## 1. WORKS REPORT

| | |
|---|---|
| **Author** | Director Infrastructure and Engineering Services |
| **Responsible Officer** | Director Infrastructure and Engineering Services |
| **Link to Strategic Plans** | CSP – 4.3.4 Ensure Council's property assets are monitored and well managed |

### Executive Summary

This report provides information regarding works undertaken for the given period for operational and capital works.

### Report

The Works Report ***(Attachment No. 1)*** for the period 1 April to 30 April 2024 is presented to Council for information.

### Financial Implications

Council has provision for these services in its Operational Budget.

### Legal and Regulatory Compliance

Local Government Act 1993
Roads Act 1993

### Risk Management Issues

Nil

### Internal/External Consultation

Nil

### Attachments

1. Works Report

### RECOMMENDATION

That the information be noted.

## 2. GENERAL WASTE KERBSIDE WASTE SERVICES

| | |
|---|---|
| **Author** | Director Infrastructure and Engineering Services |
| **Responsible Officer** | Director Infrastructure and Engineering Services |
| **Link to Strategic Plans** | CSP – 3.1.5 Reduce waste to landfill through effective and efficient domestic waste and recycling services to the community<br>DP – 3.1.5.2 Continue the provision of kerbside recycling services to the community |

### Executive Summary

This report provides an update on kerbside waste services in the Shire.

### Report

In 2018 Council entered into a 10-year contract for the collection of general waste with JR Richards. This contract included the collection of general, recyclable and organic waste. The original contract included the option of modifying the weekly collection of general waste to fortnightly. At the May 2021 Council meeting it was resolved to continue weekly general waste kerbside collection until 1 July 2024. Prior to July 2024 Council was to undertake a waste stream audit and present findings and a recommendation of continued operation to Council.

Council undertook a waste stream audit in late 2023 ***(Attachment No. 2)*** and the results are shown below. Narromine has very "clean" recycling and green waste with minimal contamination. However, waste bins still contain a significant amount of food waste and a moderate quantity of recyclables.

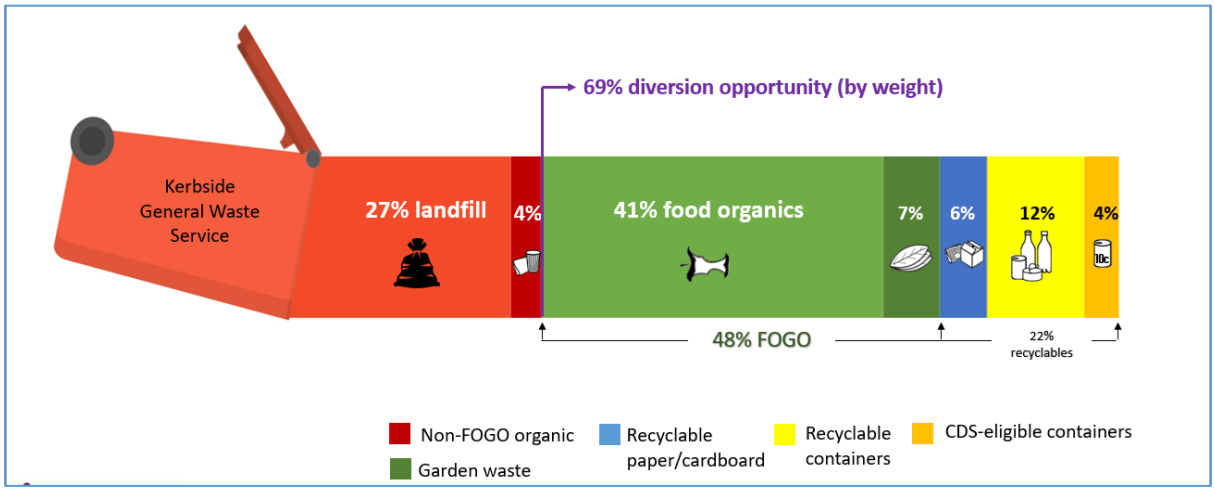


*Figure 1: Breakdown of material within general waste bins*

## 2. GENERAL WASTE KERBSIDE WASTE SERVICES (Cont'd)

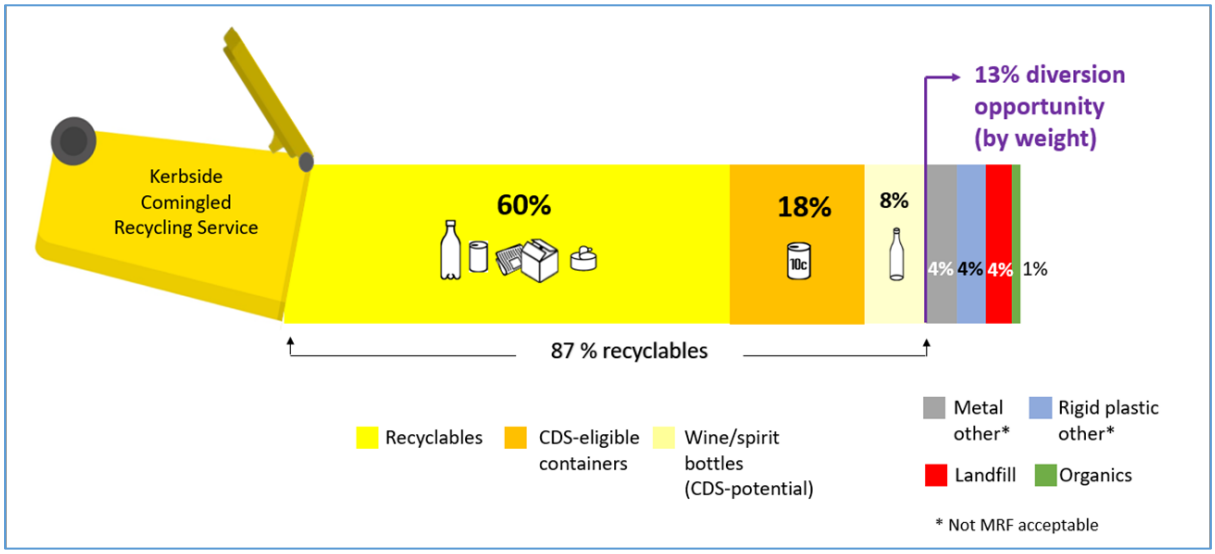


*Figure 2: Breakdown of material within recycling bins*


*Figure 3: Breakdown of material within green waste bins*

As can be seen from the images above, green waste remains a significant component of the material found in the general waste bins. Due to COVID and flooding over recent years, Council has been unable to educate the community on the benefits of reducing waste and increasing usage of green waste bins as much as initially intended.

Pleasingly, recycling and FOGO bins are exceptionally clean with minimal contamination. This is a good outcome for Council, as uncontaminated waste is much more cost-effective and easier to process, ultimately reducing expenses and staff workload.

Considering the high demand for general waste bins, the community's desire for weekly bin collection, and the contractor's agreement to continue with weekly rubbish collections, it is recommended to continue the current practice of weekly general waste kerbside collection.

## 2. GENERAL WASTE KERBSIDE WASTE SERVICES (Cont'd)

### Financial Implications

Continuing with weekly collection will result in similar ongoing maintenance costs as in previous years, increasing only with the standard consumer price index (CPI). Kerbside collection is paid by user contribution through the Waste Levy included on residential rate notices.

### Legal and Regulatory Compliance

Environment Planning and Assessment Act 1979
Waste Avoidance and Recourse Recovery Act 2001
WHS Regulation 2017

### Risk Management Issues

No health impacts due to the continuation of an existing service
Potential increase in illegal dumping if the collection service was decreased

### Internal/External Consultation

Correspondence with contractor to confirm ongoing cost of service.

Continued involvement with NetWaste, a group of local Council waste managers, to increase education and community involvement for waste sorting.

### Attachments

2. Kerbside Bin Audit Report – December 2023

### RECOMMENDATION

That Council continue with weekly kerbside collection of general waste bins until the end of the current waste contract in June 2028.

