- dwelling houses;
- group homes;
- hostels;
- multi dwelling housing;
- residential flat buildings;

- rural worker's dwellings;
- secondary dwellings/studios;
- semi-detached dwellings;
- seniors housing; and
- shop top housing,

but does not include tourist and visitor accommodation or caravan parks.

Residential care facility means accommodation for seniors or people with a disability that includes:

- meals and cleaning services, and
- personal care or nursing care, or both, and
- appropriate staffing, furniture, furnishings and equipment for the provision of that accommodation and care,

but does not include a dwelling, hostel, hospital or psychiatric facility.

Retail premises means a building or place used for the purpose of selling items by retail, or hiring or displaying items for the purpose of selling them or hiring them out, whether the items are goods or materials (or whether also sold by wholesale), and includes any of the following;

- bulky goods premises
- cellar door premises
- food and drink premises
- garden centres
- hardware and building supplies
- kiosks
- landscaping material supplies
- markets
- plant nurseries
- roadside stalls
- rural supplies
- shops
- timber yards
- vehicle sales or hire premises, but does not include highway service centres, service stations, industrial retail outlets or restricted premises.

Residential flat building means a building containing 3 or more dwellings but does not include an attached dwelling or multi-dwelling housing.

Secondary dwelling means a self-contained dwelling that:

- is established in conjunction with another dwelling (the principal dwelling), and
- is on the same lot of land as the principal dwelling, and
- is located within, or is attached to, or is separate from, the principal dwelling and
- is independently occupiable from the main dwelling.

Semi-detached dwelling means a dwelling that is on its own lot of land and is attached to only one other dwelling.

Seniors housing means a building or place that is:

- a residential care facility, or
- a hostel within the meaning of *Clause 12 of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004*, or

- a group of self-contained dwellings, or
- a combination of any of the buildings or places referred to in paragraphs (a)-(c), and that is, or is intended to be, used permanently for:
 - seniors or people who have a disability, or
 - people who live in the same household with seniors or people who have a disability, or
 - staff employed to assist in the administration of the building or place or in the provision of services to persons living in the building or place, but does not include a hospital;

Serviced apartment means a building (or part of a building) providing self-contained accommodation to tourists or visitors on a commercial basis and that is regularly serviced or cleaned by the owner or manager of the building or part of the building or the owner's or manager's agents.

Shop means premises that sell merchandise such as groceries, clothing, music, homewares, stationary, electrical goods but does **not** include food and drink premises.

Shop top housing means one or more dwellings located above ground floor retail premises or business premises.

SILEP means the Standard Instrument—Principal Local Environmental Plan.

Social housing provider means a social housing provider as defined by *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* which, at the date of adoption of this Plan included:

- the New South Wales Land and Housing Corporation,
- the Department of Housing,
- a community housing organisation registered with the Office of Community Housing of the Department of Housing,
- the Aboriginal Housing Office,
- a registered Aboriginal housing organisation within the meaning of the *Aboriginal Housing Act 1998*,
- the Department of Ageing, Disability and Home Care,
- a local government authority that provides affordable housing,
- a not-for-profit organisation that is a direct provider of rental housing to tenants.

Social infrastructure means public amenities and public services but does not include water supply or sewerage services.

Student housing means a building that:

- provides accommodation and communal facilities principally for students enrolled to study at an education establishment during teaching periods; and
- may incorporate some fully self-contained dwellings.

Tourist and visitor accommodation means a building or place that provides temporary or short-term accommodation on a commercial basis, and includes any of the following:

- backpackers' accommodation,
- bed and breakfast accommodation,
- farm stay accommodation,
- hotel or motel accommodation,
- serviced apartments,

but does **not** include—

- camping grounds, or

- caravan parks, or
- eco-tourist facilities.

Works in kind means the carrying out of work which is identified in the costed works schedule which forms part of this Plan in return for a reduction in the amount of monetary contributions (but not a reduction in the total quantum of contributions) required for the same category of contribution.

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REPORT: Draft Planning Agreement - Dubbo Firing Power Station

DIVISION: Development and Environment
REPORT DATE: 1 May 2024
TRIM REFERENCE: ID24/509

EXECUTIVE SUMMARY

Purpose	<ul style="list-style-type: none"> Seek endorsement Fulfil legislated requirement 	
Issue	<ul style="list-style-type: none"> This report seeks Council’s endorsement to prepare a Planning Agreement in relation to the Dubbo Firing Power Station. Council has received an offer from Dubbo Firing Nominees Pty Ltd to enter into a Planning Agreement for the Dubbo Firing Power Station, located at 28L Yarrandale Road, Dubbo. This project is a State Significant Development Application (SSD-28088034) that is currently being reviewed by the Independent Planning Commission. The offer will require the developer to pay to Council a monetary contribution of \$950,000 at commencement of construction, which is equivalent to 0.5% of capital investment value of the project. This offer is in accordance with Council’s Renewable Energy Benefit Framework. The funds are proposed to be utilised to implement Council’s Public Art Strategy. This Strategy identifies the principles and thematic approach to ensure art projects reflect the community’s aspirations, public art typologies, procurement processes and funding opportunities. A draft Planning Agreement is required to be placed on public display for a minimum period of 28 days in accordance with the provisions of the Environmental Planning and Assessment Act, 1979. 	
Reasoning	<ul style="list-style-type: none"> Part 7.1 of the Environmental Planning and Assessment Act 1979 	
Financial Implications	Budget Area	Growth Planning Branch
	Funding Source	Council will receive \$3,750 as part of the lodgement fees and \$950,000 as part of the Planning Agreement.
Policy Implications	Policy Title	There are no policy implications arising from this report.

STRATEGIC DIRECTION

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

Theme:	4 Leadership
CSP Objective:	4.1 Council provides transparent, fair and accountable leadership and governance
Delivery Program Strategy:	4.1.1 Council encourages and facilitates two-way communication with and between stakeholders and the community

RECOMMENDATION

- 1. That a draft Planning Agreement be prepared in accordance with the terms identified in this report.**
- 2. That a further report be presented to Council for consideration if a Planning Agreement cannot be successfully negotiated.**
- 3. That a draft Planning Agreement prepared in accordance with the terms identified in this report be placed on public exhibition in accordance with the provisions of the Environmental Planning and Assessment Act 1979.**
- 4. That following the conclusion of the public exhibition period, a further report be presented to Council for consideration, including any submissions received.**

Stephen Wallace
Director Development and Environment

TH
Manager Growth Planning

BACKGROUND

1. Previous Resolutions of Council

15 February 2024	<i>In part</i> <ol style="list-style-type: none">1. That Council adopt the amended Renewable Energy Benefit Framework that includes the following amendments:<ol style="list-style-type: none">b. Battery Energy Storage Systems:<ul style="list-style-type: none">• Funding target equivalent to 0.50% of Capital Investment Value of the project, with payment of all funds prior to the commencement of the development, or• Funding target equivalent to 0.75% of Capital Investment Value of the project, with payment of funds as annual payments over the life of the project.
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2. What is a Planning Agreement?

A Planning Agreement is an agreement entered into between Council and a developer where the developer agrees to fund public amenities or infrastructure, dedicate land at no cost to Council, or provide monetary contributions or any other material public benefit, for a public purpose. In accordance with Part 7, Division 7.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act), a public purpose includes any of the following:

- The provision of public amenities or services;
- The provision of affordable housing;
- The provision of transport or other infrastructure relating to land;
- The funding or recurrent expenditure relating to the provision of public amenities or public services, affordable housing or transport or other infrastructure;
- The monitoring of the planning impacts of development;
- The conservation or enhancement of the natural environment.

REPORT

1. Dubbo Firing Power Station

The NSW Independent Planning Commission is currently reviewing a State Significant Development Application (SSD-28088034) for the construction and operation of the Dubbo Firing Power Station at 28L Yarrandale Road, Dubbo. Subject to final approval, it will comprise a hydrogen generation plant, power station and ancillary infrastructure, including gas and fuel storage and connections to the electricity and gas networks. It will have an overall capacity of 64 megawatts (MW), and a Capital Investment Value (CIV) of \$190 million. Construction of the project is proposed to commence in late 2024 and be completed by the second half of 2025.

The general layout and location of the development is shown in **Figure 1** below:

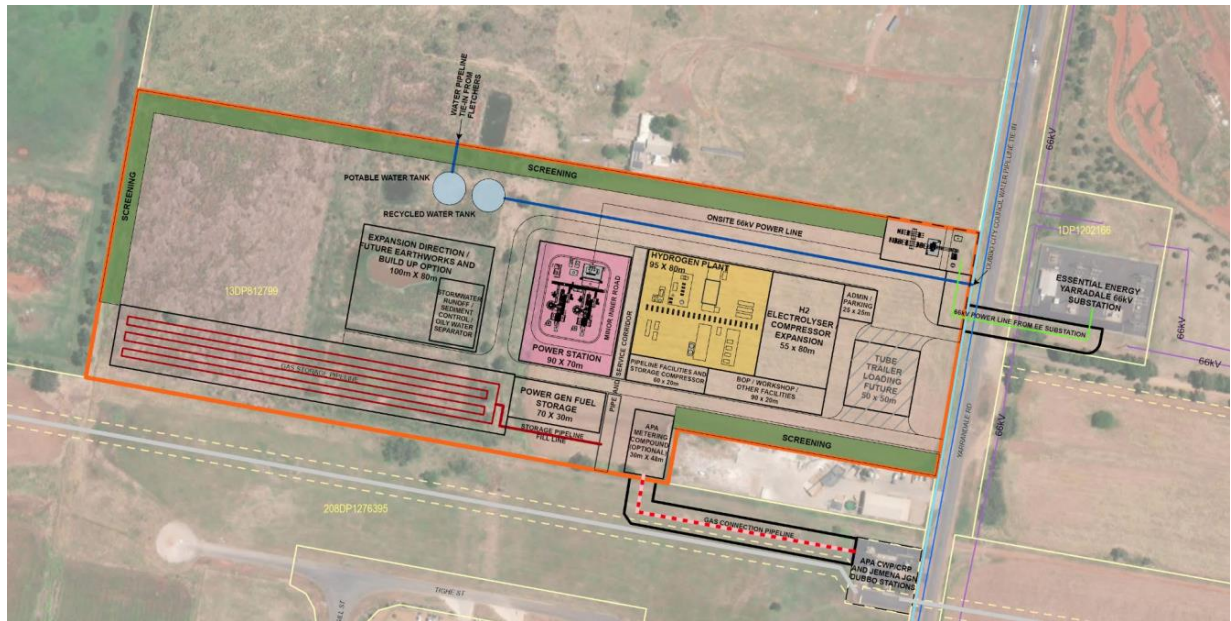


Figure 1 – General layout of development

2. Planning Agreement

Council has received a request to enter into a Planning Agreement from Dubbo Firing Nominees Pty Ltd (attached in **Appendix 1**). The terms of the offer require the developer, or a related entity of the same, to pay to Council a monetary contribution of \$950,000 at commencement of construction, which is based on 0.5% of the CIV of the project. The funds will be indexed to the Consumer Price Index – Sydney All Groups from the date of the agreement.

Funding will be allocated to Council’s Public Art Strategy. This Strategy identifies the principles and thematic approach to ensure art projects reflect the community’s aspirations, public art typologies, procurement processes and funding opportunities.

Within three months of commencement of construction, Council and the developer will prepare guidelines to govern administration and funding for public art projects funded through the Planning Agreement. The guidelines will, within the framework of the Public Art Strategy, identify eligibility criteria for public art, governance of public art, community benefit fund applications for public art, and terms of reference for public art committees.

3. Consultation

Following Council’s consideration, a draft Planning Agreement and Explanatory Note will be prepared in accordance with the terms of this report and letter of offer, and be placed on public exhibition for a minimum of 28 days in accordance with the Environmental Planning and Assessment Act 1979. A notice will be placed on Council’s website and in Customer Experience Centres, the Daily Liberal newspaper and letters will be sent to adjoining landowners.

Following completion of the public exhibition period, a further report will be presented to Council for consideration, including any submissions received.

4. Timeframe

The below estimated timeline provides a mechanism to monitor and resource the various steps required to progress the draft Planning Agreement:

Key Date	Explanation
9 May 2024	Consideration by Infrastructure, Planning and Environment Committee
23 May 2024	Consideration by Council
June 2024	Public exhibition period
July 2024	Consideration of submissions
15 August 2024	Consideration by Council

APPENDICES:

1 [↓](#) Planning Agreement Letter of Offer

11th April 2024



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

[Redacted]

Only by email

Dear Steve,

Dubbo Firming Power Station (SSD 28088034) - Planning Agreement Offer

Squadron Energy, and its associated company, Dubbo Firming Nominees Pty Ltd (the **Developer**), is the Applicant for State Significant Development Application SSD 28088034 and accompanying Environmental Impact Statement for the Dubbo Firming Power Station (the **Project**).

The Developer offers to enter into a planning agreement with Dubbo Regional Council (**Council**) for the Project.

The Developer offers to make a monetary development contribution (**Contribution**) to the Council on the following terms:

- The Contribution is to be calculated based on 0.5% of the Capital Investment Value of the Project being \$950,000;
- The Contribution is to be paid as a lump sum at commencement of construction of the Project;
- The Contribution will be indexed by CPI from the date of the agreement;
- The Contribution is to be allocated towards works identified in the Council's *Public Art Strategy 2023-2033* and other public purposes for the benefit of the community of the Councils area. The agreement will provide for the public recognition of the Developer in the expenditure of the Contribution.

Should this offer be accepted by Council we propose the detailed drafting of the planning agreement will be negotiated between the parties.

We look forward to working with you.

Yours sincerely,

[Redacted Signature]

For and behalf of Squadron Energy Pty Ltd ACN 615 221 559

[Redacted]



REPORT: Kerbside Bin Audit Report

DIVISION: Development and Environment
REPORT DATE: 26 April 2024
TRIM REFERENCE: ID24/805

EXECUTIVE SUMMARY

Purpose:	<ul style="list-style-type: none"> Provide update Fulfil legislated requirement 		
Issue	<ul style="list-style-type: none"> Quadrennial Kerbside Waste Audits 		
Reasoning	<ul style="list-style-type: none"> Domestic Kerbside Waste Audits are regularly conducted by Councils to obtain household data on waste, recycling and organic quantities and characteristics, and identify education or waste service improvement opportunities within Local Government Areas. Contamination and potential diversion percentages have increased across all three waste streams since the previous 2019 Audit, with 59% (General Waste), 20% (Recycling), and <2% (Food Organics and Garden Organics) recorded in the 2023 audit respectively. There are existing opportunities to reduce the amount of waste stream contamination, increase landfill diversion, and increase both recycling and food organic tonnages by placing materials in the correct/designated waste bins. 		
Financial Implications	<table border="1"> <tr> <td>Budget Area</td> <td>There are no financial implications arising from this report.</td> </tr> </table>	Budget Area	There are no financial implications arising from this report.
Budget Area	There are no financial implications arising from this report.		
Policy Implications	<table border="1"> <tr> <td>Policy Title</td> <td>There are no policy implications arising from this report.</td> </tr> </table>	Policy Title	There are no policy implications arising from this report.
Policy Title	There are no policy implications arising from this report.		

STRATEGIC DIRECTION

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

Theme: 6 Environmental Sustainability
 CSP Objective: 6.2 We recognise, plan for and respond to the impacts of climate change
 Delivery Program Strategy: 6.2.3 Waste management processes reduce our environmental footprint and impact on the environment

RECOMMENDATION

1. That the report of the Waste Contract and Collection Coordinator dated 26 April 2024, be noted.
2. The completed Audit and associated Report presented will be used to assist in and support future proposed changes in resource allocation to waste planning, education and support across the Local Government Area.

Jamie Lobb
Director Development and Environment

AP
Waste Contract and
Collection Coordinator

REPORT

1. Purpose

The result of the Domestic (Household) Kerbside General Waste, Recycling and Organics Audit allows Council to track and improve the waste management operations as per Council's recently adopted NetZero Framework 5.3.1 - Landfill Waste. As identified in the NetZero Framework, currently more than 62% of Council's greenhouse gas emissions come from Council's waste to landfill operations. Statistically sound data is necessary to monitor our progress in reducing that percentage and improving our regions greenhouse gas emissions.

Performance evaluation allows Council to measure the quantity and composition of the average household General Waste, Recycling, and Food and Garden Organics (FOGO) bins. The data obtained allows Council to understand the waste generated by households and identify areas that are performing well and highlight improvement area opportunities in the Local Government Area.

2. Auditing Details

Dubbo Regional Council commissioned an aggregated sample audit completed by JustWaste Consulting. This involved daily random selections of a set number of household bin contents to be combined and the analysis conducted on the aggregated waste stream, with the minimum number of bins as defined in the audit guidelines.

The total bin number (sample size) utilised in the audit were derived from the most recent census data in combination with the Environment, Climate Change and Water Guidelines (Guidelines for Conducting Household Kerbside Residual Waste, Recycling and Garden Organics Audits in NSW Local Government Areas – 2010).

The audit was completed during November 2023, sampling 1,262 bins, which included 424 General Waste bins (red), 418 Recycling bins (yellow) and 420 Food Organics and Garden Organics bins (green).

15.8 Tonnes (127KL) of material was analysed and broken down into numerous categories. (specific details can be obtained from the Kerbside Bin Audit Report attached as **Appendix 1**). This allows for detailed information on the waste composition of each stream and the level and types of cross-contamination between the three bins sampled.

3. General Waste Audit Summary

What’s in Dubbo’s General Waste Bin? 2023 Bin Audit Snapshot (by weight)

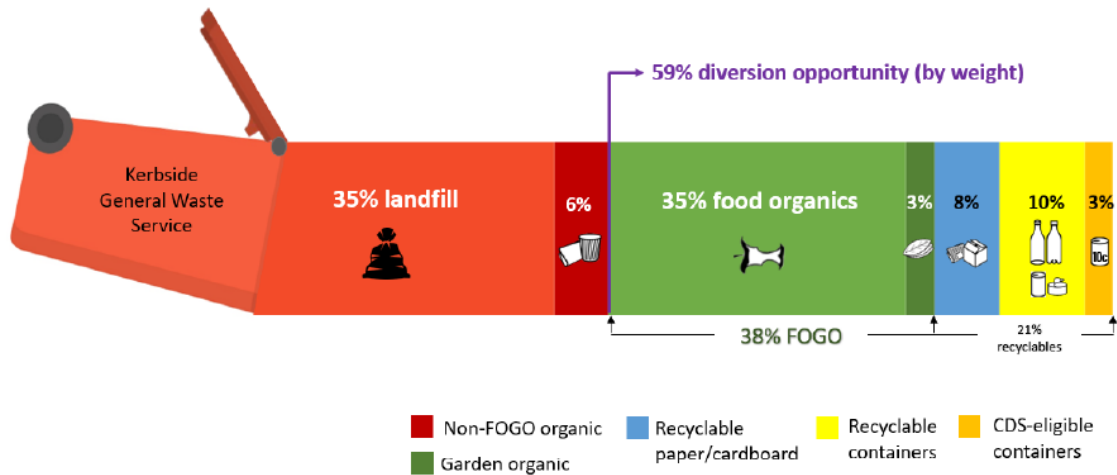


Figure 1: General Waste Bin Audit 2023 Snapshot

The average bin weight was 14.1kg with a contamination/diversion potential of 59% (8.32kg). The results show there is significant opportunity for waste diversion and resource recovery to occur from the General Waste bin. The weight of the average General Waste bin is on the increase, with data indicating this is due to the increase of organic materials and high net weight of accepted general waste materials such as nappies, clothing, soft plastics and tissue and paper towel products.

Organic material observed in the general waste stream has dropped significantly in weight since the introduction of the FOGO bin in 2019 (2015 = 9.62kg, compared to 2019 = 4.94kg). However, the 2023 audit results show an increase of approximately 0.4kg per bin when compared to the previous audit results (2019). In 2019, the average General Waste bin contained 4.94kg of compostable organics; where in 2023 5.35kg of compostable organics was recorded (equates to 38% of the average bin weight). The majority (more than 75% of the compostable organics were identified as food scraps).

Recyclable material observed in the general waste stream has declined in weight since 2019 with a reduction of 0.12kg (2019 = 3.05kg, compared to 2023 = 2.93kg). The 2.93kg observed in the recent audit equates to 21% of the average bin weight. Misplaced recyclables such as paper, cardboard and magazines still have a significant impact on available space in the General Waste bin.

4. Comingled Recycling Audit Summary

**What's in Dubbo's Recycling Bin?
2023 Bin Audit Snapshot (by weight)**

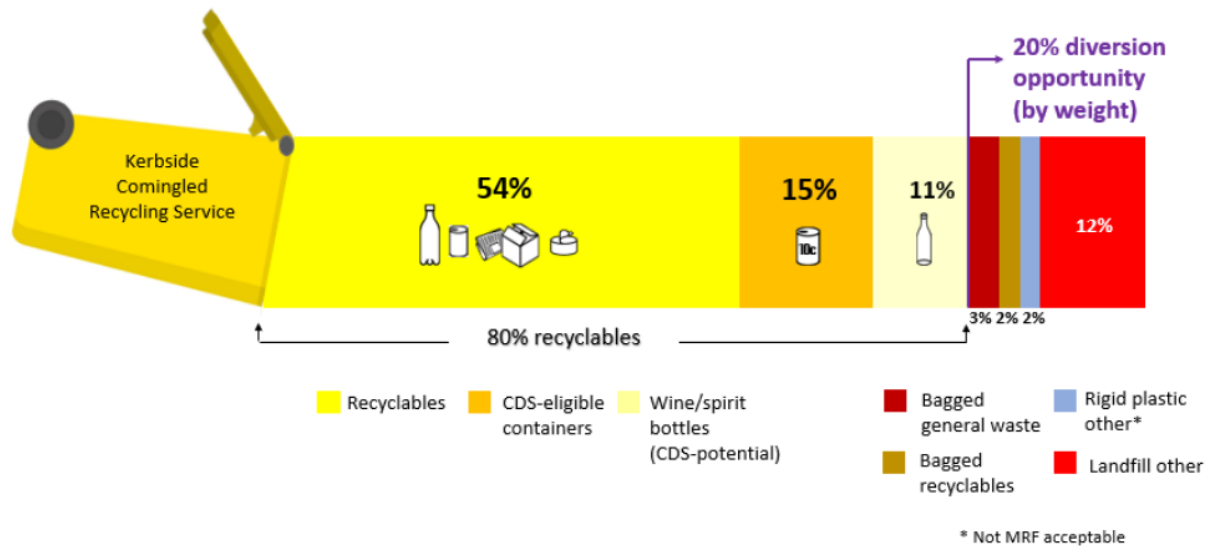


Figure 2: Recycling Bin Audit 2023 Snapshot

The average bin weight was 8.8kg with a contamination rate of 20% (2.2kg) and diversion potential of less than 1%.

Contamination rate in the recycling bin has increased since the previous audit, with 20% contamination observed in 2023, compared to 14.5% in 2019. The average recycling bin weight has decreased slightly in this audit (reduced by 0.7kg since 2019), mainly due to a reduction in paper based products.

The five heaviest contaminants are listed below:

- bagged waste
- bagged recyclables
- non-recyclable rigid plastic
- plastic film/soft plastic
- liquid paperboard foiled

Noting the above contaminants equate to 12% of the contamination rate.

In volume terms, the top contaminating items taking up majority of the space in the recycling bin are listed below:

- plastic film
- liquid paperboard (foil)
- bagged waste and/or recyclables
- non-recyclable rigid plastic
- polystyrene

Out of all material classifiable as ‘recyclables’ from all three bin types audited (1,262 bins, 4.2 tonnes), only 70% was placed in comingled recycling bins, the rest was deposited in the general waste stream (29%) and FOGO (less than 1%) bins respectively. In addition, 12% of the recycling sample by weight were drink containers eligible for the container refund scheme, which was introduced to Dubbo in December 2017.

5. Food Organics and Garden Organics Audit Summary

What’s in Dubbo’s FOGO Bin? 2023 Bin Audit Snapshot (by weight)



Figure 3: FOGO Bin Audit 2023 Snapshot

The average bin weight was 14.42kg with a contamination rate of 2% and diversion potential of less than 1%. The percentage breakdown of organic material included 90% of garden organics and 8% of food organics (by weight).

There is a significant decrease in food organics being placed in FOGO bins since 2019 (2019 = 26%, compared to 8% in 2023). A legislative change in 2023 resulted in the removal of fibre based food contact materials including baking paper, coffee filters, paper towels, serviettes; fibre-based food containers such as coffee cups, pizza boxes, plates, bowls; paper bags; cardboard packaging; and other compostable plastic bags due to the likelihood of these products containing per and polyfluoroalkyl substances (PFAS). Overall, the community has responded well to this change, with only 0.16% (by weight) of previously allowed organic/compostable material (listed above) detected in the 2023 audit.

6. Audit Summary and Opportunities

In summary, the key findings for the 2023 Domestic Kerbside Waste Audit are listed below and depicted in Figure 4:

- General Waste Bin
 - There is a significant contamination and diversion potential of 59% in the General Waste bin;
 - Current opportunity to increase the quantity of recyclables, specifically cardboard, containers and container deposit scheme (CDS) eligible containers that can be placed into recycling bins rather than placed in the General Waste bins (21%);
 - Current opportunity to increase the quantity of organics, specifically food organics that can be placed into FOGO bins rather than placed in the General Waste bins (38%); and
 - The above opportunities would reduce the amount of general waste bin contamination and increase diversion, and in correlation increase the recycling tonnages and food organics component observed in the FOGO bins.

- Recycling Bin
 - There is an increasing trend of contamination percentages when compared against previous audits (5% increase compared to previous audit in 2019);
 - Organic contamination is comparatively low (more than 0.1%);
 - Current opportunity to reduce the general waste classification by removing recyclable contains from plastic bags;
 - Current opportunity to place general waste materials in the General Waste bin; and
 - The above opportunities would reduce the amount of recycling bin contamination and increase diversion.

- FOGO Bin
 - There is a low percentage of contamination observed (less than 1.5%) in the FOGO bin;
 - Main contamination material observed is cardboard, which may be due to recent legislation change resulting in cardboard now being removed as FOGO input material;
 - Current opportunity to stop placing food scraps in plastic bags and ensure the correct compostable caddy bags (supplied by Council);
 - Current opportunity to increase the quantity of food organics being placed into FOGO bins (only comprising of 8%); and
 - The above opportunities would reduce the amount of FOGO bin contamination and increase diversion tonnages.

	General Waste Bin	Comingl. Recycling Bin	Organics Bin
General Waste / General Waste Contamination %	41.33%	20.08%	0.61%
Recyclables / Recyclables Contamination (%)	20.69%	79.83%	0.82%
Organics / Organics Contamination (%)	37.98%	0.09%	98.57%
Overall Contamination Rate for each bin	58.67%	20.17%	1.43%

Figure 4: Contamination Percentage of Contents in each Bin Stream from 2023 Audit Report (General, Recyclable and Organics)

Consultation

The Resource Recovery Manager and the Director Development and Environment.

Resourcing Implications

There are no resourcing implications relating to this report.

APPENDICES:

- 1 [↓](#) Kerbside Bin Audit Report



KERBSIDE BIN AUDIT REPORT

Waste, Recycling and FOGO

December 2023

Dubbo Kerbside Bin Audit 2023

DOCUMENT RECORD

Version	Issued To	Date	Author	Approved
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1. INTRODUCTION

The NetWaste Voluntary Regional Waste Group includes 25 member councils and covers 40% of New South Wales. NetWaste engaged JustWaste Consulting to conduct an audit of three of their councils: Mid-Western Regional Council, Narromine Shire and Dubbo Regional Council.

In total 2,144 bins were assessed – 603 general waste bins, 667 comingled recycling bins and 814 FOGO bins – each stream was assessed separately with the total audit taking three weeks between 27th November to 14th December 2023. Bin material was sorted and classified into a minimum of 57 categories to allow for detailed information on the waste composition of each stream and the level and types of cross-contamination between bins.

Dubbo Regional Councils Kerbside Waste Audit report was conducted between the 27th of November and 8th of December and assessed 1,262 bins. The population of Dubbo Regional Shire Council is 54,922¹ residents.

Available Waste Services: Council provides residents in this audit with a weekly-collected 240 or 140 litre general waste bin, a weekly-collected 240-litre FOGO and a fortnightly-collected 240-litre comingled recycling bin. FOGO was introduced in 2018 as part of a three-Council roll-out and is processed locally into compost by JR Richards & Sons. As per NSW 2022 EPA Guidelines, FOGO inputs are limited to food and garden waste, compostable caddy liners and fibre-based kitchen caddy liners (e.g. newspaper).

In addition to their 2 and 3 bin kerbside collection services, Council operate a number of waste facilities and community recycling centres where residents can drop off problematic and over-sized household waste, and Dubbo has three conveniently located CDS 'return and earn' locations. Council also offers free compostable caddy liners on request.

This report is broken down as follows:

- Executive summary and key results
- Research methodology
- Detailed analysis of each waste stream
- Detailed analysis of household hazardous wastes & container deposit scheme materials
- Recommendations for each waste stream
- Appendices containing complete datasets for each of the three waste streams that list weights, volumes and percentages by audit day, material, sub-category and stream.

¹ ABS 2021 [Census](#)

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2. EXECUTIVE SUMMARY

This is the fourth kerbside waste audit JustWaste Consulting have completed for Dubbo Regional Council - this level of data allows for a deeper understanding of Council's waste stream composition and changes over time and comparative analyses have been included where relevant.

The total sample from 1,262 bins weighed just over fifteen tonnes and equated to 126 cubic metres of material. The audit was split almost equally between the three streams - 424 general waste bins, 418 comingled recycling bins and 420 FOGO bins.

The contamination rates were relatively high for the general waste stream with a 59% weight diversion opportunity due to misplaced organics (38%) and misplaced comingled recyclables (21%). Of note also is that the average weekly household bin weight has increased by 21% when compared to 2019 results.

In the recycling stream the contamination rate was also high at 20%, predominantly due to bagged materials, being both bagged waste and bagged recyclables.

While the FOGO stream had a very low contamination rate (1%) residents are still failing to utilise it correctly for food organics disposal - 'food organics' in FOGO bins equated to 8% of the total FOGO audit weight, whereas they equated to 35% of the general waste bin weight. In net weight terms the FOGO audit contained 509 kg of food organics while the general waste bin contained 2,070 kg of food organics.

Waste strategy planners should investigate household behaviour change intervention campaigns for correct food waste placement and food waste reduction education to get better returns from the FOGO bin service, followed by a bin tagging campaign that focused on misplaced food organics. Data from this report may be applied to grant funding applications with a food waste reduction focus.

Interestingly paper/cardboard-based material was on the increase in the general waste stream and on the decrease in the comingled recycling stream when compared to previous audit results. Further investigation is recommended to identify if this is a recycling bin over-spill challenge or lack of householder knowledge on paper/cardboard recyclability given the increasing volume and complex nature of paper-based packaging.

Please note when reading this report:

- The **KEY RESULTS** bullet points summarise audit results and, as above, percentages are rounded.
- The **RESULTS Summary** includes three 'bin spill' graphics for visual display - snapshots of each waste stream that highlight materials of statistical significance.

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- The **RESULTS** section of this report then provides full analyses to two decimal places and analysis commentary.

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3. KEY RESULTS

- **GENERAL WASTE –59% diversion opportunity, weekly service**

- Organic Disposal Trend: Organic material in the general waste stream, which had dropped significantly since the introduction of FOGO, is on the increase when compared to the previous 2019 audit. In 2019 the average general waste bin contained 4.94 kg of compostable organics, in 2023 it contained 5.35 kg of compostable organics (*Figure 7*).
- If all FOGO-acceptable organic material was diverted from the 424 general waste bins audited, it would have saved 2.2 tonnes of landfill fees (*Table 3*) and 9.3 cubic metres of landfill space (*Appendix 1 - General Waste Dataset (It)*).

After 'food organics' (35% of general waste by weight); 'nappies/incontinence pads' were the heaviest single material type at 8.5% of the general waste audit by weight (

- *Figure 12*); followed by recyclable 'paper/cardboard' (7.5%) and 'clothing/textiles' (7%) (*Appendix 1 - General Waste Dataset (It)*).
- Trend: Recyclables in the general waste stream are slowly decreasing in weight terms – in 2019 they represented 27% of the general waste bin by weight, 2019 was 26% and in 2023 they dropped to 21% of the sample by weight (*Figure 7*).
- Misplaced recyclables still had a significant impact on available space in the general waste bin however, being responsible for 35% of total volume (*Appendix 1 - General Waste Dataset (It)*).
- 'Paper/newsprint/magazines' were the single-heaviest misplaced recyclable followed closely by 'cardboard' (*Figure 9*). However in volume terms 'recyclable plastics' took up one and a half times more space than misplaced paper-based products in general waste bins.
- The weight of the average general waste bin is on the increase, with data indicating this is due to the increase of FOGO material (food organics) and also high net weights of accepted general waste materials such as nappies, clothing, soft plastics and tissues/napkins/paper towel (*Figure 7*).

- **COMINGLED RECYCLING – 20% contamination, fortnightly service**

- Trend: the contamination rate in the recycling bin has increased in this audit; both 2018 and 2019 audits reported between 14-15% contamination whereas this audit recorded 20% contamination (by weight). Even with Thursday Week 1 skew data removed, this only decreased to 19% (*Figure 19*).

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- The average recycling bin weight has decreased slightly in this audit, mainly due to less paper-based products (*Figure 19*).
- The five heaviest contaminants were 'bagged waste', 'bagged recyclables', 'non-recyclable rigid plastic', 'plastic film/soft plastic' and 'liquid paperboard foiled', together they equated to 12% of the 20% contamination rate (*Appendix 2 – Comingled Recycling Dataset (kg)*).
- In volume terms, the top contaminating items taking up most space in the recycling bin were (in descending order) 'plastic film', 'liquid paperboard (foil)', 'bagged waste' 'bagged recyclables', 'non-recyclable rigid plastic' and 'polystyrene' (*Figure 20*). Together they equated to 13% of the 18% volume contamination rate. The top two were 'plastic film' 4%, and 'LPB (foil)' 3%.
- 12% of the recycling sample by weight were drink containers eligible for the container refund scheme; these containers also equated to 12% of the recycling sample by volume (*Table 8*).
- Placement - Out all material classifiable as 'recyclables' from all three streams (1,262 bins, 4.2 tonnes), only 70% was placed in comingled recycling bins, the rest was deposited in the general waste stream (29%) and FOGO (<1%) (*Table 3*).

FOGO – 1.43% contamination, weekly service

- By weight 90% of material in this audit was garden waste, 8% food waste (*Figure 13*). In comparison Narromine's 2023 FOGO audit was 95% garden waste, 3% food organics (by weight); Mudgee's 2023 FOGO audit was 71% garden waste, 27% food organics (by weight).
- FOGO was launched in 2018. In the 2019 FOGO audit 'food organics' accounted for 26% of the FOGO sample by weight, in the 2023 audit 'food organics' had dropped to 8%.
- 'Foods packaged' was responsible for 4% of the 8% audited food waste weight; followed by 'food in compostable bags' 2.5%, 'food loose' 1.5%.
- By weight, only 0.16% of previously allowed organic/compostable material (tissues/paper towel, pizza boxes, compostable packaging etc) was detected in the 2023 audit.
- The biggest contribution to FOGO contamination in weight terms was 'cardboard', followed by 'food in plastic-blend caddy bags/contaminated caddy bags' (0.62% and 0.25% respectively).

4. WASTE AUDIT METHODOLOGY

4.1.1. *Sample selection and collection procedure*

The audit was planned and executed under the 'Guidelines for conducting household kerbside residual waste, recycling and garden organics audits in NSW local government areas - 2008', subsequently referred to as '[the Guidelines](#)'.

NetWaste commissioned an **aggregated sample** audit. This method requires a set number of household bin contents be combined and the analysis conducted on the aggregated waste, with the minimum number of bins defined by the Guidelines. This method does not provide information on per-household levels but rather provides an average household result.

4.1.2. *Privacy*

The nature of an aggregated sample is that it is anonymous, this ensures the privacy of the household is protected. Additionally, the auditors observe professional confidentiality of any objects found in the audit that could potentially identify individuals.

4.1.3. *Sorting and classification of materials*

JustWaste specialises in collecting detailed data additional to requirements and provides highly detailed information of waste stream composition.

This report groups the material into categories and sub-categories to allow for comparisons over time and between Councils. The three major categories correspond to the three kerbside collection services i.e. comingled recycling, organics and general waste.

Sub-category definitions split material into groupings e.g. 'glass', then drill down further to identify specific materials and/or material types e.g. comingled recyclable glass, comingled recyclable glass eligible for the container deposit scheme (CDS), other glass e.g. glassware, Pyrex, windows etc.