## 3. KERB, GUTTER AND FOOTPATH CONTRIBUTION POLICY

| | |
|---|---|
| **Author** | Director Infrastructure and Engineering Services |
| **Responsible Officer** | Director Infrastructure and Engineering Services |
| **Link to Strategic Plans** | CSP – 4.3.4 Ensure Council's property assets are monitored and well managed |

### Executive Summary

The Kerb, Gutter and Footpath Contribution Policy was written in 2019 and is due for review. This report details the changes to the updated policy.

## 3. KERB, GUTTER AND FOOTPATH CONTRIBUTION POLICY (Cont'd)

### Report

The Kerb, Gutter and Footpath Contribution Policy ***(Attachment No. 3)*** details Council's stance on providing funding for new kerb, guttering and footpaths that are not included in Council's capital works program.

The main changes in this revision include:

- Simplifying the document by removing unnecessary and outdated information.
- Update of "Related Documents" to current versions.
- Clarifying that if a landowner wishes to install kerb and guttering or footpaths not included in the current budget, they will be responsible for 100% of the construction costs.
- Specifying that during kerb and gutter works, each property is entitled to one 3-meter layback, with any additional or larger accesses at the property owner's expense.

These updates align with Council's current practices for footpaths, kerb, and guttering, and aim to clarify financial responsibilities between Council and landowners.

### *Financial Implications*

None

### *Legal and Regulatory Compliance*

Local Government Act 1993
Roads Act 1993

### *Risk Management Issues*

Nil

### *Internal/External Consultation*

Nil

### Attachments

3 Kerb, Gutter and Footpath Contribution Policy

### RECOMMENDATION

That the updated Kerb, Gutter and Footpath Contribution Policy be endorsed.

## 4. ROADS MANAGEMENT STRATEGY

| | |
|---|---|
| **Author** | Director Infrastructure and Engineering Services |
| **Responsible Officer** | Director Infrastructure and Engineering Services |
| **Link to Strategic Plans** | CSP – 3.6.1 Ensure local and regional road network best meets the needs of road users and industry<br>CSP 3.6.3 - Ensure local and regional roads are safe, well-constructed and maintained |

### Executive Summary

The Council's Road Management Strategy is presented for Council's endorsement.

### Report

Council's Road Management Strategy outlines the plans and priorities for managing the sealed and unsealed road network across the Shire. It includes guidelines for maintenance, upgrades, safety, and other issues related to road infrastructure. The intention of the strategy is to help guide decision-making and resource allocation for road management activities.

Council's Road Management Strategy was originally endorsed by Council in 2013. In 2022 Council conducted a comprehensive review of the document updating the design, planning, response times, hierarchy definitions and road hierarchies. The document was presented to the July 2022 Council meeting where Council resolved to put the document on Public Exhibition prior to final endorsement.

In late 2022, the draft Strategy was placed on public exhibition, additionally Council released a customer survey to all residents in the Shire. The survey garnered numerous responses, with a majority requesting that Council prioritize repairs to roads affected by floods, crucial information around road usage by the agricultural industry was also captured in the survey. The 90 survey responses are provided to Council under separate cover.

Comments regarding the hierarchy were reviewed, and minor adjustments have been implemented accordingly.

The strategy was further updated in early 2024 with the following changes:

- Removal of the road design specifications, this will form its own document and become the cornerstone of Council's design requirements for road construction and design.
- Streamlining of the document to remove repetition, some information has been transferred into the Transport Asset Management Plan.
- Updated legislation and references throughout document as needed.
- Update to the Target Response Times to provide clarity to all users around expected response priorities from Council. The Defect Example section was also updated to provide visual clarity of each defect.

## 4. ROADS MANAGEMENT STRATEGY (Cont'd)

- Update of the Road Hierarchy to become an Appendix, this spreadsheet sits outside of the Strategy and can be updated as new traffic data becomes available. Additionally, the Hierarchy was streamlined for improved visibility.
- In the recent revision of the document updated traffic counts were compared to the Hierarchy Definitions and hierarchies were updated accordingly, there were only three roads that were updated, all as a result of increased usage in recent years, these roads are shown in Table 1.

*Table 1: Updated Road Hierarchies within the 2024 Road Management Strategy Revision*

| Road Name | Road ID | Hierarchy 2022 | Hierarchy 2024 |
|---|---|---|---|
| Gainsborough Road | 142 | 4 | 1 |
| McNamara's Lane | 4 | 3 | 2 |
| Old Backwater Road | 106 | 3 | 2 |

Whilst the document appears significantly changed, the intent and content remains consistent with the document that was presented in 2022.

### Financial Implications

Improved rural road quality, with increased useful life within Council's allocated budget. The Strategy will continue to provide background guidance to producing future budgets and maintenance programs.

### Legal and Regulatory Compliance

Local Government Act 1993
Roads Act 1993

### Risk Management Issues

Provides the framework for the planning, design and management of Council's Road network.

### Internal/External Consultation

Internal and external consultations have occurred.

### Attachments

4 Road Management Strategy (2024)

### RECOMMENDATION

That Council endorses the Road Management Strategy as presented.

## 5. TEMPORARY CLOSURE OF ROADS POLICY

| | |
|---|---|
| **Author** | Director Infrastructure and Engineering Services |
| **Responsible Officer** | Director Infrastructure and Engineering Services |
| **Link to Strategic Plans** | CSP – 4.3.1 Operate and manage Council in a financially sustainable manner that meets all statutory and regulatory compliance and Council policies. |

### Executive Summary

This report is presented to Council to consider revoking Council's Temporary Closure of Roads Policy.

### Report

The Policy was initially considered and adopted by Council on 20 November 2012.

On further review and in view of the document providing a guideline to staff, it is now recommended the policy be made obsolete and the relevant information be incorporated into an internal operating procedure.

#### *Financial Implications*

Nil

#### *Legal and Regulatory Compliance*

Council as the road authority may regulate traffic on all public roads for which it is the road authority under the Roads Act 1993:

- Section 115 Roads authority may regulate traffic in connection with road work etc.
- Section 122 Temporary Regulation of Traffic

#### *Risk Management Issues*

The internal operating procedure, based on best practice guidelines, will be followed in the event of rain where the road becomes impassable or damaged, or bulldust conditions because of extreme weather.

#### *Internal/External Consultation*

Executive Leadership Team

## 5. TEMPORARY CLOSURE OF ROADS POLICY (Cont'd)

**Attachments**

- Current Temporary Closure of Roads Policy ***(Attachment No. 5)***

**RECOMMENDATION**

That the Temporary Closure of Roads Policy be made obsolete.

Melanie Slimming
**Director Infrastructure and Engineering Services**

# Works Report

## Water and Sewer

Water consumption decreased in April as temperatures dropped with water reservoirs operating within normal ranges. The reduced water demand has enabled the team to conduct some maintenance work including telemetry upgrades and an emergency bore repair.

*Figure 1: Narromine Bore 9 was lifted in April. Significant Iron is present on the stainless steel column and pump*

The water and sewer team completed preliminary works at the Dandaloo Crossing in preparation for the rail works occurring throughout May. The works include the underbore of the rail line to install a new water main ensuring connectivity and water back up supply to the northern side of town.

## Works Report (Cont'd)

*Figure 2: water main preparation works on Dandaloo Street*

### Facilities and Major Projects

In late April an extension of a disabled access around the perimeter of the grandstand was installed at Cale Oval. The path improves access to all areas of the complex.


*Figure 3: New footpath around the Cale Oval Grandstand*

## Works Report (Cont'd)

Also, at Cale Oval a new window was installed in the Media Room to allow visibility from the canteen through into the oval. The new space looks very professional and inviting!

*Figure 4: A window was installed at the back of the media room at Cale Oval*

The work at the wetlands has picked up pace, with the contractor finalising the second car park and engaging a fencing contractor. Council staff have designed new signage for the park, which will be purchased and installed after consultation with Rotary. The new signage will replace existing signs and be installed in the new section of the wetlands.