LIQUID PAPERBOARD is split into three categories. Two of these categories are classified as recyclable - liquid paperboard (no foil), and liquid paperboard (CDS) which can be both foiled (juice boxes) or no foil (flavoured milk). All other liquid paperboard (foil) is classified as belonging to the general waste stream due to their non-recyclability in most jurisdictions.

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PACKAGED FOOD: Where this material has been identified under the 'ORGANICS' category it means that the vast majority of the item's weight was due to the food content not the packaging weight. This material may or may not have compostable packaging and would need examination and potentially de-packaging.

HOUSEHOLD HAZARDOUS WASTE: Household hazardous waste (HHW) refers to wastes or products that have the potential to harm humans or the environment, either now or in the future. In this audit it includes 'e-waste and electrical'.

ORGANICS STREAM: As per [NSW EPA](#) regulations only garden waste, food waste, certified compostable caddy bags and fibre-based caddy liners are permitted in FOGO. Five other materials are classified as organic (pizza boxes soiled, compostable packaging, tissues/paper towel, untreated timber, pet waste/litter/bedding compostable); however have been treated as contamination in the FOGO and recycling bin analyses and as acceptable material in the general waste analysis.

lists all material classifications by stream and sub-category.

4.1.1. Statistical recording and analysis

WEIGHT AND VOLUME:

All material is recorded by weight (kg) and volume (lt). Each sorting bin is weighed using digital platform scales; volumes are calculated based on the capacity reached on the known volume of the weighing container. Although both volume (L) and weight (kg) are recorded, weight is the indicator predominantly quoted throughout this report as weight corresponds to the charges both on waste disposal to landfill and processing facilities; and is also what is most used in the industry.

Note on Volume: In amalgamated audits a set number of bins are collected, the contents mixed, transported and then separated into 65 litre tubs for single material analysis – during this process some materials can become either compressed or expanded, therefore when volume data is totalled across a large range of materials, it may not be as precise as weight data and is subsequently quoted as 'approximate'. However it remains a very useful metric to identify available bin air-space and is also included in commentary where volume can highlight materials which have a large discrepancy between weight and volume such as plastic bags and expanded polystyrene.

Note on FOGO AUDITING: Auditing methods for FOGO audits may differ from waste and recycling audits if the auditors can immediately visually identify that the aggregated sample is over 90% garden waste. If this is the case, the auditors will comb through the aggregated sample at least twice and carefully extract all non-garden organics and all contamination. This extracted material is then categorised, weighed,

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volumetrically assessed and recorded. The remaining material is classified as 'garden organics', with the weight derived by subtracting the total food organics and contaminants from the weighbridge weight of the total aggregated sample. The volume of 'garden organics' is both visually assessed by our senior auditor and then cross-checked by comparing the weight results against the amalgamated results of other FOGO and green waste audits.

PERCENTAGES AND ROUNDING:

Percentage comparisons are used as it enables analysis between audit years and waste streams by showing the proportional representation of categories and sub-categories, and it eliminates other variables such as increased or decreased weight overall.

All percentages in Excel are calculated automatically to two decimal places, rounding has been applied in the stream summary graphics. All charts which examine material breakdowns in detail are reported to two decimal places.

In rare instances rounding can result in totals adding up to slightly under, or over, 100%. When this occurs the chart or commentary has been examined to ensure no statistical impact. Extremely small volumes of light material e.g. pizza boxes in the ORGANICS stream, may reflect 0% weight due to rounding down across all the audit days where this material was recorded, however are still reflected in the Appendix data-set. The higher the total number of bins audited the more accurate the statistical averaging.

SKEW:

Skew is identified and eliminated if statistically impactful e.g. if one recorded weight from one load is quadruple all others, this is examined and removed from averaging calculations. If this occurs, it is also recorded in the commentary.

In one of the Comingled Recycling Audits – Thursday Week 1 – the total audited weight was double that of the next heaviest audit. This has been examined in more detail throughout the Recycling Stream analysis.

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2023 Waste Audit Material Classifications

CATEGORY	SUB-CATEGORY	MATERIAL
Comingled Recycling	Paper & Cardboard	Paper / Newsprint / Magazines
		Cardboard
		Liquid Paperboard (no foil)
		Liquid Paperboard (CDS)
	Glass	Bottles and Jars
		Glass Bottles (CDS)
		Wine & Spirit (CDS potential)
	Plastics	Plastic #1
		Plastic #1 (CDS)
		Plastic #2
		Plastic #2 (CDS)
		Plastic #3
		Plastic #4
		Plastic #5
	Metals	Aluminium can / foil
		Aluminium cans (CDS)
		Steel cans
		Aerosol cans
	Organics	Food Organics
		Foods packaged
Non-FOGO	Garden Organics	Food in Compostable Caddy Bags
		Garden waste
General Waste	Organics	Pizza boxes - soiled
		Compostable Packaging
		Tissues / paper towel/shredded paper
		Wood / timber - untreated*
		Pet waste/litter/bedding compostable
General Waste	Food	Food in plastic / plastic blend caddy bags
	Rubber	Tyres and Tubes
		Rubber Other
	Aggregates	Soils
	soils, other	Brick
	C&D waste	Concrete
		Aggregates Other
	Textiles	Carpet/furnishings
		Clothing/shoes
		Textiles Other
	HHW	Paint etc, paint tins (Paintback acceptable)
		Fluorescent Tubes
		Dry cell batteries
		Medical Waste (inc sharps)
		Pharmaceuticals
		Nappies / incontinence pads
		Pet waste/litter/bedding not compostable
		HHW Other
		E-waste
	Other	Plastic composite, toys, HH other not recyclable
		Metal other not recyclable
		Glass other (pyrex, windscreen, windows)
		Ceramics
		Liquid Paperboard (foil)
		Coffee cups
		Non-recyclable plastic/rigid plastic
		Polystyrene
	Plastic Film	
	Ash	
	Timber - treated	
	Building materials other (silicone, rollers)	
	Bagged recyclables (recycling stream)	
	Bagged waste (recycling stream)	



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4.1.2. Audit Schedule

Table 2: Audit Schedule of load types and bin numbers

	Day / date	Stream	General Waste No. bins	Recycling No. bins	FOGO No. bins	Total Bins audited
WEEK ONE - DUBBO	Mon 27/11/2023	FOGO			42	42
	Tues 28/11/2023	Waste	57			151
		Recycling		52		
		FOGO			42	
	Wed 29/11/2023	Waste	52			146
		Recycling		52		
		FOGO			42	
	Thu 30/11/2023	Waste	52			146
		Recycling		52		
		FOGO			42	
Fri 1/12/2023	Waste	52			146	
	Recycling		52			
	FOGO			42		
WEEK TWO - DUBBO	Mon 4/12/2023	Waste	42			126
		Recycling		42		
		FOGO			42	
	Tue 5/12/2023	Waste	42			126
		Recycling		42		
		FOGO			42	
	Wed 6/12/2023	Waste	42			126
		Recycling		42		
		FOGO			42	
	Thu 7/12/2023	Waste	43			127
		Recycling		42		
		FOGO			42	
	Fri 8/12/2023	Waste	42			126
		Recycling		42		
		FOGO			42	
BIN TOTALS			424	418	420	1262

4.1.3. Occupational Health and Safety

The auditing process adhered to strict safety and COVIDSafe Plan requirements. The following measures were applied as part of standard operating procedure:

- Appropriate Personal Protective Equipment (PPE) provided, including gloves, protective overalls, masks and eyewear. All staff wear ASA safety standard workplace boots.
- COVID safe workplace, with staff trained to follow the COVIDSafe Plan as agreed with Council.



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- Employment of staff who are experienced in sorting waste and who are trained in safety matters related to auditing tasks.
- The allowance of sufficient time to sort the waste to avoid staff rushing and therefore decreasing the likelihood a workplace accident or injury.
- Scheduling regular breaks and providing staff with cold drinking water and snacks.
- Ensuring up-to-date immunisation schedules for auditing staff.
- Allocation of a suitable space for sorting to take place. The designated area is accessible by car and trailer for the delivery of audit materials. It is open and therefore well-ventilated and protected by roof/awning.
- Ease of disposal of audited materials.

4.1.4. Limitations

Area

Local variations can affect the types of material in the sample. For example, the population demographics might vary in age, family dynamics and socio-economic structure, all of which may impact their lifestyle and grocery purchases.

Season

This audit was done in mid-December. This is the start of summer and might be associated with some changes in waste disposal behaviours. For example it is typical to see some variation in waste generation associated with season, e.g. during the middle of summer total organics might be lower than compared to autumn or spring due to a decrease in garden waste from prunings and lawn clippings.

Cross contamination

Some cross contamination between categories is unavoidable. Also, some material may fit into several categories. Our experienced auditors will estimate the dominant factor or most relevant factor. For example, containers (plastic or tin) containing a lot of food will be sorted as organics under 'food – packaged' and not under the packaging material type. This is because the food will represent the majority of the weight. As such some packaging will have been included in the Organics results. Similarly, other containers that were almost empty were sorted into relevant plastics categories but the weight of the remaining food will slightly add to the weight of the plastic sub-category.

5. RESULTS

5.1. Summary

A total of **15,710.81 kg** of material was audited from twenty-eight individual audits over the three waste streams (1,262 bins), with a volume equivalent of **126 cubic metres** (126,714 litres).

Table 3 reports the weight and stream classification of all audited material. The last two columns of Table 3 report on its correct placement in both weight and percentage terms e.g. out of all material classifiable as ‘general waste’ across all three streams (total weight 3,245.75 kg), 76.12% of it (by weight) was correctly placed in general waste bins.

Table 3: Composition of three waste streams in the 2023 kerbside bin audit

Dubbo Audit 2023	General Waste Bin (weekly)	Comingled Recycling (fortnightly)	FOGO Bin (weekly)	Material Weight Total	% material in correct bin vs stream totals –
	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (%)
General Waste	2,470.52	738.19	37.04	3,245.75	76.12%
Comingled Recycling	1,236.89	2,934.71	49.50	4,221.10	69.52%
Organics	2,270.18	3.44	5,970.34	8,243.96	72.42%
Total Waste	5,977.59	3,676.34	6,056.88	15,710.81	

Table 4 uses the net weights from Table 3 to calculate the percentage contamination in each bin:

- By weight, the general waste bin had an overall contamination rate of **58.67%**, of which just over one third (37.98%) was organic material and 20.69% was comingled recyclables.
- The comingled recycling bin had a **20.17%** contamination rate by weight, of which 20.08% was general waste and 0.09% organic material.
- The FOGO bin had a total contamination rate of **1.43%**; of which 0.61% was general waste and 0.82% was misplaced comingled recyclables.

Table 4: Contamination as a % of bin contents in the 2023 kerbside bin audit

	General Waste Bin	Comingl. Recycling Bin	Organics Bin
General Waste / General Waste Contamination %	41.33%	20.08%	0.61%
Recyclables / Recyclables Contamination (%)	20.69%	79.83%	0.82%
Organics / Organics Contamination (%)	37.98%	0.09%	98.57%
Overall Contamination Rate for each bin	58.67%	20.17%	1.43%

The following three graphics provide a **snapshot overview** of Narromine’s 2023 kerbside bin audit, highlighting materials that had statistical significance. Please note figures are rounded.



What's in Dubbo's General Waste Bin? 2023 Bin Audit Snapshot (by weight)

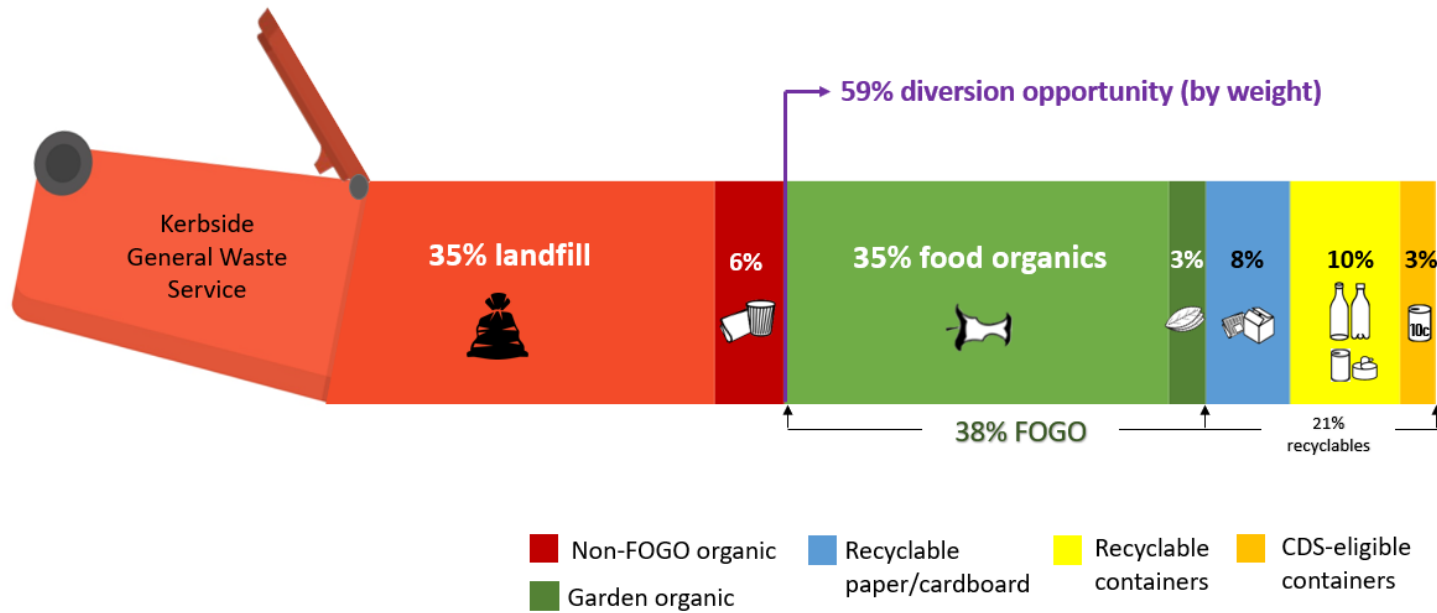


Figure 1: General Waste Bin Audit 2023 snapshot



Dubbo Kerbside Bin Audit 2023

What's in Dubbo's Recycling Bin? 2023 Bin Audit Snapshot (by weight)

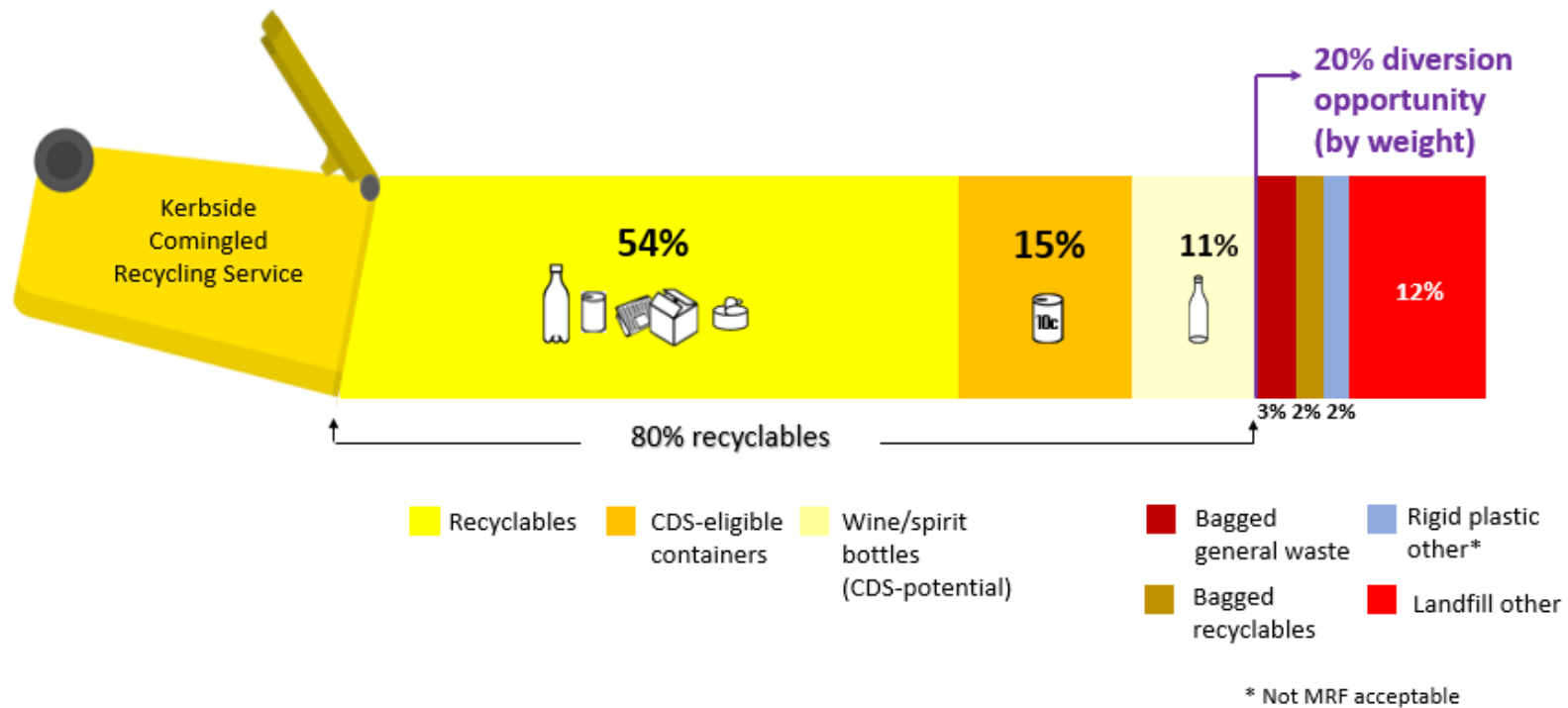


Figure 2 Recycling Bin Audit 2023 snapshot

Dubbo Kerbside Bin Audit 2023

What's in Dubbo's FOGO Bin? 2023 Bin Audit Snapshot (by weight)



Figure 3: FOGO Bin Audit 2023 snapshot

Dubbo Kerbside Bin Audit 2023

5.2. General Waste Stream Analysis

5.2.1. Overall composition

The auditors weighed **5,997.59 kg** of material from 424 general waste bins which equated to just over 42 cubic metres (42,271 litres) of material.

When categorising the material by waste stream, just over one third (37.98%) was organic material that belonged in the kerbside FOGO service, one fifth (20.69%) by weight was misplaced recyclables, and the remaining 41.33% was classifiable as general waste (Figure 4).

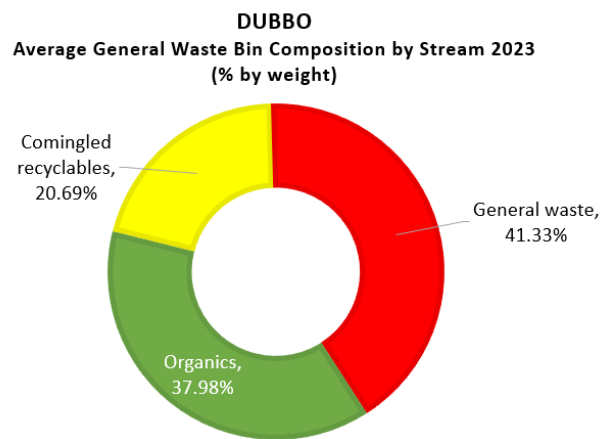


Figure 4: Overall composition of the general waste bin

5.2.1. Profile of Average Household General Waste bin

The average general waste bin weight in 2023 was **14.10 kg**. This is an increase of 20.72% in net weight terms from the 2019 average general waste bin of 11.68 kg.

The three biggest sub-categories of materials by weight were:

- Food waste: mainly due to the weight of 'food scraps loose' which totalled 28.58% of the total sample by weight;
- General waste 'other' category mainly due to 'plastic film', 'non-recyclable rigid plastic' and 'e-waste';

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- Household Hazardous Waste: mainly due to ‘nappies/incontinence pads’ however ‘pet waste/litter/bedding not compostable’ also contributed to this sub-category’s high result.

Figure 5 breaks down the results for the general waste bin into net weight averages by material sub-category.

DUBBO 2023
Average Weekly General Waste Bin Composition
(kg)

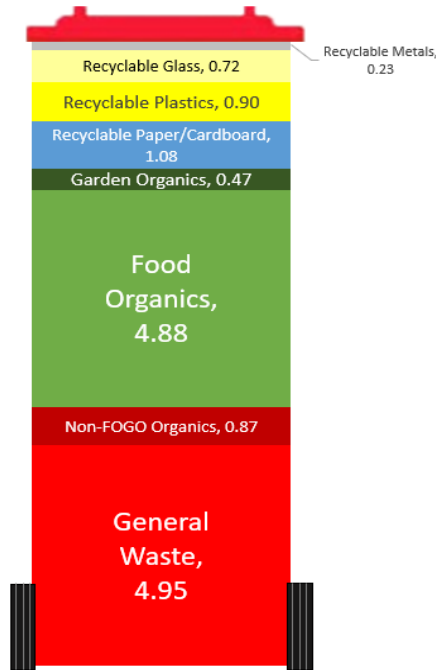


Figure 5 : Average composition of the General Waste bin by sub-category (total weight 14.10 kg)

5.2.2. Sample variation in the Average Household General Waste bin

Figure 6 overleaf reports the results of the nine general waste samples individually, alongside the audit average. The following page provides commentary and data highlights from this analysis.

Dubbo Kerbside Bin Audit 2023

DUBBO 2023
Average Weekly General Waste Bin Breakdown
(% weight) by Sample

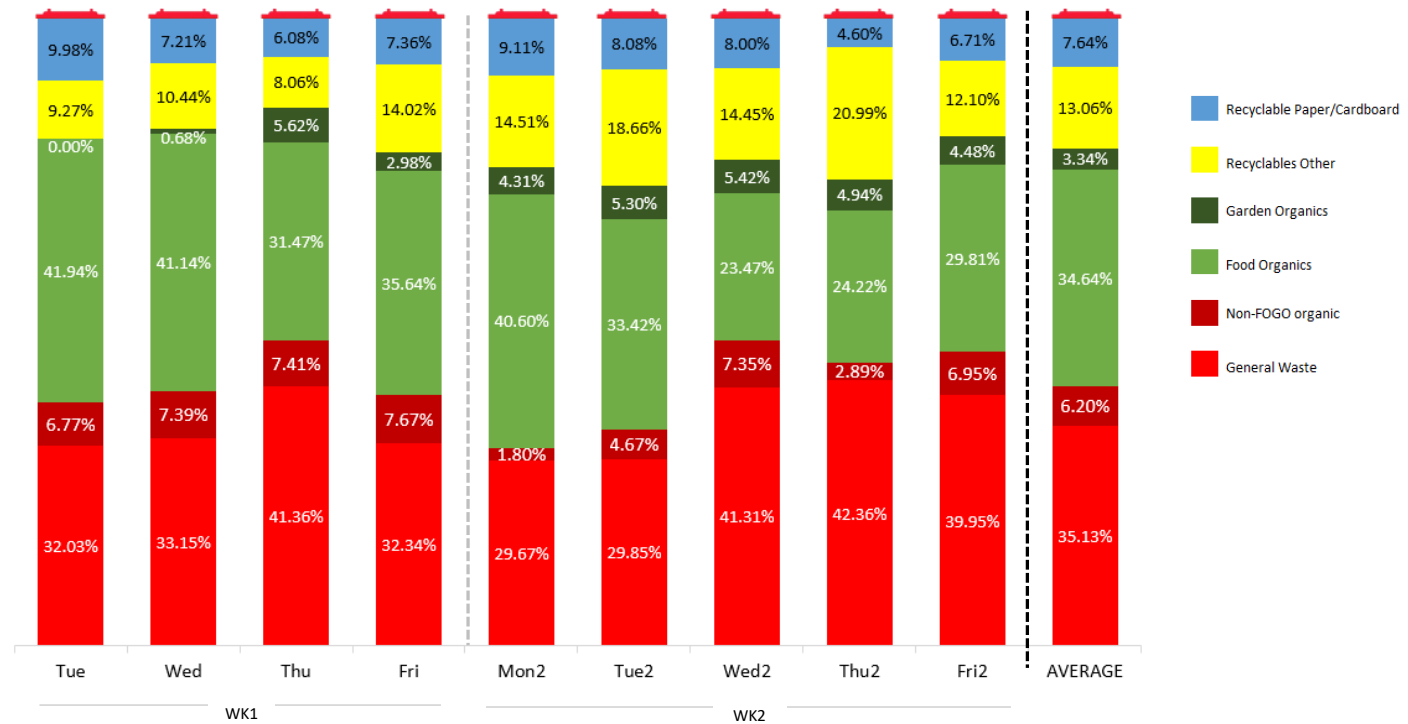


Figure 6: Compositional difference in the general waste bin between the nine samples vs the average



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DATA HIGHLIGHTS:

- **Paper/cardboard:** Average result 7.64% of the general waste bin by weight. No statistically significant variations between the nine samples, or when the average results for Week 1 is compared to the average results of Week 2.
- **Recyclables Other:** Average result 13.06% of the general waste bin by weight. Week 2's average results were over 50% higher than Week 1 with every day recording higher volumes; of note was Thursday Week 2 recording one-fifth of their bin contents due to misplaced recyclables, mainly CDS eligible glass bottles and CDS eligible PET #1 containers.
- **Garden organics:** Average result was 3.34% of the general waste bin by weight. Week 2 bins were twice as likely to contain garden waste then Week 1 bins.
- **Food organics:** Average result 34.64% of the general waste bin by weight. Week 1 bins contained more food waste than Week 2, with only one of their audits (Thu) below the average result. Week 2 had better results – Tue through Friday samples were all below the average.
- **Non-FOGO² organics:** Average result 6.20% of the general waste bin by weight. The material predominantly contributing to this was 'tissue/paper towel', which was more likely to be found in Week 1's bins.
- **General Waste:** Average result 35.13% of the general waste bin weight. Mon Week 2 and Tue Week 2 audits had the lowest percentage of their bin weight due to correctly placed material, at 29.67% and 29.85% respectively.

The full dataset for all nine samples are in the appendices.

² 'Other Organic' categories: pizza boxes-soiled, compostable packaging, tissues/paper towel/shredded paper, wood/timber–untreated and pet waste/litter/bedding compostable

5.2.1. Trend Analysis - Average Household General Waste Stream

The following chart (Figure 7) reflects net weights per waste stream for the average general waste bin over the last four audits. **Please note** that in the 2023 audit all 'other organic' materials have been reclassified as 'non-FOGO organics' due to the restrictions placed on FOGO inputs by the NSW EPA in September 2022. In the previous two audits (2019 and 2018) these materials were classified as organic contaminants in general waste, however NSW residents must now put these materials in general waste bins, or compost by other means.

Although this reclassification makes year-on-year audits not directly comparable, Figure 7 shows that the average net weight of disposed material has been increasing for all streams except recyclables. This may indicate an increase in overall household waste generation or may reflect an anomaly of this audit due to the streets/area the 2023 samples were collected from.

DUBBO - General Waste Trend Tracker
Average weekly general waste bin composition (kg/hh/wk)

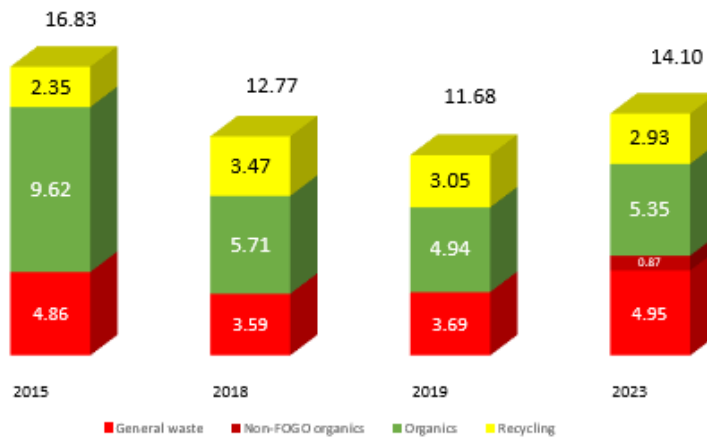


Figure 7: Average household general waste bin weight and composition, 2015, 2018, 2019, 2023

5.2.2. Breakdown of organic material in the general waste stream

Over 2.2 tonnes of FOGO-acceptable material was disposed of in general waste bins across the nine audits, accounting for 37.98% of all waste disposed to these bins (by weight).

The average net weight per general waste bin of FOGO material was 5.35 kg.

‘Food scraps – loose’ was by far the most dominant FOGO-acceptable organic, representing three quarters (75.26%) of all misplaced organics.

In net weight terms the auditors weighed 2,070.38 kg of ‘food scraps – loose’ in the 424 general waste bins audited. The average weight across all nine audits was **170.86 kg per audit**, the highest single result was the first Wed audit at 375.50 kg (from 52 bins). The lowest weight was recorded from Thu2 at 58.96 kg (43 bins). Two other days from the first week had over 200 kg of ‘food scraps’ in their audits – Tuesday had 278.45 kg (57 bins) and Friday had 232.98 kg (52 bins).

‘Foods packaged’ weighed 361.77 kg, ‘garden waste’ 199.80 kg.

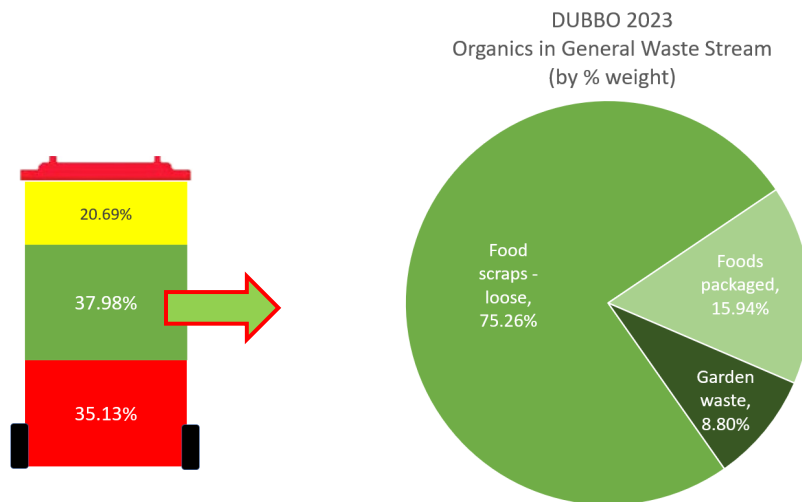


Figure 8: Organic contamination in the general waste stream

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5.2.3. Breakdown of comingled recyclables in the general waste stream

A total of 1,236.89 kg of comingled recyclables were found in Dubbo’s general waste bin audit, accounting for 20.69% of all material discarded in this stream by weight, or 2.93 kg per average general waste bin.

WEIGHT: Recyclable ‘paper and cardboard’ were the most impactful sub-category of misplaced material, followed by recyclable ‘plastics’. This is consistent with the last two audits.

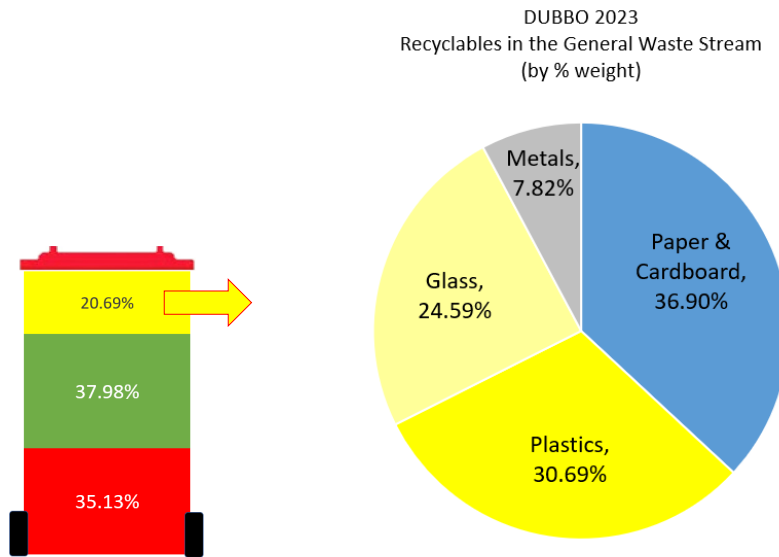


Figure 9: Recyclables contamination in the general waste stream

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Figure 10 contrasts the differing impact of the misplaced recyclables in weight and volume terms.

VOLUME: When comparing which type of recyclable consumed the most bin airspace in the general waste bin, ‘recyclable plastics’ remained the most impactful, again consistent with the last two audits.

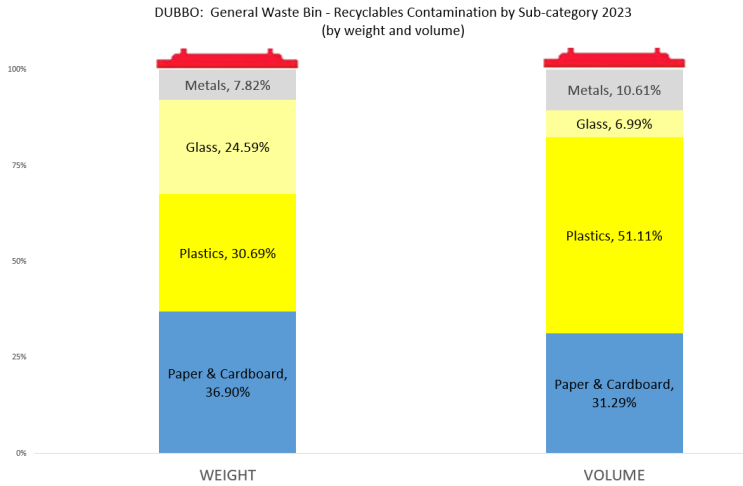


Figure 10: Recyclables in the general waste stream -weight and volume sub-category comparison

Figure 11 overleaf looks at the individual recyclable material types and reports them in descending weight order. Consistent with Figure 10, in weight terms, paper and cardboard were the top two contributors, followed by glass bottles and jars.

When looking at the volume results however, ‘cardboard’ came out as the most impactful comingled recyclable material, responsible for 7.53% of the total sample by volume (Appendix 2). This made it the third-most space consuming material of all sixty-two material types identified, only behind incorrectly placed ‘food scraps-loose’ (16.52%) and correctly-placed ‘plastic film’ (10.60%). ‘Plastic #1’ and ‘plastic #2’ were the second and third most impactful recyclable in volume terms in the general waste stream.

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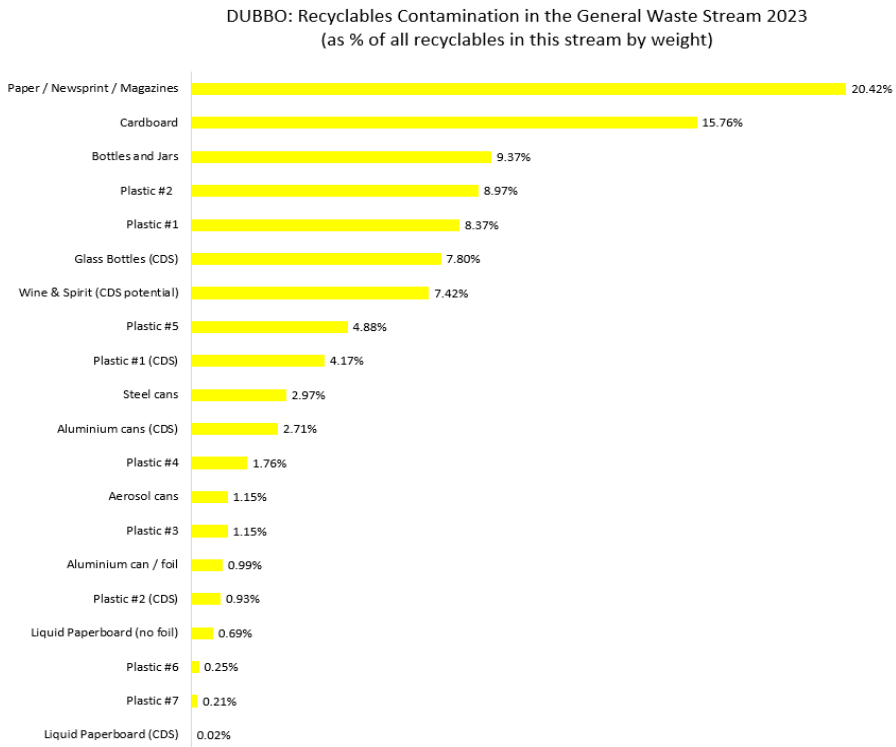


Figure 11: Recyclables in the general waste stream material breakdown

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5.2.4. Breakdown of general waste material

The auditors identified almost 2.5 tonnes (2,470.52 kg) of correctly placed material in this stream, which was **41.33%** of the total sample by weight. These materials were grouped into the following sub-categories (in descending weight order):

- General Waste 'Other' (12 material types) – 13.60% of the *total sample* by weight
- Household Hazardous Waste 11.44% (refer Section 5.6 for further HHW analysis)
- Textiles 7.31%
- Non-FOGO organics 6.20%
- Aggregates and soils 1.79%
- Rubber 1.00%

Figure 12 lists all audited individual general waste material types in descending weight order, as a percentage of the total sample. The auditors noted unusually large volumes of 'tissues/paper towel/shredded paper'.