The upgrades at Narromine's Depot facilities include modifications to security and toilets, with the amenities upgrade set to begin in late April and continue into early June. This will refresh the area, which has not been upgraded in many years. The security upgrade, part of a multi-stage plan, will also include automated gates to be installed in 2025. Increasing site security is crucial for staff safety and protecting the plant and fleet.

At the Narromine Sporting Complex, projects in the pipeline include updating the security system moving to online payments and gym access via an app, eliminating the need for in-person payments at the Council office. The air-conditioning system will also be replaced in late May, improving the heating and cooling within the complex. Roof repair work is also being planned, with quotations currently underway.

Construction works at the Council's residential subdivision in Trangie, Belgrove Street, will commence in May, beginning with sewer installation. An innovative plastic manhole solution is being trialed, as they are easier to install compared to concrete manholes and have a longer lifespan. The area is fenced off and preliminary site clearing has occurred.

Delivery of the new Dundas Park toilets has been delayed due to issues with the supplier. Council's contractor will install the toilets once they have arrived.

# Works Report (Cont'd)

### Waste Management

In late April Council staff were trained in the use of the new waste management software system "Mandalay". This software will be rolled out at the beginning of May at all three waste depots. Customers will not notice a difference; however, the setup is much more standardised than the existing software and ensures correct charging and reporting is occurring. The software will enable the Council to accurately track waste types and volumes accepted at our three waste sites, enabling better long-term planning and environmental reporting. The training garnered positive responses from the team and is used successfully at Dubbo Council. Staff are looking forward to the roll out and subsequent improvements of the new software.

Click and collect is continuing in Trangie with positive results. The trial is seeing constant demand with all four skip bins utilised each week.

### Parks and Gardens

In April the Parks and Gardens Team were focusing on beautification of the town, including preparation for ANZAC Day activities.

The specialist turf consultant visited Trangie and undertook testing on Burns Oval. No pests or bugs were found and the consultant concluded that the oval was in good health and the team were maintaining it well. Soil samples were taken to determine whether any specific nutrients or minerals were depleted, results are expected to be back in mid-May. The consultant also performed maintenance activities on Cale Oval to assist with the bugs and improve the soil and grass. Inspections occur frequently on the ovals and staff are reporting positive improvement. The goal posts at Cale Oval were recently painted, which significantly brightens the area.

*Figure 5: Cale Oval is looking inviting!*

## Works Report (Cont'd)

The Narromine Cemetery Kurrajong trees are planned for maintenance in May. An elevated work platform has been ordered and staff will be pruning and shaping the trees.

Council has reallocated an existing position to create a new position in the Parks and Gardens Team. This position will have a focus on ovals and irrigation to ensure they are maintained to a high standard, particularly during the playing season. The new role will also support the team in keeping the town looking immaculate with an ever-growing area.

**Roads**

*Gainsborough road / Tullamore Road line marking next Monday (29)*
Council is currently working on a number of roads projects. The intersection of Gainsborough Road and Tullamore was sealed in April and line marking is scheduled in early May. The team is finalising Gainsborough Road and it is expected the road will be sealed and open to traffic by early July.

Council continues to work on Tullamore Road, approximately 15 km south of Narromine Township. The first two kilometers are widened with the subbase compacted.

Road resealing is underway across the shire with nearly all regional roads complete, including Willydah Road which was completed in late April. Tomingley Road and urban road resealing will occur in May and June.

Road maintenance continues across the shire with Buddah Lake, Fairview and Dullah Dullah roads completed at the end of April.

*Figure 6: Buddah Lake Road was graded in late April*

## Works Report (Cont'd)

The installation of Kerb and guttering is underway on A'Beckett street with a contractor starting in late April. This work connects the existing kurb and gutter into the kerb and gutter along Minor Street, improving the drainage in the area. The works are expected to take three weeks to complete. Once completed the contractor will start the installation of kerb and gutter on Fourth Avenue.

*Figure 7: Installation of kerb and gutter has started on A'Beckett Street.*

### Pedestrian Access Mobility Plan (PAMP)

Council's Pedestrian Access Plan has been finalised, a review session for Councillors will occur in late May, after which the plan will be placed on public exhibition. The report will be included in the June Council Business Paper.

Narromine
SHIRE COUNCIL


justWASTE CONSULTING

NetWaste

# KERBSIDE BIN AUDIT REPORT

## Waste, Recycling and FOGO

## December 2023

**DOCUMENT RECORD**

| Version | Issued To | Date | Author | Approved |
|---|---|---|---|---|
| 1 | Justin Jones | 29/2/24 | Gwen Harper | |
| | Hamish Campbell | 12/3/24 | | Justin Jones |
| | | | | |

***THIS ASSESSMENT AND REPORT WAS CONDUCTED BY:***

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# Contents

## LIST OF TABLES



## LIST OF FIGURES

## 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 Council 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 type of cross-contamination between bins.

**Narromine Shire's Waste Audit report** was conducted between the 11th and 13th of December and assessed 486 bins – 111 general waste bins, 110 comingled recycling bins and 265 FOGO bins. The population of Narromine Shire Council is 6,360[1] residents.

**Available Waste Services:** Council provides residents with a weekly-collected 240-litre general waste bin, a weekly-collected 240-litre FOGO and a fortnightly-collected 240-litre comingled recycling. FOGO was introduced in 2018 as part of a three-Council roll-out and is processed into compost in nearby Dubbo 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 kerbside collection services, Council run two Waste Management facilities and one Waste Transfer Station where residents can drop off excluded and problematic household wastes, with property owners issued one free drop-off Waste Voucher per year. Council also offers free compostable caddy liners on request. A container deposit reverse vending machine was installed at the Narromine Waste Management Facility on 27 June 2023.

This report is broken down as follows:

- Executive summary, key results and recommendations
- 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

## 2. EXECUTIVE SUMMARY

This is the third waste audit JustWaste Consulting have completed for Narromine Shire Council - this level of data allows for a deep understanding of Council's waste stream composition and changes over time and comparative analyses across audits have been included where relevant.

The total audited weight from 486 bins was 6,738 kg, in volume terms this equated to approximately sixty cubic metres. The service split was 111 general waste bins, 110 recycling bins and 265 FOGO bins.

The contamination rates were high for the general waste stream – there was a 70% weight diversion opportunity due to misplaced organics and recyclables. Of interest also is the average weekly household general waste bin weight has increased by over one-third when compared to 2019 results.

In the recycling stream the contamination rate is an acceptable 13%, however a lot of comingled recyclables are still being misplaced in the general waste bin.

The FOGO stream had a very low contamination rate (1%) although residents are still failing to utilise it correctly for food organics disposal – 'food organics' in FOGO bins equated to 3% of the total FOGO audit weight, whereas they equated to 41% of general waste bin audit weight. In net weight terms the FOGO audit had 149 kg of food organics while the general waste bin had 665 kg of food organics.

Narromine Council should investigate household behaviour change intervention campaigns aimed at helping residents reduce their food waste as the auditors identified a lot of avoidable food waste in original packaging. This approach should be coupled with 'how/why' reminders to residents of the multiple benefits of correct food waste placement in FOGO bins. as this has dropped significantly since FOGO launch. A carrot/stick approach is recommended with a long notice period on Council's intention to run a general waste bin inspection (bin tagging project). More landfill diversion would also be achieved if residents received refresher/reminder education on what belongs in the kerbside recycling bin to avoid misplacement in general waste and 'wish-cycling' of non-recyclable plastics and metals.

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
- The **RESULTS** section of this reports provides full analyses to two decimal places and associated commentary.

## 3. KEY RESULTS

- **GENERAL WASTE –70% diversion opportunity, weekly service**
    - Contamination consisted primarily of organics (48%) followed by recyclables (22%).
    - Trend: Organic material in the general waste stream has slowly decreased from 59% in 2018 to 53% in 2019 to 48% in 2023 (by weight).
    - If all organic material was diverted from the 111 general waste bins reviewed, it would have saved three quarters of a tonne of landfill fees (775 kg) and 3.3 cubic metres of space.
    - After 'food organics' (41% of all general waste weight), 'garden organics' was the heaviest single material type at 7%; followed by 'cardboard' (3%) and 'nappies/incontinence pads' (3%).
    - Trend: Recyclables in the general waste stream are slowly increasing - 2018 they represented 20% of the general waste bin by weight, 2019 it was 21% and in 2023, 22%.
    - Based on this audit, misplaced recyclables have a significant impact on available space in the general waste bin – responsible for 35% of total volume.
    - While cardboard was the single-heaviest misplaced recyclable material, when reviewing the sub-categories 'recyclable plastics' were most common and were responsible for 7% of the total sample weight.
    - The weight of the average general waste bin has increased significantly. While no single skew weight was detected, the first of the three audits did reflect higher weights across the board which pulled the average weight result upwards. When these results are removed however, the average general waste bin weight was still a notable increase from previous audits.

**COMINGLED RECYCLING – 13% contamination, fortnightly service**

- Trend: the contamination rate in the recycling bin is decreasing, in 2018 was 18%, in 2019 was 17% and in 2023, 13% (by weight). The average bin weight is also decreasing.
- In volume terms, the average comingled recycling bin contained 148 litres of material, note however that 'paper/cardboard' was the predominant material, consuming 65% of available bin air space.

- The three heaviest contaminants were 'metal other', 'non-recyclable rigid plastic' and 'plastic film/soft plastic', together they equated to 9% of the 13% contamination rate. It is worth noting that the first two materials can be misplaced in recycling bins due to confusion around their MRF acceptability – auditors particularly noted nursery plant pots.
- In volume terms, the top three contaminating items were (in descending order) 'plastic film', 'non-recyclable rigid plastic' and 'liquid paperboard (foil)', together they equated to 6% of the total 8% volume contamination rate.
- 18% of the comingled recyclables sample by weight were drink containers eligible for the container refund scheme.
- Placement - Out all material classifiable as 'recyclables' from all three streams (486 bins, 1.1 tonnes), only 65% of it was found in comingled recycling bins, the rest was found in the general waste stream (31%) and FOGO (4%).
- No organic material was found in recycling bins; and surprisingly no bagged recyclables and only one bag of general waste – an excellent result when compared to most metro or regional recycling bin audits.

**FOGO – 1% contamination, weekly service**

- The vast majority of material audited in this stream was garden waste – 95% by weight.
- FOGO was launched in 2018, in the 2019 FOGO audit food waste accounted for 9% of the sample by weight. In this 2023 audit it had dropped to 3%.
- 'Foods packaged' was responsible for 2% of this 3%. Auditors noted over 100 kg of avoidable food waste (expired or past use by dates) being discarded still in original packaging.
- Bin weight – In 2019 the average bin weighed 10.92 kg, in 2023, 16.23 kg[2].
- By weight, only 0.01% of previously allowed organic material (tissues/paper towel, pizza boxes, compostable packaging etc) was detected in the 2023 audit.
- Contamination was predominantly cardboard.
- No Council-approved compostable caddy bags in the FOGO stream were detected.

[2] FOGO bin weight can be significantly influenced by garden waste seasonality and precipitation immediately prior to auditing.

## 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 (e.g. 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.

**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.

Table 1 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. However, volume has been noted in the report commentary where significant, as volume provides additional information about the available bin airspace and 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, volumetrically assessed and recorded. The remaining material is classified as 'garden organics', with the weight derived by subtracting the total food organics and contaminates 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%. For example extremely small volumes of light material e.g. the occasional pizza box 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.

*Table 1: 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 |
| | | Plastic #6 |
| | | Plastic #7 |
| | Metals | Aluminium can / foil |
| | | Aluminium cans (CDS) |
| | | Steel cans |
| | | Aerosol cans |
| Organics | Food Organics | Food scraps - loose |
| | | Foods packaged |
| | | Food in Compostable Caddy Bags |
| | Garden Organics | Garden waste |
| | Other Organic not FOGO accepted | Pizza boxes - soiled |
| | | Compostable Packaging |
| | | Tissues / paper towel |
| | | Wood / timber - untreated |
| | | Pet waste/litter/bedding compostable |
| General Waste | Food | Food in plastic / plastic-blend bags |
| | Rubber | Tyres and Tubes |
| | | Rubber Other |
| | Aggregates & soils | Soils |
| | | Brick |
| | | Concrete |
| | | Aggregates Other |
| | Textiles | Carpet |
| | | Clothing |
| | | Textiles Other |
| | HHW | Paint |
| | | Fluorescent Tubes |
| | | Dry cell batteries |
| | | Car batteries |
| | | Medical Waste (inc sharps) |
| | | Pharmaceuticals |
| | | Nappies / incontinence pads |
| | | Pet waste/litter/bedding not compostable |
| | | HHW Other |
| | | E-waste |
| | Other | Metal other |
| | | Glass Other (pyrex, windscreen, windows) |
| | | Ceramics |
| | | Liquid Paperboard (foil) |
| | | Coffee cups non recyclable |
| | | Rigid plastic not recyclable |
| | | Polystyrene |
| | | Plastic Film |
| | | Ash /vacuum cleaner dust |
| | | Timber - treated |
| | | Building materials other |
| | | Bagged recyclables (recycling steam) |
| | | Bagged waste (recycling stream) |

### *4.1.2. Audit Schedule*

*Table 2: Audit Schedule of load types and bin numbers*

| Area | Day / date | Stream | General Waste No. bins | Recycling No. bins | FOGO No. bins | Total Bins audited |
|---|---|---|---|---|---|---|
| NARROMINE SHIRE | Mon 11/12/2023 | Waste | 37 | | | 147 |
| | | Recycling | | 55 | | |
| | | FOGO | | | 55 | |
| | Wed 13/12/2023 | Waste | 37 | | | 339 |
| | | | 37 | | | |
| | | Recycling | | 55 | | |
| | | FOGO | | | 210 | |
| BIN TOTALS | | | 111 | 110 | 265 | 486 |

### *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:

- COVID safe workplace, with staff trained to follow the COVIDSafe Plan as agreed with Council.
- Appropriate Personal Protective Equipment (PPE) provided, including gloves, protective overalls, masks and eyewear. All staff wear ASA safety standard workplace boots.
- 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 **6,737.86 kg** of material was audited from seven audits over the three waste streams (486 bins), with a volume equivalent of **60 cubic metres** (60,725 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 597.66 kg), 82.17% of it was correctly placed in general waste bins.

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

| Narromine Audit 2023 | General Waste Bin (weekly) | Comingled Recycling (fortnightly) | FOGO Bin (weekly) | Totals for category | % material in correct bin vs stream totals ← |
|---|---|---|---|---|---|
| | Weight (kg) | Weight (kg) | Weight (kg) | Weight (kg) | Weight (%) |
| General Waste | 491.12 | 96.17 | 10.37 | 597.66 | 82.17% |
| Comingled Recycling | 347.87 | 718.20 | 39.16 | 1,105.23 | 64.98% |
| FOGO Organics | 775.24 | 9.26 | 4,250.47 | 5,034.97 | 84.42% |
| **Total Waste** | **1,614.23** | **823.63** | **4,300.00** | **6,737.86** | |

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 **69.58%,** of which just under half (48.03%) was organic material and 21.55% was comingled recyclables.
- The comingled recycling bin had a **12.80%** contamination rate by weight, of which 11.68% was general waste and 1.12% organic material.
- The FOGO bin had a total contamination rate of **1.15%;** of which 0.24% was general waste and 0.91% was misplaced comingled recyclables.

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

| | General Waste Bin | Comingl. Recycling Bin | FOGO Bin |
|---|---|---|---|
| General Waste / General Waste Contamination % | 30.42% | 12.80% | 0.24% |
| Recyclables / Recyclables Contamination (%) | 21.55% | 87.20% | 0.91% |
| Organics / Organics Contamination (%) | 48.03% | 0.00% | 98.85% |
| Overall Contamination Rate for each bin | 69.58% | 12.80% | 1.15% |

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.