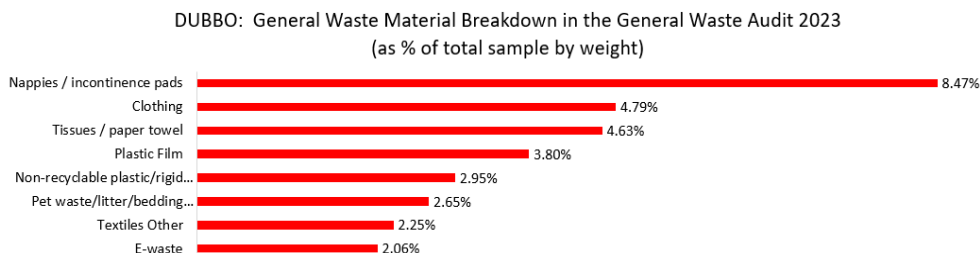


Figure 12: Breakdown of general waste in the general waste stream



5.2.5. Photos from the general waste stream



Picture 1: General Waste audit – photos showing soft plastic, shredded paper, non-compostable pet waste, paper towel*, loose food waste* and packaged food waste *potentially commercial not kerbside

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5.3. Household Hazardous Waste Analysis

The following table compiles all material classifiable as household hazardous waste (HHW) which refers to wastes or products that have the potential to harm humans or the environment, either now or in the future while degrading or decomposing. In this audit it includes 'e-waste and electrical' in light of an increasing volume of research identifying the negative impact of corroding metals and minerals from e-waste on landfill leachate.

Table 5: Household Hazardous Waste analysis

Dubbo 2023 AUDIT Household Hazardous Waste	General Waste Stream (kg)	Recycling Stream (kg)	Organics Stream (kg)	TOTAL AUDITED WEIGHT (kg)
Nappies / incontinence pads	506.14	10.74	0.00	516.88
Pet waste/litter/bedding not compostable	158.50	20.61	0.00	179.11
E-waste	123.26	14.78	1.62	139.66
Pharmaceuticals	7.31	2.71	2.00	12.02
Medical Waste (inc sharps)	4.43	1.06	0.00	5.49
Paint	4.24	3.10	0.00	7.34
Dry cell batteries	1.65	0.31	0.00	1.96
Fluorescent Tubes	1.30	0.60	0.00	1.90
Car batteries	0.01	0.00	0.00	0.01
HHW Other	0.00	0.02	0.00	0.02
Total Weight per sample (kg)	806.84	53.93	3.62	864.39
HHW as a % of each waste stream	13.50%	1.47%	0.06%	

DATA HIGHLIGHTS:

- The average discarded weight for 'nappies/incontinence pads' across all nine samples was 56.24 kg per sample, the heaviest single weight was from Tuesday Week 1 at 109.04 kg. The first week had almost double the average HH bin weight of nappies versus the second week (1.57 kg per bin vs 0.81 kg per bin).
- 'Non-compostable pet waste' was predominantly kitty crystals in both streams, again the first week had more than double the second week (general waste stream). Thursday Week 1 contained almost a third of all 'non-compostable pet waste' by weight, this day was also the only source of pet waste in the recycling audits.
- 'E-waste' was found in all nine general waste samples, with daily audit totals ranging from 5.79 kg to 24.69 kg. E-waste was also found in seven of the nine recycling audits.

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5.4. FOGO Stream Analysis**5.4.1. Overall composition**

The auditors assessed just over six tonnes (6,056.88 kg) of material from 420 FOGO bins which equated to 41 cubic metres (41,103 litres). The vast majority of the material was garden waste (90.16% by weight), with only 8.41% classifiable as 'food waste' and the remaining 1.43% classified as contamination (Figure 13).

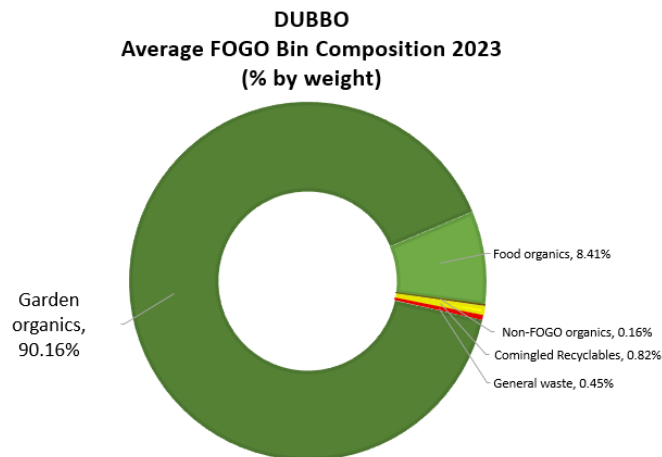


Figure 13: Overall composition of FOGO stream

5.4.2. Contamination Rate 1.43%

The auditors identified just 86.54 kg of non-FOGO material from the ten individual audits – the majority of this was 'comingled recyclables' (49.50 kg) followed by 'general waste' (27.14 kg) and 'non-FOGO organic' materials (9.90 kg).

Out of all contaminants, the four most common items were:

- 'Cardboard' found in nine of the ten audits, weights ranged from 1.46 kg to 6.68 kg.
- 'Food in plastic-blend/contaminated caddy bags' (15.23 kg total, all from Week 2 audits).
- 'Pizza boxes – soiled' (8.14 kg, from all five of the Week 2 audits).
- 'Plastic film' totaling 7.17 kg (found in 3 audits, with the highest volume in Fri Week 1's audit at 5.80 kg).

5.4.3. Average Household FOGO bin

The average household FOGO bin weighed **14.42 kg**. This was a 38.92% increase in weight from the 2019 average household FOGO bin weight of 10.38 kg.

Figure 14 reports the average household weekly FOGO bin composition in net weight terms.

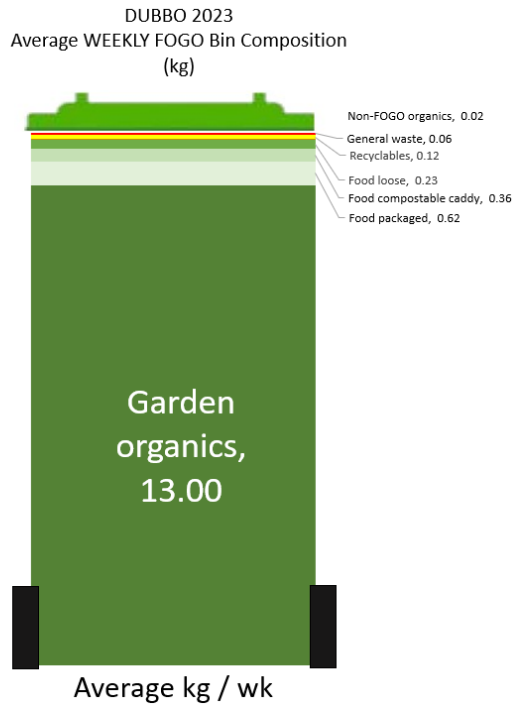


Figure 14: Average composition of the FOGO bin by sub-category, total average bin weight 14.42 kg

5.4.1. Average Household FOGO bin – sample comparison

Figure 15 reports the average individual results for all ten audits against the total audit average, shown in the last column. Please note that the Y-axis starts at 75% to aid visual clarity.

Figure 15 clearly reflects the disparity for disposed food organics, with Tue Week 2 depositing virtually no food in their FOGO bin and Wed, Thu and Fri Week 1 being better than average.

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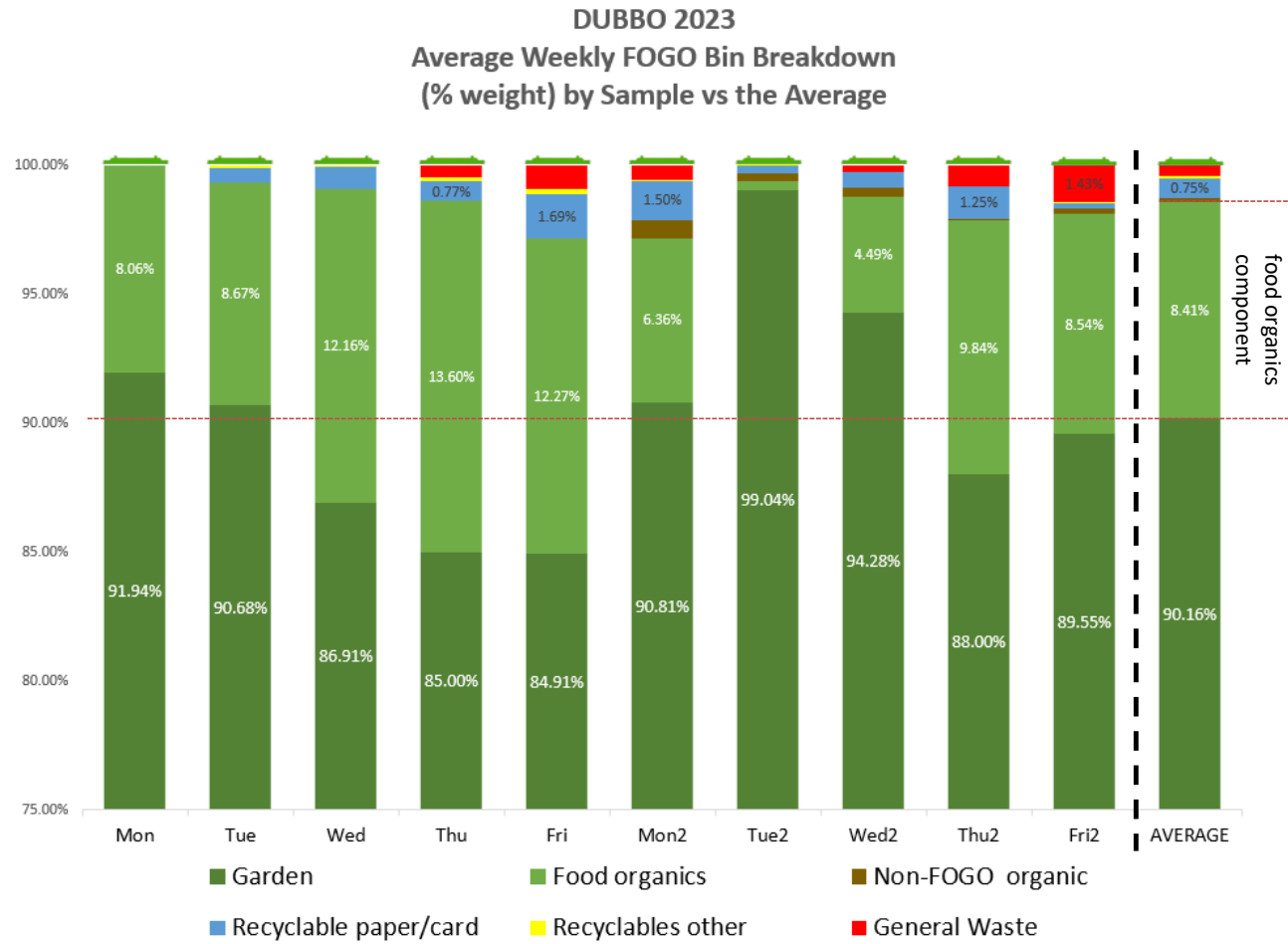


Figure 15: Compositional difference in the FOGO bin between the ten samples vs the audit average

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5.4.2. Food Organics Component

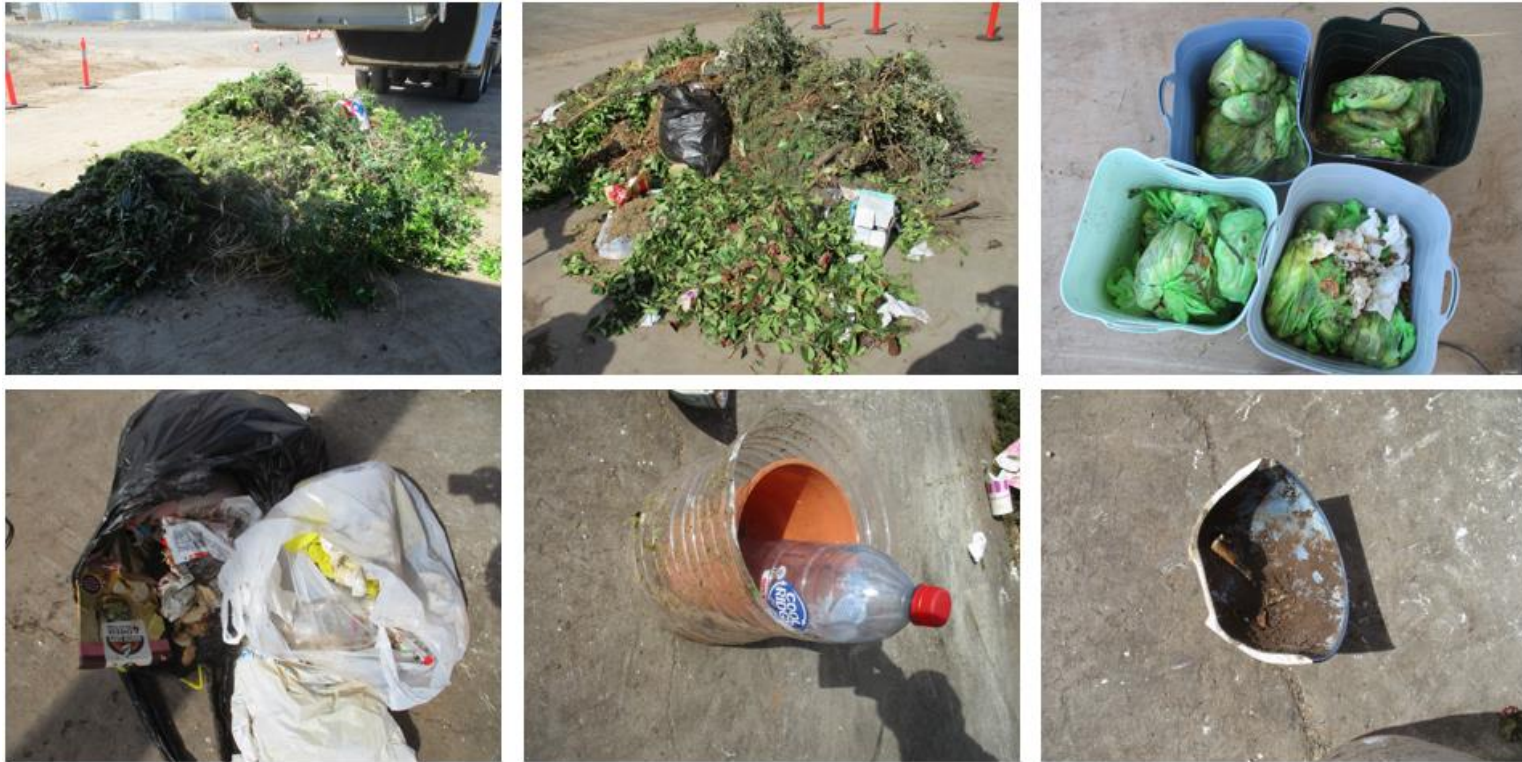
The auditors weighed 509.51 kg of compostable food organics which was 8.41% of the FOGO sample (Figure 13). This was a significant decrease when compared to the 2019 audit which reported 25.91% of the FOGO weight due to food organics.

Data insights:

- **'Food organics – packaged'** totaled 262.11 kg, which was just 4.33% of the total sample weight. Of note was that over half (51.44%) of all food in this audit was still in its packaging. While the packaging would have contributed slightly to its total weight, the auditors noted it was mostly plastic film or Plastic #1 PET trays.
- **'Food in compostable caddy bags'** weighed 149.31 kg which was 2.47% of the total sample by weight. As a percentage of all audited food in the FOGO sample, 29.30% was in compostable caddy bags.
- **'Food organics - loose'** totaled 98.09 kg which represented just 1.62% of the total FOGO sample by weight. As a percentage of all food found in FOGO bins, 'food scraps-loose' equated to less than one fifth of all audited food (19.25%).
- In addition, 15.23 kg of **'food in plastic blend/contaminated'** caddy bags were identified, all from the second week's audits - Mon2, Thu2 and Fri2.

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5.4.3. Photos from the FOGO stream



Picture 2: FOGO audit – pictures include bagged waste, compostable caddy bags and plastic/blend caddy bags, recyclables and ceramics

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5.5. Recycling Stream Analysis

5.5.1. Overall composition

The auditors weighed **3,676.34 kg** of material from 418 comingled recycling bins which equated to just over 43 cubic metres of material (43,340 litres).

When categorising the material by the three waste streams, 79.83% was acceptable comingled recyclables, the remainder was 'general waste' (20.08%) and 'FOGO' (0.09% by weight) (Figure 16).

The 2023 contamination rate (**20.17%**) reflects a continuous upward trend - in 2019 the contamination rate was 14.53% and in 2018 it was 13.70%.

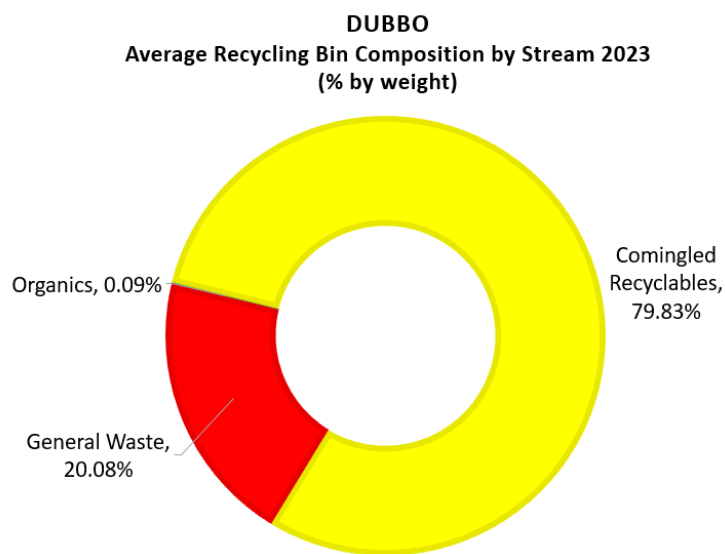


Figure 16: Overall composition of recycling stream

5.5.2. Profile of Average Household Recycling bin

The average fortnightly household recycling bin in this audit weighed **8.80 kg**.