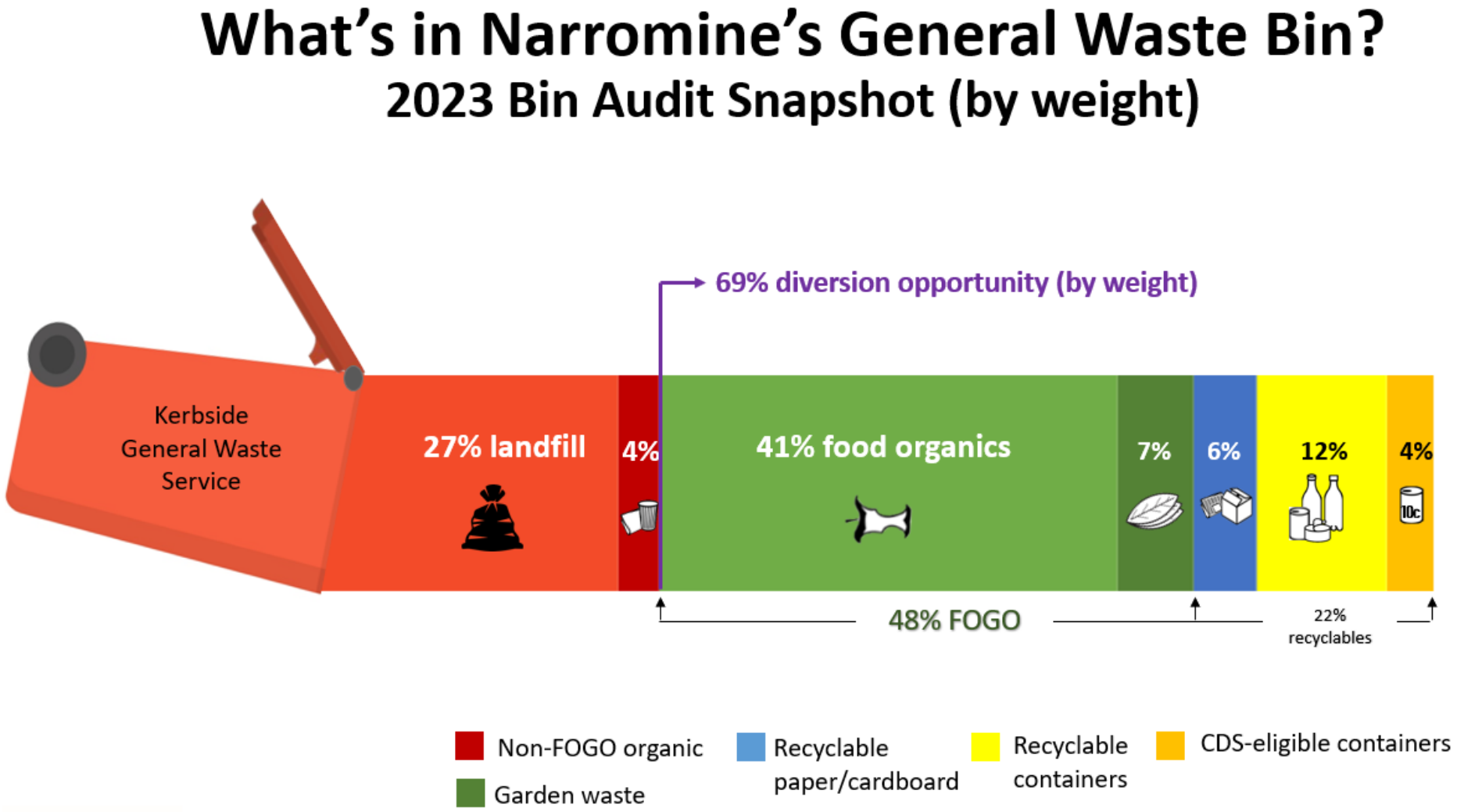



*Figure 1: General Waste Bin Audit 2023 snapshot*

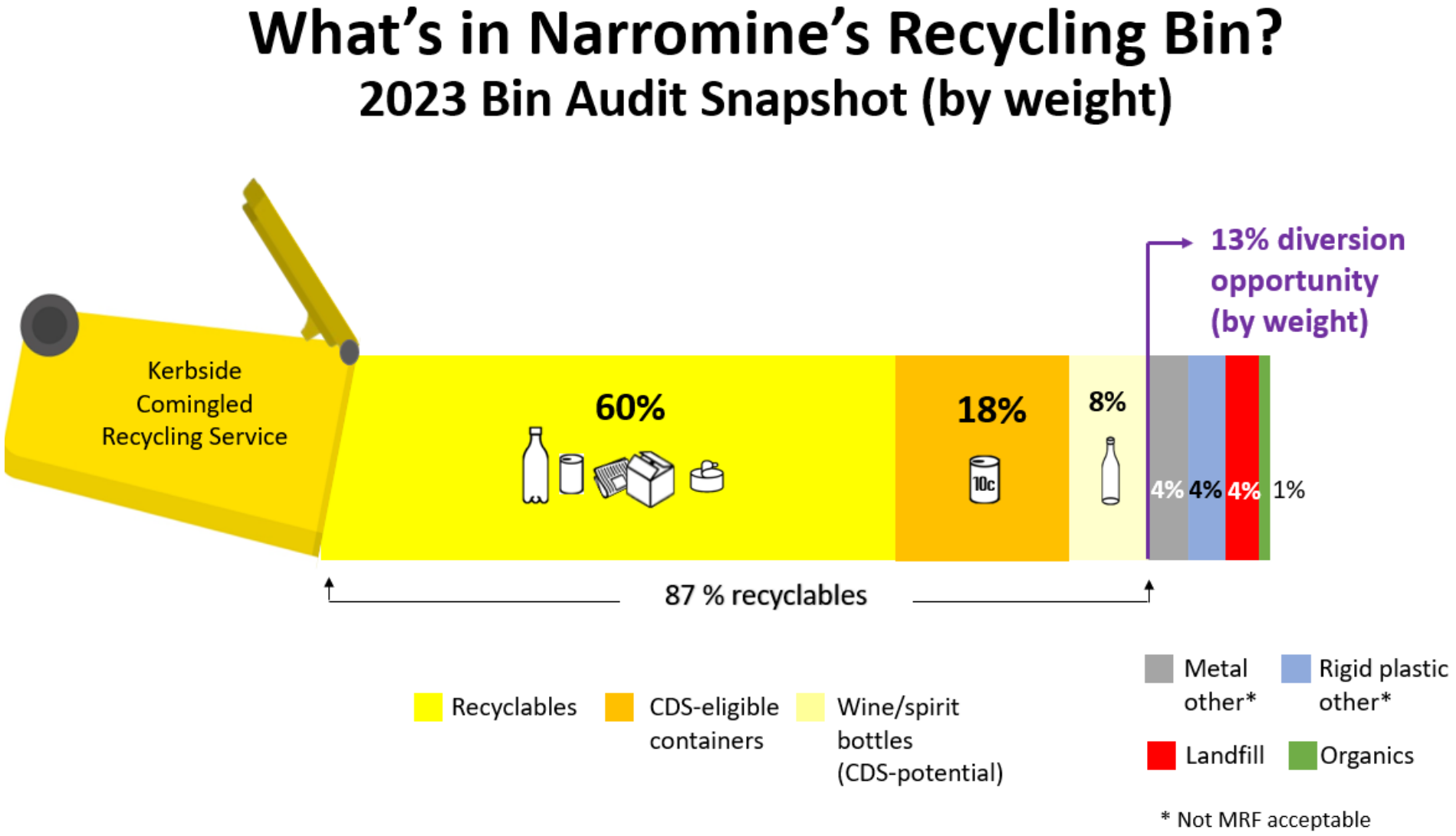



*Figure 2 Recycling Bin Audit 2023 snapshot*

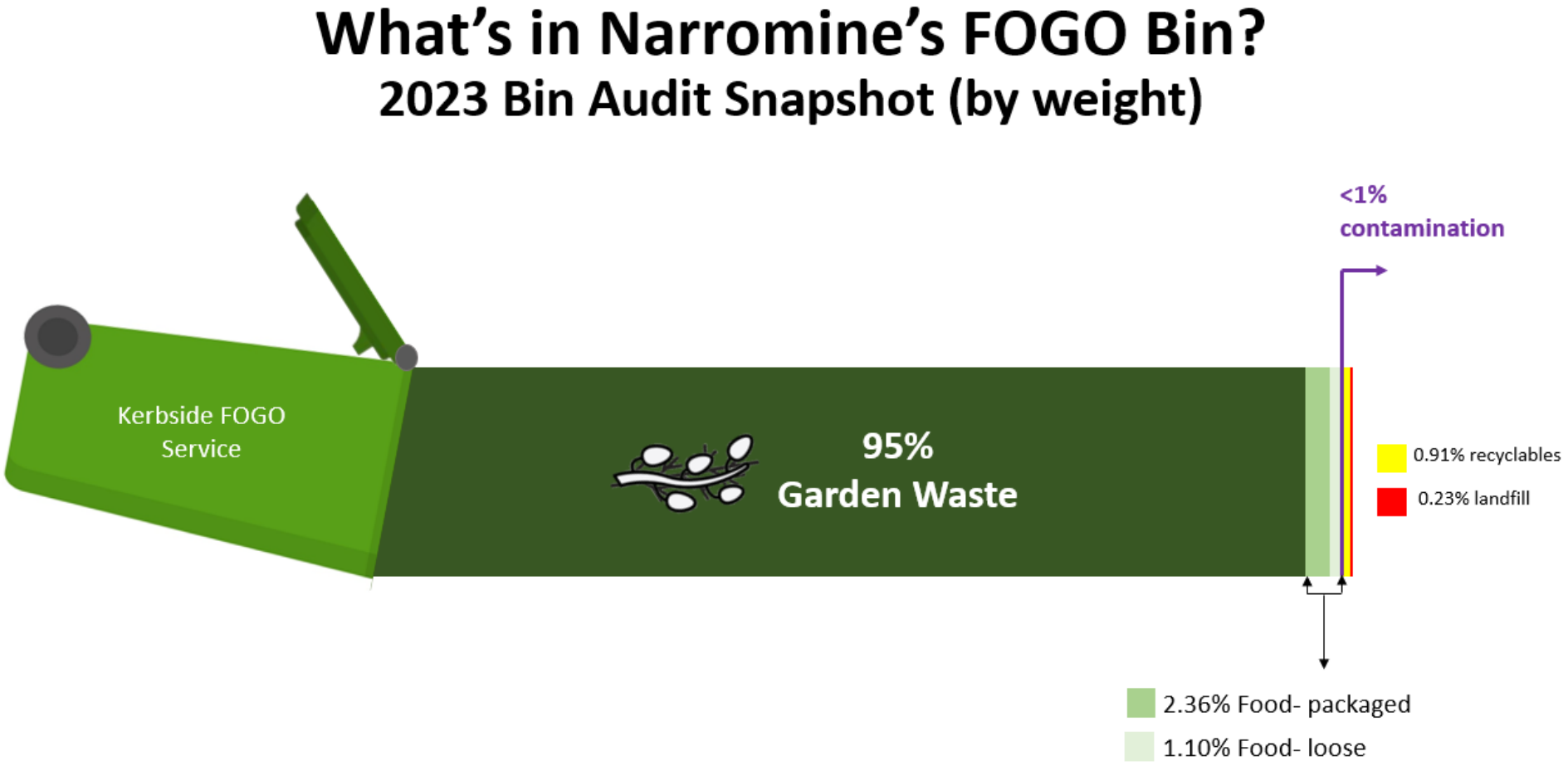



*Figure 3: FOGO Bin Audit 2023 snapshot*

## 5.2. General Waste Stream Analysis

### *5.2.1. Overall composition*

The auditors weighed **1,614.13 kg** of material from 111 general waste bins which equated to just under 14.5 cubic metres (14,469 litres) of material.

When categorising the material by waste stream, just under half (48.03%) was organic material that belonged in the kerbside FOGO service, 21.55% by weight was misplaced recyclables, and just under a third (30.42%) was classifiable as general waste (Figure 4).

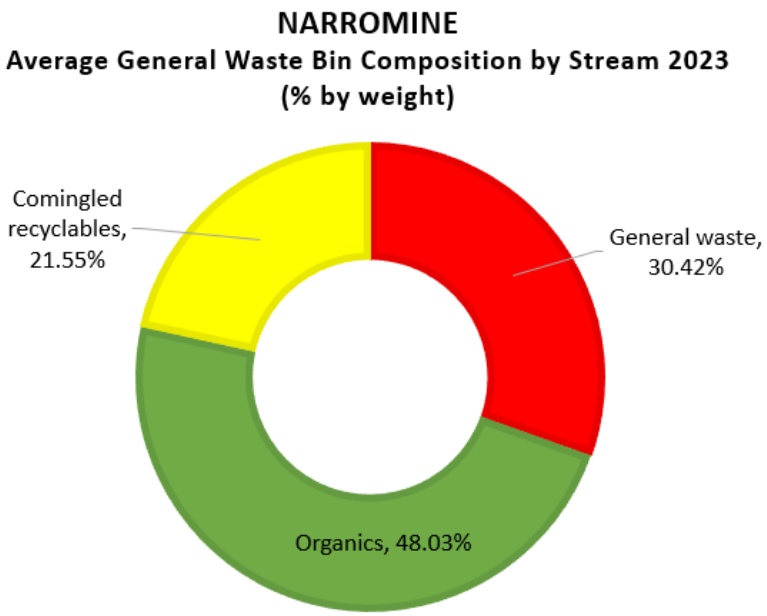



*Figure 4: Overall composition of the general waste bin*

The average general waste bin weight in 2023 was **14.54 kg.** This is an increase of *35.38%* in net weight terms from the 2019 average general waste bin result of 10.74 kg (110 bins) and a 71.06% net weight increase from the 2018 audit result of 8.5 kg (110 bins).

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

- Food waste: mainly due to the weight of 'food scraps loose' which totalled 36.41% of the total sample by weight;
- General waste 'other' category mainly due to 'plastic film', 'non-recyclable rigid plastic' and 'e-waste';
- 'Recyclable plastics': mainly due to 'HDPE plastic #2' and 'PET plastic #1'.

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

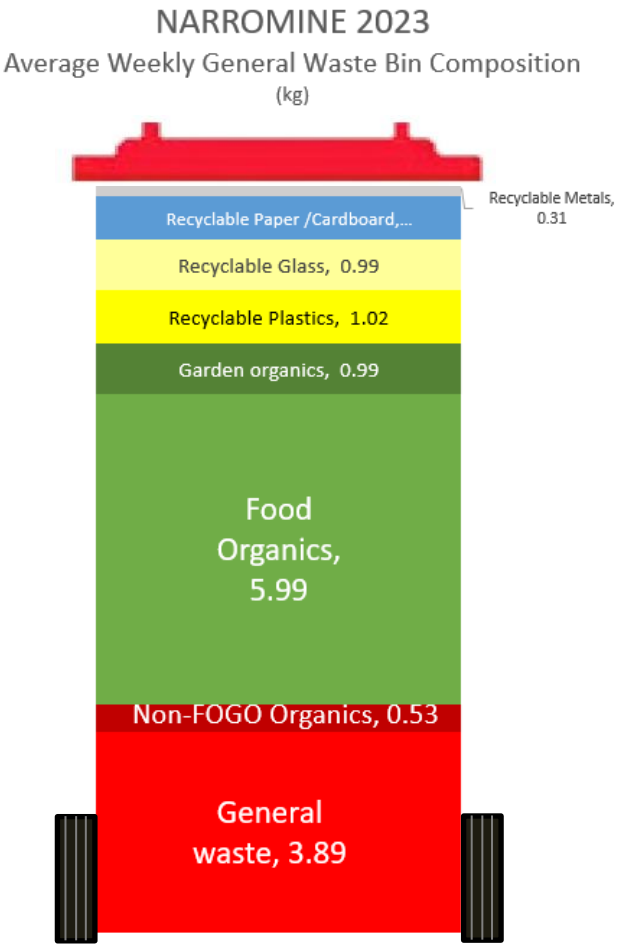



*Figure 5: Average composition of the General Waste bin by sub-category (total weight 14.54 kg)*

### *5.2.2. Average Household General Waste bin by sample*

Figure 6 overleaf reports the major sub-categories for each of the three waste samples – Monday, Wednesday 1 and Wednesday2, each sample reviewed 37 bins. Monday's sample was notably higher in most categories, in particular 'food organics', 'recyclable paper/cardboard' and 'recyclable glass'. Extraordinarily, Monday's sample had approximately 50% more 'food scraps – loose' (264.54 kg) than the next highest recorded weight for 'food scraps' (Wed2, 174.48 kg).