Figure 17 shows the breakdown of materials by category, with the bin on the right reflecting the same data but with all CDS-eligible containers as a separate category. CDS-eligible containers are examined in more detail in Section 5.6 Container Deposit Scheme Analysis.

‘Paper/cardboard’ still dominate the recyclables by weight, followed by ‘recyclable glass’. In volume terms, ‘paper/cardboard’ also took up the most bin airspace, followed by ‘plastics’.

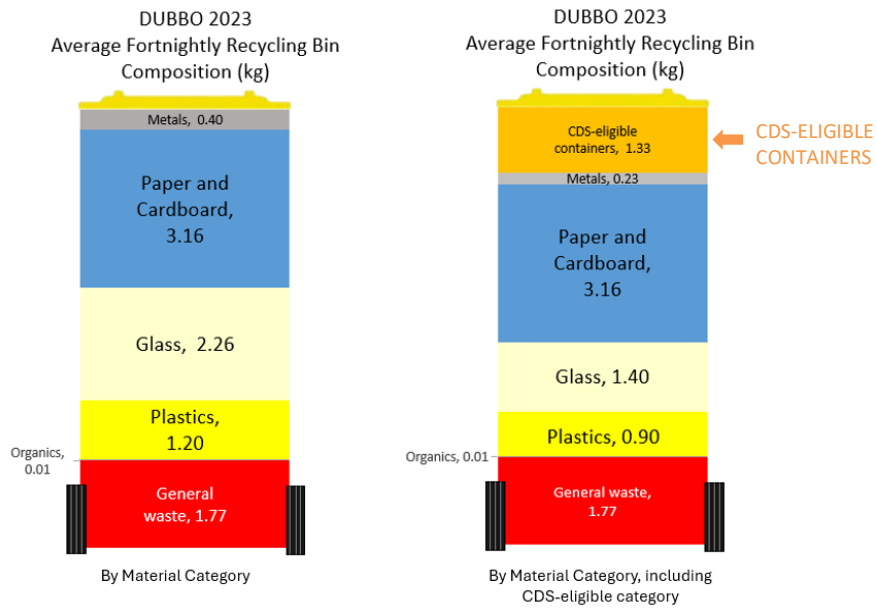


Figure 17: Average fortnightly household recycling bin weight and material composition (left) and average fortnightly household recycling bin composition with CDS eligible material shown separately. Net total weight 8.80 kg

POTENTIAL SKEW:

As noted in Section 4.1.1 Methodology under ‘SKEW’, Thursday Week 1’s results are more than double the weight of the next heaviest audit (Figure 18), which tags it as outlier data skewing all averages. When this outlier data is removed from all averaged results, the contamination rate drops to 18.71% and the average household recycling bin weight drops to 7.62 kg.

5.5.3. Sample variation in the recycling stream

Figure 18 reports the results of the nine recycling samples in net weight terms, noting there was a slight variance in the daily bin audits between the two weeks³ - the daily results for Week 1 had an extra 10 bins’ worth of material per day. Despite this, this chart clearly shows that Thursday Week 1’s audit collected considerably more material than any other day over the two weeks.

SKEW Comment: Thursday Week 1 had extraordinarily high weights for ‘paper/newsprint/magazines’ at 403.68 kg - the next highest weight for this category was 114.31 kg. Thursday Week 1 also recorded the highest contamination weights for ‘bagged waste’ and ‘bagged recyclables’.

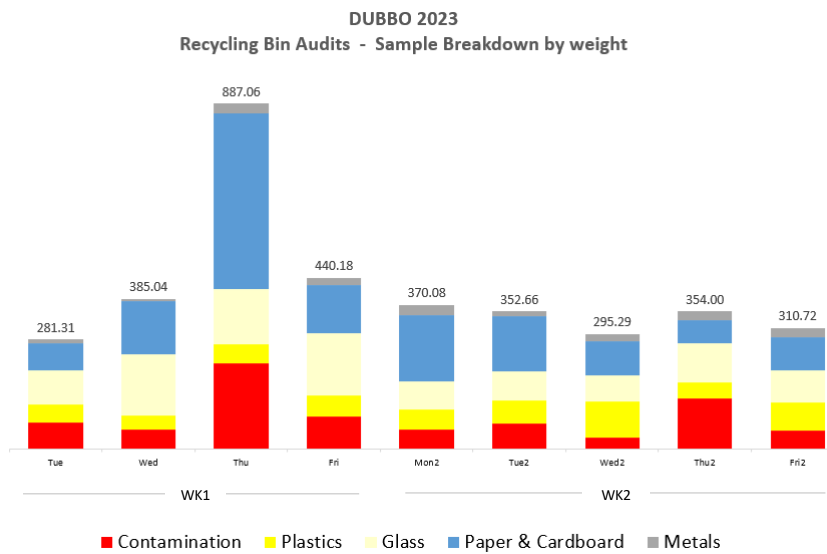


Figure 18: Sample variation by weight for the nine recycling bin audits

³ Week 1= 4 days, 52 bins per day; Week 2= 5 days, 42 bins per day.

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5.5.4. Trend Analysis – Average Household Recycling Bin

The weight of the average recycling bin has declined slightly since the last audit (note the last column in Figure 19 reports the average results with skew removed for comparative purposes). The overall average bin weight drop versus the previous audit is mainly due to less ‘paper/cardboard’.

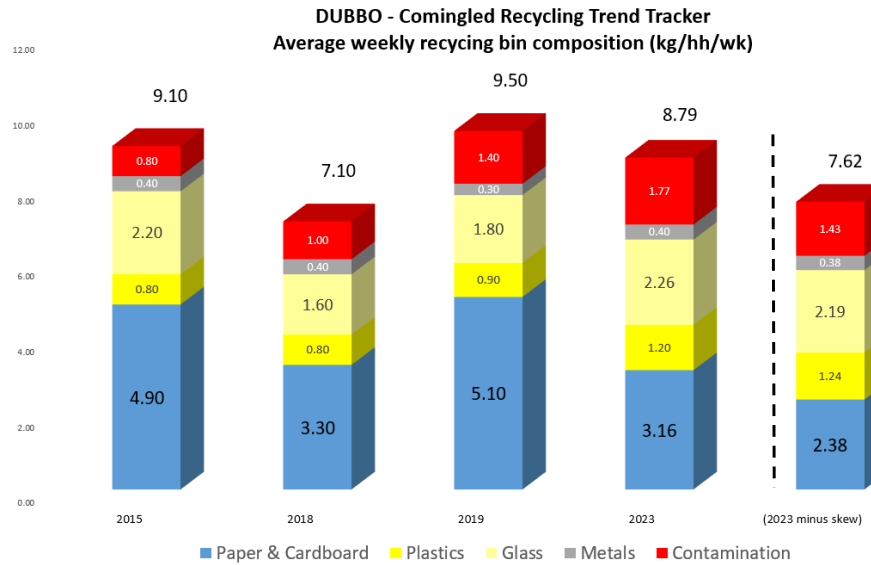


Figure 19: Average household recycling bin weight and composition, 2015, 2018, 2019, 2023 and 2023 (minus skew)

5.5.5. Breakdown of contamination in the recycling stream

Contamination equated to 20.17% of the total weight of the recycling sample, this equated to approximately 17.25% by volume (available bin airspace). Four materials dominated, together they equated to just over half of all contamination by weight (373.77 kg): ‘bagged waste’, ‘bagged recyclables’, ‘non-recyclable rigid plastic’ and ‘plastic film’. In volume terms, ‘plastic film’ took up the most bin-airspace, followed by ‘liquid paperboard (foil)’ and ‘bagged waste’.

SKEW Comment: When Thursday Week 1’s data is removed from this analysis, the contamination rate drops to 18.71% and ‘non-recyclable/rigid plastic’ becomes the single-heaviest material type, followed by ‘bagged waste’, ‘plastic film’ and then ‘bagged recyclables’.

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Figure 20 lists the contaminants that collectively were responsible for over 95% of the total weight of all contamination in the recycling audit (418 bins), with the remaining 4.68% listed as ‘other contaminants’, being the totalled weight of the remaining twelve individual contamination categories with no statistical significance (refer Appendices for complete data-set).

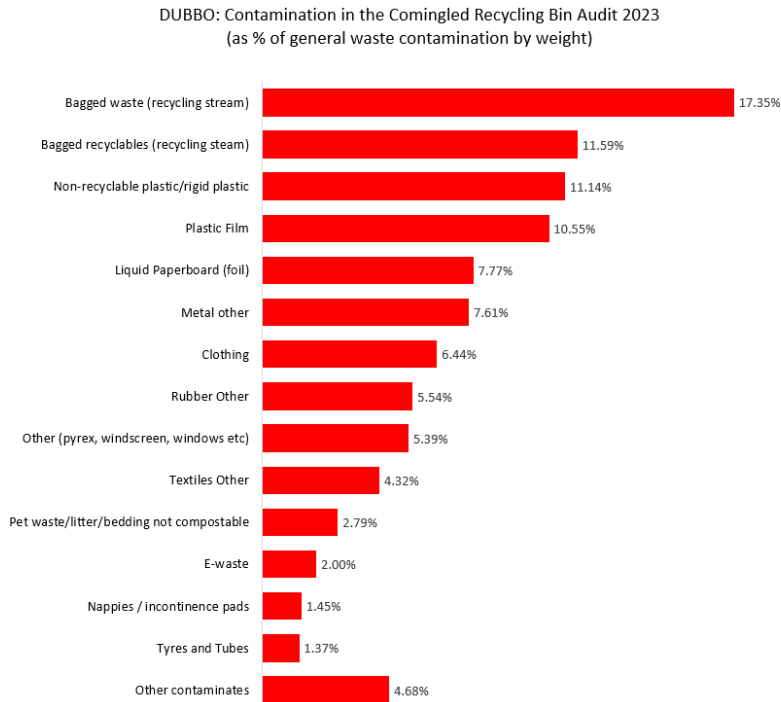


Figure 20: Breakdown of contamination in the recycling bin.

5.5.6. Breakdown of recyclables in the recycling stream

The total net weight of the audited recyclables was **2,934.71 kg**, with the average household fortnightly-collected recycling bin weighing **8.80 kg**. (With skewing data removed, this was reduced to 7.62 kg per average household bin).

Figure 21 compares the recyclables sub-categories audited in relative weight and volume terms, with paper/cardboard being the dominant category in both weight and volume terms.

SKEW Comment: When Thursday Week 1’s data is removed from the recycling sample (noting that auditors weighed over 400 kg of paper/cardboard, 300 kg higher than the next highest weight for paper/cardboard), ‘paper/cardboard’ still remains the heaviest recyclable sub-category but decreases to 38.44% of all recyclables by weight, just ahead of ‘glass’ at 35.38%.

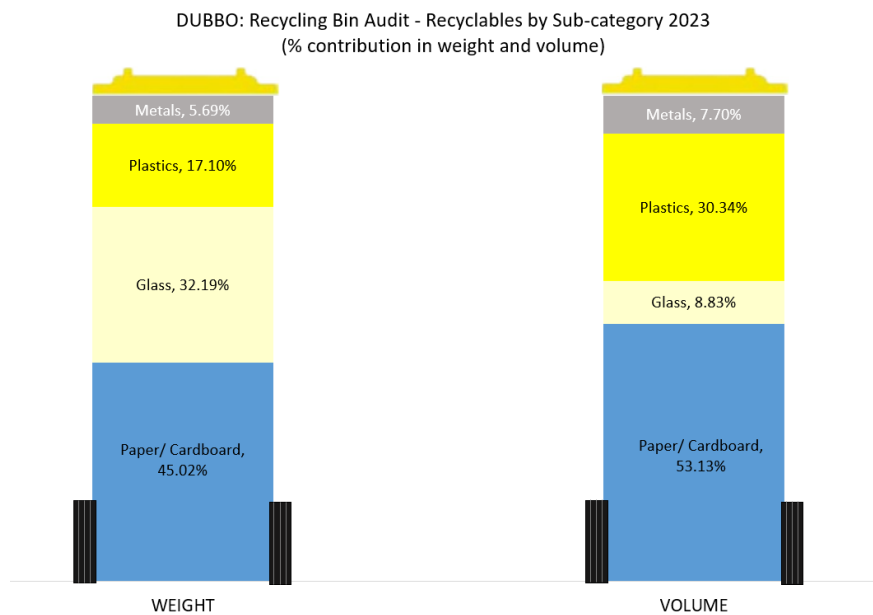


Figure 21: Recyclables in the recycling stream -weight and volume sub-category comparison

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Figure 21 details all correctly placed, MRF-acceptable comingled recyclable materials in descending weight order, as a percentage of the total sample by weight. By sub-category, *paper-based products* were the two single heaviest categories, and *glass products* were third, fourth and fifth. Of note ‘CDS-eligible glass bottles’ were fourth and represented almost 10% of the total sample by weight.

Skew comment: With Thursday Week 1’s data removed the top two materials by weight remain paper-based products, but ‘CDS-eligible glass bottles’ moves ahead of ‘wine/spirit’ bottles into third place at 12.10% of the total sample by weight.

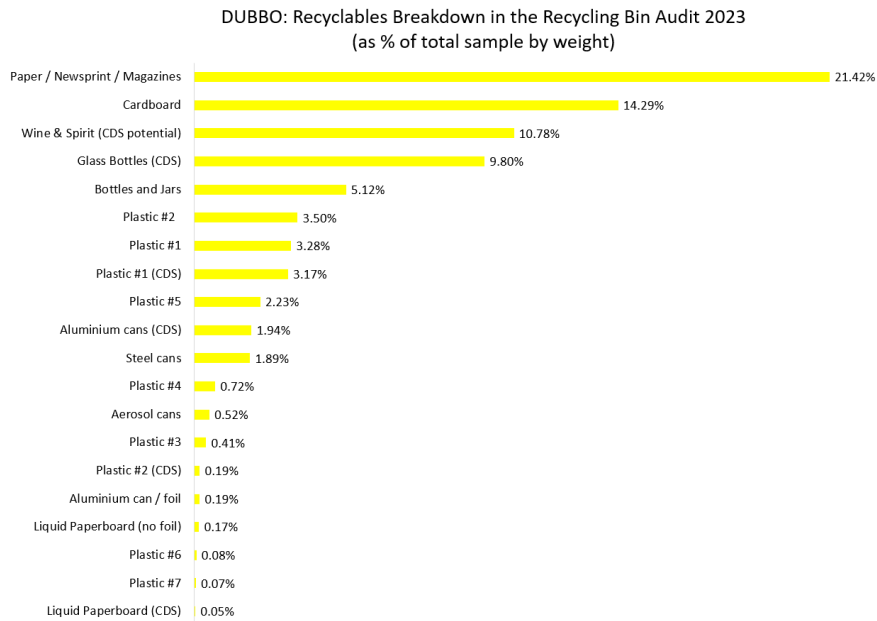


Figure 22

Dubbo Kerbside Bin Audit 2023

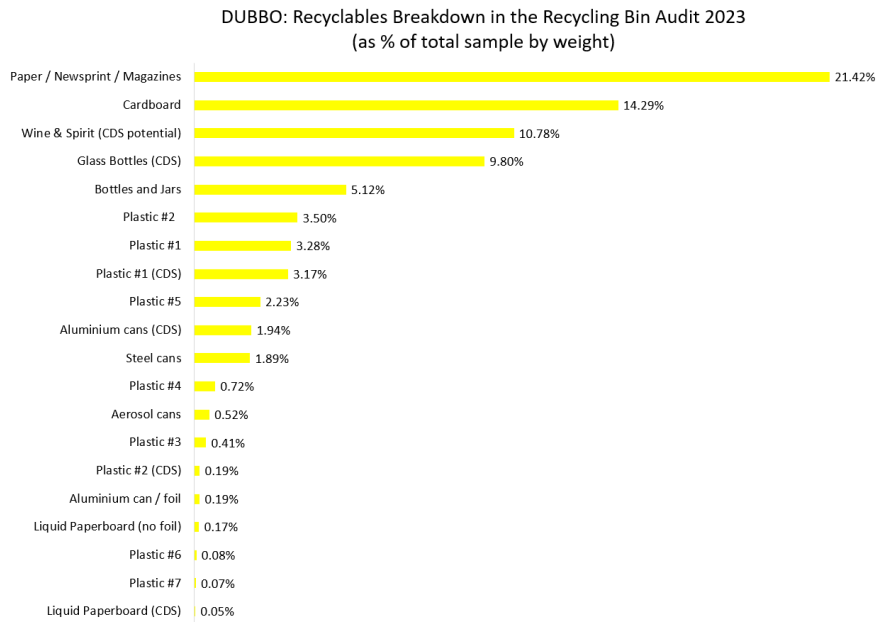


Figure 22: Breakdown of recyclable material in the recycling bin

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5.5.7. Photos from the recycling stream



Picture 3: Recyclables audit – photos of rigid non-recyclable plastics, metals, ceramics and other composite materials not accepted by MRFs

Dubbo Kerbside Bin Audit 2023



Picture 4: Recyclables audit – pictures from Thursday Week 1 audit

Dubbo Kerbside Bin Audit 2023

5.6. Container Deposit Scheme Analysis

The auditors identified 8,128 CRS eligible containers across all three streams (Table 6), weighing a total of 219.69 kg (Table 7) with a volume impact of 2.3 cubic metres (Table 8). Just under three quarters (71.16%) of all eligible containers were in recycling bins.

If all CDS-eligible containers were removed from kerbside bins, it would have the following impact (note figures are rounded):

- Recycling bin - average weight drops by 12%, bin airspace increases by 12%
- General waste bin – average weight drops by 3%, bin airspace increases by 5%
- FOGO bin – negligible, total weight of audited CDS-eligible containers just 1.22 kg.

The refund value to the community from just two weeks' worth of binned drink containers from 1,262 bins, equated to \$812.80.

Table 6: Summary of eligible containers for the CDS scheme.

DUBBO WASTE AUDIT: REFUNDABLE CONTAINER COUNT in the 2023 audit	Recycling Bins (418)	FOGO Bins (420)	General Waste Bins (424)	2023 TOTAL UNIT COUNT
Liquid Paperboard (CDS)	55	-	14	69
Glass Bottles (CDS)	1,403	2	355	1,760
Plastic #1 (CDS)	2,008	16	950	2,974
Plastic #2 (CDS)	124	-	116	240
Aluminium cans (CDS)	2,194	3	888	3,085
TOTAL UNITS 2023	5,784	21	2,323	8,128
% of all CDS-eligible containers	71.16%	0.26%	28.58%	

CDS UNIT PROFILE: 'Aluminium cans' and 'PET #1 plastic' containers were the most frequently discarded CDS-eligible containers at 38% and 37% of the CDS-eligible container sample respectively. 'Glass bottles' equated to almost another quarter (22%).

- **WEIGHT IMPACT:** As can be expected with units of significantly varying weights, it was 'glass bottles' that had the highest weight impact (44% of all CDS material by weight), despite the fact that they only accounted for 22% of all units counted.
- **VOLUME IMPACT:** PET #1 took up the most bin airspace (46%), with aluminium cans equating to another 28% and glass bottles 23%.

The tables overleaf report on the weight and volume for all five identified CRS eligible container types by stream. No CDS eligible steel drink cans were found in any of the nine audits.

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Table 7: CDS eligible containers by weight per stream (kg)

CDS ELIGIBLE CONTAINERS - WEIGHT	in Recycling Bin	in Green Waste bin	In General Waste bin	TOTALS	2023 TOTAL UNIT COUNT
Liquid Paperboard (CDS)	1.77	-	96.43	98.20	69
Glass Bottles (CDS)	360.11	0.20	51.54	411.85	1,760
Plastic #1 (CDS)	116.62	0.60	11.48	128.70	2,974
Plastic #2 (CDS)	7.15	-	33.52	40.67	240
Aluminium Cans (CDS)	71.35	0.42	193.25	265.02	3,085
TOTAL WEIGHT / stream	557.00	1.22	386.22	944.44	8,128
Percentage split by weight by stream	58.98%	0.13%	40.89%		

Table 8: CDS eligible containers by volume per stream (litres)

CDS ELIGIBLE CONTAINERS - VOLUME	in Recycling Bin	in Green Waste bin	In General Waste bin	TOTALS	2023 TOTAL UNIT COUNT
Liquid Paperboard (CDS)	28	-	7	35	69
Glass Bottles (CDS)	1,341	2	340	1,683	1,760
Plastic #1 (CDS)	2,350	16	1,013	3,379	2,974
Plastic #2 (CDS)	102	-	108	210	240
Aluminium Cans (CDS)	1,448	2	623	2,073	3,085
TOTAL VOLUME / stream	5,269	20	2,091	7,380	8,128
Percentage split by volume by stream	71.40%	0.27%	28.33%		

WINE AND SPIRIT BOTTLES:

The auditors also counted all 'glass wine and spirit bottles' to record a baseline should the CDS-acceptable material list be expanded to include these containers, as has happened in Queensland (November 1st, 2023) and is under review in other states and regions. Table 9 lists the data for Wine and Spirit bottles in count, weight and volume terms.

Table 9: Wine and Spirit bottle baseline analysis in 2023 Audit - all streams

WINE/ SPIRIT CONTAINER ASSESSMENT in the 2023 audit	In Recycling Bin	in Organics bin	In General Waste bin	2023 TOTALS
Wine and Spirit Bottles COUNT	850	-	207	1,057 units
Wine and Spirit Bottles (kg)	396.32	-	91.81	488.13 kg
Wine and Spirit Bottles (lt)	1,078	-	274	1,352 litres

DATA HIGHLIGHT: The average audit weight of 'wine/spirit bottles' per audit over the nine recycling bin audits was 44.04 kg per audit; interestingly the average weight per recycling bin audit of 'CDS-eligible glass bottles' was lower at 40.01 kg. Only when the two highest day's weights were removed from each category did the average weight even out to 36.29 kg and 36.48 kg respectively. This suggests that 'wine/spirit bottles' have as much impact on recycling bin weight as 'CDS-eligible glass bottles'.

6. RECOMMENDATIONS

6.1. FOGO

- **FOOD ORGANICS:** As a percentage of FOGO material, 'food organics' in FOGO bins has halved since the last audit – in 2019 'food organics' equated to 16.58% of the total sample by weight, versus 2023 where food organics equated to just 8.41% of the FOGO sample by weight. This suggests there are a lot of 'lapsed' users of the FOGO bin for food waste. Consider adopting some of the intervention recommendations published in the Fight Food Waste Cooperative Research Centre's latest [Toolkit](#), and/or End Food Waste Australia's [Top Five Interventions](#).
- **COMPOSTABLE CADDY BAGS:** Providing free residential compostable caddy bags increases the propensity for residents to put food waste into FOGO bins as it provides caddy convenience, cleanliness and higher engagement with the food waste disposal habit at no cost to the customer. DRC's web-based ordering system for free caddy bags may be serving residents with internet skills and existing high council engagement. In order to re-engage 'lapsed' users of FOGO bins for food waste, consider providing a free home delivery of compostable caddy bags to tie-in with a FOGO education campaign. Other ways to increase free caddy bag access include a) 'free-giveaways' over a short time period (to stop the system being abused) e.g. over the counter at Council public-facing venues, libraries or school/community events; b) running 'community waste education' stalls near food shopping locations and at community events - entice engagement with well-signposted "Give-aways!". A second FOGO audit following any caddy bag campaign - using the exact same households - is recommended to identify the FOGO-for-food-waste uptake and subsequent landfill cost savings.
- **FOOD WASTE SAMPLE VARIANCE:** The FOGO Week 1 households discarded 1.5 tonnes of food waste, of which 20% went into FOGO bins. In comparison FOGO Week 2 households a much lower 1 tonne of food waste, of which 16% went into FOGO bins. Despite the same number of bins being audited from each week (210) the considerable net weight disparity suggests that Week 2 households generally discard less food waste due to either socio-economic factors (diet/household size/life stage etc) or have alternative means of disposal such as composting or pets. However their propensity to use the general waste bin instead of the FOGO bin for food waste are statistically similar enough (16% / 20%) to suggest that FOGO messaging should continue to focus on FOGO bin usage for food waste; with a secondary message focus on Week 1 areas on the economic value of better food management.

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- **PACKAGED FOOD:** In the half tonne of food waste in the FOGO stream, the volume of 'packaged food' (262.11 kg) was concerning, and notably higher than 'food scraps – loose' (98.09 kg) and 'food in compostable caddy bags' (149.31 kg). Consider develop a 'FOGO-friendly food scraps' visual campaign that visually demonstrates de-packaging. Note that 98.5% of the packaged food in FOGO bins came from the Week 1 audit.
- **POSITIVE REINFORCEMENT:** Use the results in this report to highlight the volume of organic waste going to landfill and its negative impacts on the environment as well as organic waste diversion targets at a national and state level. Couple householder messaging on the environmental benefits with win-win solutions emphasising that correct placement of food and garden waste will also free up space in general waste bins.
- **IDENTIFY PARTICIPATION BARRIERS:** Survey the community to identify what behavioural, contextual or attitudinal barriers or drivers are impacting their usage of the FOGO bin. Positive comments from existing users around ease of use and benefits should be amplified to help develop a FOGO food waste social norm; consider appointing community advocates to promote better FOGO behaviour. Consider surveying Council staff first to identify if questions are succinct and provide insight into FOGO attitudes and behaviours.
- **REDUCE ATTITUDINAL BARRIERS to PARTICIPATION:** Intersperse food waste reduction and food decanting education with messaging about FOGO bin management to reduce odours e.g. freezing odorous food waste until bin night.
- **CARROT/STICK MOTIVATIONAL DRIVER:** Consider including in messaging a possible review and service reduction for general waste bins to ensure messaging cut-through.
- **NEW HOMEOWNER ENGAGEMENT:** If not already in place, ensure detailed 'FOGO service' information and rationale has prominence in new homeowner Council communications e.g. with welcome pack/updated rates letter.

6.2. General Waste

- **AVERAGE WASTE BIN WEIGHT INCREASE:** Given the increase of all waste sub-categories excluding recyclables, further investigation is recommended to identify other factors that might be influencing this weight increase, e.g. any major differences in audit route selection. The three largest sub-categories are discussed below:
- **FOOD ORGANICS PLACEMENT:** With the FOGO service in operation for over four years yet general waste bins consisting of 35% food organics, all avenues of community engagement are recommended to reinforce 'FOGO-your-food-waste' messaging, including increased messaging on social media e.g. weekly 'Waste Wise Wednesdays', as well as further engagement with traditional media e.g. radio / outdoor advertising and 'spokesperson' advocates that have the capacity to reach those not already engaged with Council over the internet or through the current waste education programs.
- **WASTE REDUCTION FOCUS:** The six heaviest non-organic materials were (in descending order): - nappies, clothing, tissues/paper towel, paper/newsprint, plastic film and cardboard; their combined weight equated to 52% of the non-organic total weight, with the two misplaced recyclables making up 13% of this. To encourage better placement of the two paper-based recyclables, waste education should highlight the end result of Australian-based paper recycling – e.g. saves trees, water, pollution and electricity when compared to virgin paper products – and coupled with 'too good to waste' messaging.
- **HHW WASTE REDUCTION FOCUS:** Investigate opportunities for promoting cloth nappies e.g. through community advocates or a cloth nappy rebate.
- **WASTE REDUCTION FOCUS:** Utilise waste reduction 'days' and 'weeks' promoted by other organisations e.g. Op Shop Week, Organics Week, National Recycling Week, Garage Sale Trail, Stop Food Waste Day, International Repair Day [etc.](#) to push Council waste reduction messaging as this capitalises on raised awareness levels. Link messaging with DRC waste management results and strategies.
- **WASTE REDUCTION FOCUS:** Establish strategic bin/s location for a non-sellable textiles at WTS's, landfills and/or CRCs. Continue to provide information about the services available at WTS's and CRC's targeting e-waste, hazardous material and inert materials. Promote the location of alternative Extended Producer Responsibility recycling schemes, including commercially-run mail-in and drop-off options for things like re-sellable textiles, hard-to-recycle plastics, beauty products, blister packs and e-waste. Examples include Terracycle

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collaborations e.g. [Priceline Chemists](#), Pharmacycle bins, online retailers which offer voucher rebates e.g. [Flora and Fauna](#), [Banish](#), [Upparel](#) and [Underwear for Humanity](#), and national product stewardship schemes such as [B-Cycle](#) and [TechCollect](#).

- MISPLACED RECYCLABLES: This general waste audit had a high contamination rate for recyclables – five of the top ten misplaced (non-organic) materials were comingled recyclables. In addition to paper and cardboard (4th and 6th respectively), ‘bottles/jars’, plastic #2 and plastic #1’ were 8th,9th and 10th respectively. Further investigation is recommended to identify if this is due to recycling bin over-spill or lack of recycling knowledge. Either a series of visual bin checks on bin full-ness on recycling set-out days, or a specific bin-by-bin audit is recommended.
- RECYCLABLES POSITIVE MESSAGING : Use waste education campaigns to highlight products made from recyclables (e.g. the average recyclable content in metal containers and infinite ability to recycle aluminium, any local uses for glass aggregate etc.), emphasising that correct placement is essential for this to continue happening. Also highlight the gained general waste bin airspace when recyclables are correctly disposed of.
- CONTAINER DEPOSIT SCHEME: Use the CDS analysis in this audit to emphasise the dollar value of ‘wasted money’ in both general waste and recycling bins and quote the annual dollar amount extrapolated across the region.
- POSITIVE REINFORCEMENT and/or ‘GAMIFICATION’: In addition to communicating where improvement needs to happen, waste education should celebrate good results and positive progress, including examples and statistics from this report and monthly figures on waste data where possible. Identify if there are any opportunities to set up a ‘friendly competition’ between a neighbouring council on waste reduction targets or initiatives, as a way to engage interest and change personal waste disposal from an unconscious ‘habit’ into conscious behaviour.
- SERVICE CONFIGURATION TRIALS: Consider options for transitioning more residents to a smaller general waste bin, offering different bin configurations or rate rebates on application for specific cases e.g. low waste households. A low-risk trial could be set up to examine the provision of 140 litre bins to 240 litre bin householders that self-nominate as a ‘low waste’ family based on their answers to a set criteria of householder waste management practices. Successful candidates could be interviewed and become agents of change, community spokespeople and/or a source of good news stories in exchange for reduced waste charges.

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6.3. Recycling

- **SKEW:** Thursday Week 1 had significant stand-out results for paper-based products and contamination – the auditors noted an extra 300 kg of paper products versus the other eight audits, which included cardboard, newspapers, student notes and even some Council-originated paperwork. Thursday Week 1 also included 69 kg of bagged waste and 39 kg of recyclables (versus audit average of 7 kg and 5kg for these categories). The well-above-average weights/volumes recorded also suggest it was not limited to one over-heavy MGB. Possible explanations include extra bins collected above the 52-bin audit specification; commercial recyclables put into kerbside bins possibly from a newsagency, general store or a business that had a big clean-out; students doing end of year clear-outs, a house-move with extra MGB access. While this might be an audit anomaly with no confirmable explanation, it is recommended the waste haulers be asked to keep this audit route under surveillance.
- **CONTAMINATION:** Bagged material continues to be a challenge, however, when Thursday Week1's outlier data is removed, 'non-recyclable rigid plastic' becomes the single highest contaminant by weight, which can often be due to confusion around MRF acceptability. While not as extensive as in Narromine's recycling audit, 'plant pots' were identified as 'wish-cycling' along with composite metal/plastic products and eWaste. Explore an educational collaboration with local nurseries, investigate the opportunity with www.pp5.com.au, and continue to promote CRCs as a drop-off points.
- **CONTAMINATION:** Soft plastic had a significant impact, both in volume terms (as the contaminant taking up the most bin air-space) and, surprisingly for such a light-weight material, as the fourth-heaviest contaminant just behind 'rigid non-recyclable plastic' and the bagged materials. Education should emphasise the multiple issues with soft plastic in recycling bins (acts like paper in the sorting process which ruins the paper recycling efforts, can tangle machinery). Include updates on progress to re-establishing soft plastics recycling, including tips on soft plastic packaging avoidance strategies, and emphasise the current correct placement in general waste bins. A trial of soft plastic recycling at local WTS/CRCs may also be worth investigating.
- **CDS ELIGIBLE CONTAINERS:** Eligible containers were responsible for 13% of the recycling stream audit by weight and 12% by volume, with 5,784 containers identified over the nine audit days (418 bins). Council could consider supporting/promoting local charities and non-government organisations that use the CDS as a fundraiser by highlighting their

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mission, fundraising efforts, goals achieved and success stories, with particular emphasis on organisations that are prepared to collect from households. Use the data in this report where possible to support the expansion of the NSW CDS to include wine/spirit bottles.

- RECYCLING BIN MATERIAL REDUCTION: Maximise awareness and sentiment on single-use plastic to promote a 'reuse culture'; find and foster community links with like-minded community members and promote Waste Education workshops.
- REDUCTION OF WISH-CYCLING / INCREASE RECYCLING KNOWLEDGE: Include statistics from this report and compare against Cleanaway's ['Recycling Behaviours Report'](#), using a "How did we do?" theme to both raise awareness and add a level of competitiveness on where DRC residents could do better.
- RECYCLING EDUCATION: Promote recyclingnearyou.com.au and the RecycleMate app to increase the knowledge of waste management for individuals and encourage local recycling 'champions' to investigate trialing recycling at the workplace. Investigate the 'RecycleCoach' app as an option to send timely SMS and 'push' notifications to keep residents informed of special events, service changes, recycling reminders and 'wind warnings' to residents due to put their bins out on windy nights, suggesting they delay until early morning if possible. Any 'custodial caring' communications, as opposed to 'instructional / enforcement' communications, helps to develop trust and a positive brand image for Council.
- CONTEXTUAL ELEMENTS: Consider applying or re-applying stickers to recycling bins that state what goes in, including clear visual imagery. Consider printing stickers for household internal recycling bins (including simple diagrams) and have them freely available at public locations.

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Appendix 1 – General Waste Dataset (kg)