OTHER DATA HIGHLIGHTS:

- All three samples had 'textiles' totalling 94.20 kg, almost half of which were classified as 'clothing'.
- The first Wednesday sample had the highest recorded weight for 'nappies/incontinence pads'.
- Monday's sample had the least amount of misplaced 'garden waste'.
-

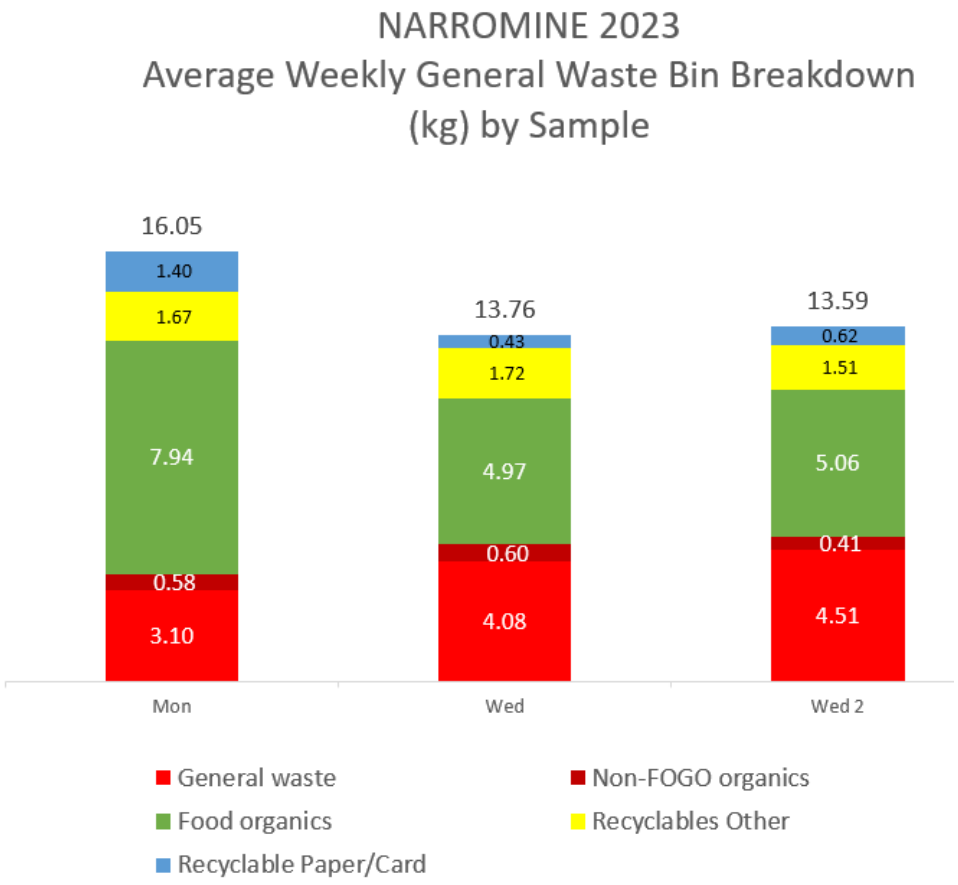



*Figure 6: Compositional difference in the general waste bin between the three samples*

The full dataset for each of the three samples are in the appendices.

COMMENT on MONDAY's DATA IMPACT:

While Monday's high results for 'food organics' and recyclable 'paper/cardboard' notably increase the 2023 average bin weight, if these results are removed and the average calculated only using

the two Wednesday samples (last column, Figure 7), there is still a considerable increase in net weights for organics and general waste when compared to the last two audits.

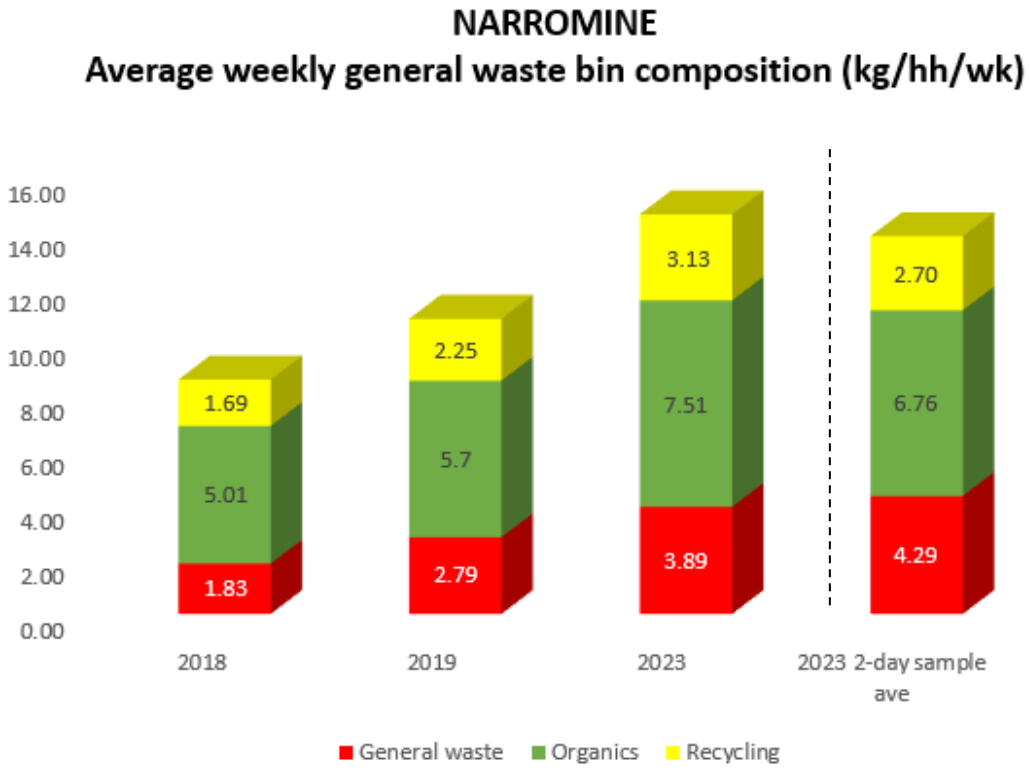



*Figure 7: Average general waste bin weight 2018-2023 plus 2023 2-day sample average*

### *5.2.1. Trend Analysis - Average Household General Waste Stream*

The following chart (Figure 8) reflects net weights per waste stream for the average general waste bin over the last three audits. **Please note** that in the 2023 audit all 'other organic' materials[3] 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 8 still clearly shows that the average net weight of disposed material has increased across all three

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

streams. 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.