CATEGORY	CATEGORY TOTAL		SUB-CATEGORY	SUB-CATEGORY TOTAL		MATERIAL	TOTAL		Mon	Tue	Wed	Thu	Fri	Mon	Tue	Wed	Thu	Fri						
	Weight (kg)	Weight(%)		Weight (kg)	Weight (%)		Weight (kg)	Weight (%)	27/11/2024	28/11/2024	29/11/2024	30/11/2024	1/12/2024	4/12/2023	5/12/2023	6/12/2023	7/12/2023	8/12/2023						
	0	57		52	52		52	52	42	42	42	43	42	42	43	42								
	KG	KG	KG	KG	KG	KG	KG	KG	KG	KG	KG	KG	KG	KG	KG	KG	KG	KG						
Comingled Recycling	1,236.83	20.63%	Paper & Cardboard	456.47	7.64%	Paper / Newsprint / Magazines	252.63	4.23%	0.00	63.21	57.62	19.57	43.30	7.55	23.25	7.16	3.96	21.01						
						Cardboard	194.98	3.26%	0.00	16.63	15.14	14.47	10.38	33.30	24.81	42.07	12.26	13.92						
						Liquid Paperboard (no foil)	8.58	0.14%	0.00	2.00	1.21	0.20	0.47	1.17	1.07	1.17	1.12	0.17						
						Liquid Paperboard (CDS)	0.23	0.00%	0.00	0.00	0.00	0.00	0.15	0.02	0.00	0.00	0.11	0.00						
						Bottles and jars	115.83	1.94%	0.00	16.93	20.07	1.20	20.17	20.23	4.84	7.19	10.58	14.62						
			Glass	304.13	5.03%	Plastics	373.54	6.35%	Glass Bottles (CDS)	96.43	1.61%	0.00	3.61	12.21	3.00	13.11	6.02	12.64	19.11	17.06	3.67			
									Wine & Spirit (CDS potential)	91.81	1.54%	0.00	14.16	19.82	2.00	12.30	10.09	3.12	12.32	2.43	3.77			
									Plastic #1	103.55	1.73%	0.00	13.71	13.78	8.52	13.77	10.34	15.05	14.52	7.36	5.90			
									Plastic #1 (CDS)	51.54	0.86%	0.00	2.66	5.66	3.60	5.56	4.17	6.93	6.66	12.63	3.67			
									Plastic #2	110.30	1.86%	0.00	7.73	17.72	12.72	17.64	10.12	22.58	5.96	5.14	11.63			
									Plastic #2 (CDS)	11.49	0.19%	0.00	0.50	1.00	1.60	3.70	0.12	1.98	1.52	1.02	0.04			
									Plastic #3	14.19	0.24%	0.00	5.21	2.77	1.80	1.00	0.00	3.18	0.00	0.07	0.09			
			Metals	96.75	1.62%	Aluminium cans / foil	12.27	0.21%	Plastic #4	21.79	0.36%	0.00	1.00	2.21	0.30	0.40	2.74	10.63	2.11	1.17	1.17			
									Plastic #5	60.41	1.01%	0.00	4.61	3.97	2.00	5.21	6.17	21.94	5.97	5.53	5.61			
									Plastic #6	3.13	0.05%	0.00	1.00	0.90	0.40	0.50	0.00	0.11	0.20	0.01	0.01			
									Plastic #7	2.55	0.04%	0.00	0.40	0.40	0.60	0.55	0.00	0.00	0.60	0.00	0.00			
									Aluminium cans / foil	12.27	0.21%	0.00	0.30	0.77	1.40	1.20	0.99	3.12	2.11	1.19	1.19			
									Aluminium cans (CDS)	33.52	0.56%	0.00	1.00	2.47	3.57	5.74	1.94	3.45	5.79	5.49	4.07			
									Steel cans	36.75	0.61%	0.00	2.00	2.22	1.00	2.11	1.53	10.14	6.17	5.86	5.52			
			Organics	2,270.18	37.98%	Food Organics	2,070.38	34.64%	Aerosol cans	14.21	0.24%	0.00	1.17	1.40	1.64	0.50	0.95	2.11	1.11	4.21	1.12			
Food scraps - loose	1708.61	28.58%							0.00	278.45	375.50	169.14	232.98	164.98	166.58	110.16	58.96	151.86						
Foods packaged	361.77	6.05%							0.00	65.38	46.79	8.00	30.06	48.98	61.37	37.60	32.83	30.76						
Food in Compostable Caddy Bags	0.00	0.00%							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Garden	199.80	3.34%							0.00	0.00	7.00	31.62	22.01	22.71	36.16	34.12	18.72	27.48						
Non-FOGO Organics	370.88	6.20%							Other	370.88	6.20%	Pizza boxes - solid	44.60	0.75%	0.00	6.22	2.72	2.60	5.61	4.17	3.73	6.09	3.07	4.19
												Compostable Packaging	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Tissues / paper towel / shredded paper	276.32	4.63%	0.00	43.56	68.93	37.11	45.76	3.32	8.99	28.01	7.98	32.76
												Wood / timber - untreated	43.36	0.83%	0.00	5.73	4.21	2.00	5.02	1.41	13.16	12.17	0.00	5.66
												Pet waste/litter/bedding compostable	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Food in plastic bags	0.00	0.00%	0.00	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00						
			Tires and Tubes	59.72	1.00%	0.00	9.96	5.50				6.21	4.12	1.91	15.05	12.19	1.11	3.67						
			Rubber Other	0.00	0.00%	0.00	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00						
			General Waste	2,093.64	35.13%	Aggregates & soils	106.35	1.73%				Brick	17.89	0.30%	0.00	4.12	5.00	0.00	2.00	0.74	0.00	3.32	0.00	2.11
												Concrete	15.84	0.26%	0.00	4.00	0.00	6.70	0.00	1.17	2.79	0.98	0.00	0.00
Aggregates Other	5.60	0.09%							0.00	0.00	0.00	5.60	0.00	0.00	0.00	0.00	0.00	0.00						
Carpet	16.32	0.27%							0.00	7.64	0.00	0.00	0.00	0.00	0.00	6.42	1.17	1.09						
Clothing	236.21	4.73%							0.00	12.32	57.70	16.91	27.01	25.88	26.96	37.86	49.94	31.93						
Textiles Other	134.20	2.25%							0.00	4.21	0.00	0.00	0.00	10.21	24.09	24.11	28.39	43.19						
Other	812.66	13.60%							HHV	683.58	11.44%	Paint	4.24	0.07%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.12	0.00	2.12
												Fluorescent Tubes	1.30	0.02%	0.00	0.20	0.10	0.80	0.20	0.00	0.00	0.00	0.00	0.00
												Dry cell batteries	1.65	0.03%	0.00	0.20	0.60	0.40	0.40	0.01	0.02	0.00	0.01	0.01
												Car batteries	0.01	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
			Medical Waste (no sharps)	4.43	0.07%	0.00	0.12	0.40				1.70	2.04	0.00	0.00	0.00	0.00	0.17						
			Pharmaceuticals	7.31	0.12%	0.00	1.21	3.10				2.90	1.00	0.00	0.00	0.00	0.00	0.00						
			Nappies / incontinence pads	506.14	8.47%	0.00	78.72	109.04				67.80	79.11	28.53	26.36	43.88	11.53	57.17						
			Pet waste/litter/bedding not compostable	158.50	2.65%	0.00	9.05	16.31				48.44	26.70	22.30	0.00	24.93	0.00	10.17						
			HHV Other	0.00	0.00%	0.00	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00						
			Other	123.26	2.06%	E-waste	119.35	2.00%				Other (porex, windscreen, windows etc)	24.57	0.41%	0.00	3.61	6.61	3.80	4.60	1.86	1.74	1.12	1.07	0.16
Ceramics	38.96	0.65%							0.00	12.35	7.20	3.51	11.21	0.41	0.21	0.74	0.12	3.11						
Liquid Paperboard (foil)	41.25	0.69%							0.00	3.21	7.24	2.87	3.20	4.12	7.94	4.64	5.29	2.94						
Coffee cups	18.26	0.31%							0.00	3.61	3.90	0.66	0.90	1.12	3.23	1.17	2.81	0.86						
Non-recyclable plastic/hgid plastic	176.45	2.95%							0.00	16.25	27.88	10.18	8.21	22.47	24.98	23.30	17.43	25.75						
Polystyrene	10.07	0.17%							0.00	1.21	0.50	0.20	0.15	0.42	2.52	4.15	0.41	0.51						
Plastic Film	226.95	3.80%							0.00	37.86	33.42	26.53	24.27	20.36	14.03	23.45	16.99	22.04						
Ash	2.07	0.03%							0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.07	0.00	0.00						
Timber - treated	31.57	0.53%							0.00	0.00	3.61	5.21	1.00	1.07	11.70	2.17	3.00	3.91						
Building materials other	0.00	0.00%							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Bagged waste (recycling stream)	0.00	0.00%	Bagged waste (recycling stream)	0.00	0.00%	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
						0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	5,977.59	100%		5,977.59	100.00%		5,977.59		819.77	1026.57	562.85	738.06	527.05	682.00	629.63	378.98	612.66							



Dubbo Kerbside Bin Audit 2023

Appendix 1 - General Waste Dataset (lt)

CATEGORY	CATEGORY TOTAL		SUB-CATEGORY	SUB-CATEGORY TOTAL		MATERIAL	TOTAL				
	Vol (lt)	Vol (%)		Vol (lt)	Vol (%)		Vol (lt)	Vol (%)			
Comingled Recycling	14,612	34.57%	Paper & Cardboard	4,572	10.82%	Paper / Newsprint / Magazines	1246	2.95%			
						Cardboard	3181	7.53%			
						Liquid Paperboard (no foil)	138	0.33%			
			Glass	1,021	2.42%	Glass	1,021	Bottles and Jars	407	0.96%	
								Glass Bottles (CDS)	340	0.80%	
			Plastics	7,468	17.67%	Plastics	7,468	Wine & Spirit (CDS potential)	274	0.65%	
								Plastic #1 (CDS)	1013	2.40%	
								Plastic #2	2219	5.25%	
								Plastic #2 (CDS)	108	0.26%	
								Plastic #3	232	0.55%	
								Plastic #4	403	0.95%	
								Plastic #5	884	2.09%	
								Plastic #6	143	0.34%	
								Plastic #7	30	0.28%	
								Metals	1,551	3.67%	Metals
			Aluminium cans (CDS)	623	1.47%						
			Steel cans	554	1.31%						
			Aerosol cans	168	0.40%						
			Organics	9,334	22.08%	Food Organ	8,616	20.38%	Food scraps - loose	6985	16.52%
									Food packages	1631	3.86%
Non-FOOD Organics	2,528	5.98%	Garden	718	1.70%	Food in Compostable Caddy Bags	0	0.00%			
						Garden	718	1.70%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Pizza boxes - soiled	603	1.43%			
						Compostable Packaging	0	0.00%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Tissues / paper towel	1750	4.14%			
						Wood / timber - untreated	175	0.41%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Pet wastelitter/bedding compostable	0	0.00%			
						Food in plastic bags	0	0.00%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Tires and Tubes	459	1.09%			
						Rubber Other	0	0.00%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Soils	124	0.29%			
						Brick	15	0.04%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Concrete	15	0.04%			
						Aggregates Other	5	0.01%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Carpet	140	0.33%			
						Clothing	1731	4.10%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Textiles Other	630	1.63%			
						Paint	5	0.01%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Fluorescent Tubes	18	0.04%			
						Dry cell batteries	9	0.02%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Car batteries	1	0.00%			
						Medical Waste (no sharps)	70	0.17%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Pharmaceuticals	89	0.21%			
						Nappies / incontinence pads	2238	5.44%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Pet wastelitter/bedding not compostable	483	1.14%			
						HHW Other	0	0.00%			
General Waste	15,797	37.37%	Other	2,528	5.98%	E-waste	566	1.34%			
						Metal other	538	1.27%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Other (pyrex, windscreen, windows etc)	96	0.20%			
						Ceramics	128	0.30%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Liquid Paperboard (foil)	672	1.59%			
						Coffee cups	295	0.70%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Non-recyclable plastic/rigid plastic	1455	3.44%			
						Polystyrene	1270	3.00%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Plastic Film	4481	10.60%			
						Ash	4	0.01%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Timber - treated	152	0.36%			
						Building materials other	0	0.00%			
General Waste	15,797	37.37%	Other	2,528	5.98%	Bagged recyclables (recycling stream)	0	0.00%			
						Bagged waste (recycling stream)	0	0.00%			
	42,271	1		42,271	1		42,271	1			

Mon	Tue	Wed	Thu	Fri	Mon	Tue	Wed	Thu	Fri
27/11/2023	28/11/2023	29/11/2023	30/11/2023	1/12/2023	4/12/2023	5/12/2023	6/12/2023	7/12/2023	8/12/2023
0	52	52	52	52	42	42	42	42	42
LT	LT	LT	LT	LT	LT	LT	LT	LT	LT
0	205	308	105	194	47	190	89	41	67
0	392	372	339	234	282	394	690	246	232
0	20	20	5	15	21	19	12	22	4
0	0	0	0	5	1	0	0	1	0
0	45	45	5	65	61	32	47	65	42
0	10	35	10	60	19	42	62	84	18
0	40	70	5	22	37	40	23	17	14
0	292	300	226	352	210	262	290	153	255
0	42	110	92	127	80	146	134	198	84
0	126	363	276	403	209	398	71	143	224
0	5	15	2	75	1	5	3	1	1
0	55	62	40	40	0	30	2	2	1
0	25	40	15	20	42	179	21	41	20
0	75	55	35	107	10	310	62	84	126
0	30	20	30	0	16	0	16	1	1
0	30	15	25	30	0	0	0	0	0
0	20	15	60	42	4	21	11	17	16
0	20	42	70	112	43	65	49	118	104
0	30	35	15	20	18	205	88	57	86
0	15	15	12	10	4	16	17	58	19
0	905	1080	814	924	690	732	510	620	710
0	102	114	9	117	260	732	31	89	117
0	0	0	0	0	0	0	0	0	0
0	0	10	140	102	68	148	119	49	82
0	110	50	40	95	48	92	58	38	72
0	0	0	0	0	0	0	0	0	0
0	275	376	282	332	39	82	84	90	190
0	20	15	10	7	10	42	39	0	32
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	120	10	45	25	2	145	68	12	32
0	0	0	0	0	0	0	0	0	0
0	20	20	15	25	0	17	0	6	21
0	5	2	0	2	1	0	4	0	1
0	4	0	6	0	2	2	1	0	0
0	0	0	5	0	0	0	0	0	0
0	70	0	0	0	0	0	48	12	16
0	137	450	84	120	140	152	152	334	162
0	15	0	0	0	81	180	93	134	181
0	0	0	0	0	0	0	2	0	3
0	5	2	1	10	0	0	0	0	0
0	1	2	1	1	1	1	0	1	1
0	0	0	0	0	0	0	1	0	0
0	1	1	60	7	0	0	0	0	0
0	20	55	10	4	0	0	0	0	0
0	282	472	328	372	143	114	214	121	252
0	25	30	100	122	91	0	73	0	42
0	0	0	0	0	0	0	0	0	0
0	102	30	40	50	72	96	57	52	67
0	87	70	30	110	18	108	52	29	34
0	15	20	15	10	7	2	12	4	1
0	30	15	12	30	2	1	2	2	33
0	55	107	80	82	49	142	63	52	42
0	55	60	20	40	17	57	19	16	11
0	182	197	99	107	57	392	98	102	221
0	140	100	20	25	42	301	390	80	172
0	792	736	584	593	172	531	365	442	266
0	0	0	0	0	0	0	4	0	0
0	0	10	20	2	3	86	13	16	16
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
-	5,052	5,987	4,227	5,277	3,104	6,510	4,372	3,656	4,086



Appendix 3 – FOGO Dataset (It)

CATEGORY	CATEGORY TOTAL		SUB-CATEGORY	SUB-CATEGORY TOTAL		MATERIAL	TOTAL		Mon	Tue	Wed	Thu	Fri	Mon	Tue	Wed	Thu	Fri														
	Vol (lt)	Vol (%)		Vol (lt)	Vol (%)		Vol (lt)	Vol (%)	27/11/2023	28/11/2023	29/11/2023	30/11/2023	1/12/2023	4/12/2023	5/12/2023	6/12/2023	7/12/2023	8/12/2023														
	LT	LT		LT	LT		LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT													
Comingled Recycling	1,029.00	2.50%	Paper & Cardboard	957.00	2.33%	Paper / Newsprint / Magazines	77.00	0.19%	0.00	0.00	0.00	0.00	42.00	21.00	10.00	4.00	0.00	0.00	0.00													
						Cardboard	880.00	2.14%	0.00	100.00	80.00	100.00	50.00	192.00	30.00	38.00	260.00	30.00	0.00	0.00	0.00	0.00										
						Liquid Paperboard (no foil)	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
						Liquid Paperboard (CDS)	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
						Bottles and Jars	2.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00									
						Glass Bottles (CDS)	2.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00									
						Wine & Spirit (CDS-potential)	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00									
						Plastics	63.00	0.15%	Plastics	63.00	0.15%	Plastic #1	37.00	0.09%	0.00	5.00	4.00	25.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00						
												Plastic #1 (CDS)	16.00	0.04%	0.00	0.00	1.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
												Plastic #2	9.00	0.02%	0.00	0.00	0.00	0.00	5.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
			Plastic #2 (CDS)	0.00	0.00%							0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
			Plastic #3	0.00	0.00%							0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
			Plastic #4	0.00	0.00%							0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
			Plastic #5	0.00	0.00%							0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
			Plastic #6	1.00	0.00%							0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00							
			Plastic #7	0.00	0.00%							0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
			Aluminium can / foil	1.00	0.00%							0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00						
			Aluminium cans (CDS)	2.00	0.00%	0.00	0.00	0.00%	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00												
			Steel cans	2.00	0.00%	0.00	0.00	0.00%	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00												
			Aerosol cans	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00												
			Organics	39505.00	96.11%	Food Organics	1,505.00	3.66%	Food scraps - loose	304.00	0.74%	35.00	35.00	30.00	45.00	82.00	12.00	0.00	32.00	13.00	0.00	0.00										
									Foods packaged	805.00	1.96%	145.00	102.00	168.00	214.00	157.00	6.00	12.00	0.00	1.00	0.00	0.00	0.00									
									Food in Compostable Caddy Bags	396.00	0.96%	0.00	0.00	0.00	0.00	0.00	72.00	0.00	70.00	132.00	122.00	0.00	0.00	0.00	0.00							
Organic non-FOGO	289.00	0.70%	Other	289.00	0.70%	Garden	38,000.00	92.45%	4,400.00	4,200.00	2,500.00	4,200.00	3,800.00	3,400.00	4,900.00	4,000.00	3,300.00	3,900.00														
						Pizza boxes - soiled	233.00	0.57%	0.00	0.00	0.00	0.00	0.00	80.00	16.00	40.00	38.00	59.00	0.00	0.00	0.00											
General Waste	280	0.68%	Other	280	0.68%	Compostable Packaging	42.00	0.10%	0.00	0.00	0.00	0.00	0.00	42.00	0.00	0.00	0.00	0.00	0.00													
						Tissues / paper towel	14.00	0.03%	0.00	0.00	0.00	0.00	0.00	4.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00											
						Wood / timber - untreated	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
						Pet waste/litter/bedding compostable	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
						Food in plastic bags	42.00	0.10%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	21.00	17.00										
						Tyres and Tubes	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
						Rubber Other	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
						Aggregates & soils	-	0.00%	-	-	0.00%	Soils	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
												Grind	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
												Concrete	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
						Textiles	-	0.00%	-	-	0.00%	Aggregates Other	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
												Carpet	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
												Clothing	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
						HWM	5.00	0.01%	Other	5.00	0.01%	Textiles Other	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
												Paints	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
												Fluorescent Tubes	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
												Dry cell batteries	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
												Car batteries	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
												Medical Waste (inc sharps)	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
												Pharmaceuticals	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
												Nappies / incontinence pads	5.00	0.01%	0.00	0.00	0.00%	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
												Pet waste/litter/bedding not compostable	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
												HWM Other	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
												Other	233.00	0.57%	Other	233.00	0.57%	E-waste	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
																		Metal other	10.00	0.02%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00
																		Other (pyrex, windscreen, windows etc)	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
																		Ceramics	2.00	0.00%	0.00	0.00	0.00%	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
																		Liquid Paperboard (foil)	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
																		Coffee cups	12.00	0.03%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	11.00	0.00	1.00	0.00	0.00
																		Non-recyclable plastic/rigid plastic	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
						Polystyrene	0.00	0.00%	0.00	0.00	0.00%							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
						Plastic Film	182.00	0.44%	0.00	0.00	0.00%							0.00	40.00	134.00	0.00	0.00	0.00	8.00	0.00							
						Ash	0.00	0.00%	0.00	0.00	0.00%							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
						Timber - treated	27.00	0.07%	0.00	0.00	0.00%							0.00	0.00	0.00	0.00	15.00	0.00	12.00	0.00							
						Building materials other	0.00	0.00%	0.00	0.00	0.00%							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
						Bagged recyclables (recycling stream)	0.00	0.00%	0.00	0.00	0.00%							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
						Bagged waste (recycling stream)	0.00	0.00%	0.00	0.00	0.00%							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
							41,103.00	100%	41,103.00	100.00%	41,103.00							100%	4,580.00	4,445.00	2,783.00	4,653.00	4,288.00	3,821.00	4,412.00	4,186.00	3,792.00	4,143.00				