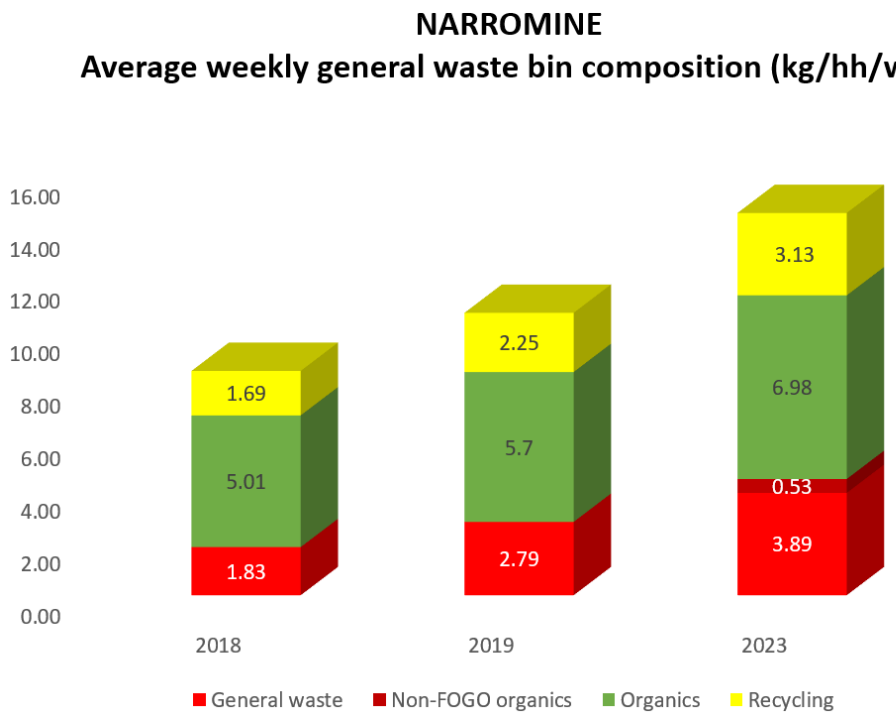



*Figure 8: Average household general waste bin weight and composition, 2018, 2019, 2023*

### *5.2.2. Breakdown of organic material in the general waste stream*

A total of **775.24 kg** of FOGO-acceptable material was disposed of in general waste bins, accounting for 48.03% of all waste disposed to these bins (by weight). The average net weight per general waste bin was 6.98 kg.

Figure 9 reports that 'food scraps – loose' was by far the most dominant FOGO-acceptable organic, representing three quarters (75.82%) of all misplaced organics.

It is worth noting that in Narromine's audit a further 3.64% of the total sample was non-FOGO organics, with the predominant material in this category being 'tissues/paper towel'.

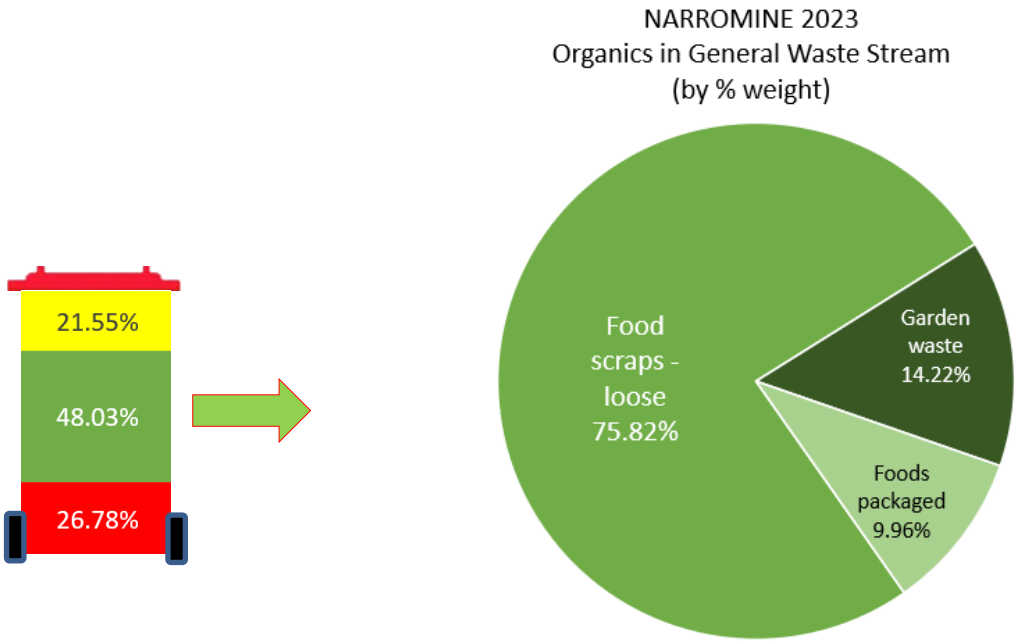



*Figure 9: Organic contamination in the general waste stream*

### *5.2.3. Breakdown of recyclable material in the general waste stream*

A total of 347.87 kg of comingled recyclables were audited in Narromine's general waste bin audit, accounting for 21.55% of all material discarded in this stream by weight, or 3.13 kg per average general waste bin.

**WEIGHT:** Recyclable 'plastics' were the most impactful recyclable sub-category, this despite their lightweight nature. Plastic material has come to dominate the recyclables contamination when compared to previous audits – in both 2019 and 2018 it was 'paper/cardboard' by weight.

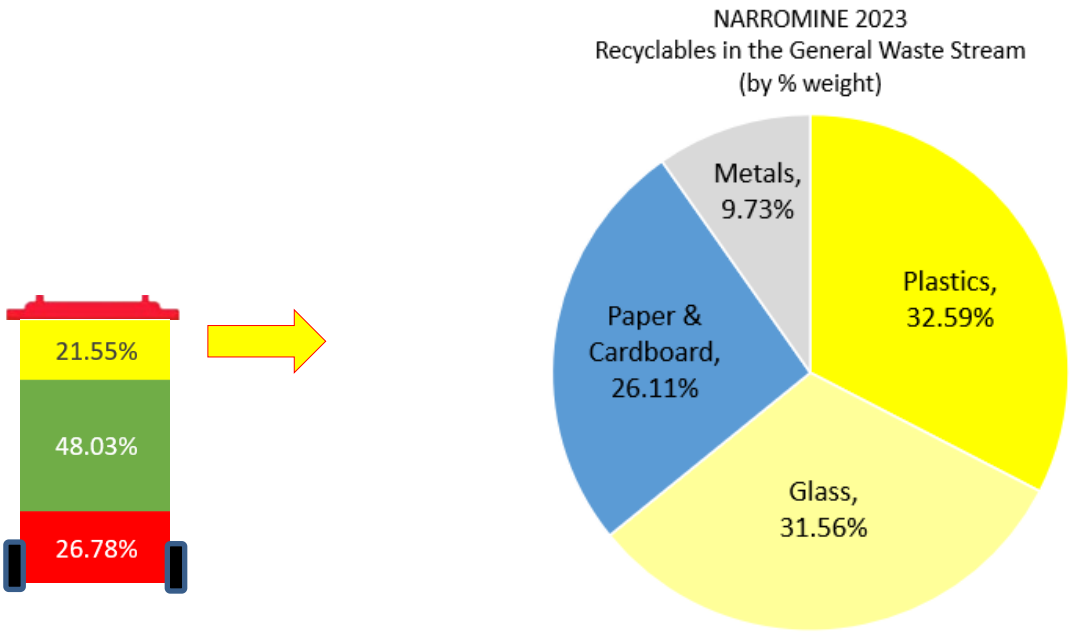



*Figure 10: Recyclables contamination in the general waste stream*

**VOLUME:** When comparing which recyclable sub-category consumed the most bin airspace, 'paper/ cardboard' remains the most impactful (Figure 11). 'Cardboard' as a material was responsible for 6.78% of the total sample by volume and was the third-most space consuming material of all sixty-two material types tracked, only behind incorrectly placed 'food scraps-loose' (16.54%) and correctly placed 'plastic film' (12.47%).

**MATERIAL:** While 'cardboard' was also the heaviest single material type, 'glass bottles-CDS eligible' was the second-heaviest, followed by 'glass bottles and jars' and 'paper/newsprint/magazines' (Figure 12). If all CDS-eligible containers were removed from the general waste stream, the average general waste bin would drop from 14.54 kg to 13.94 kg; if

'wine/spirit' bottles were included in the CDS scheme, it would drop to 13.65 kg. CDS material is examined in more detail in Section 5.5.

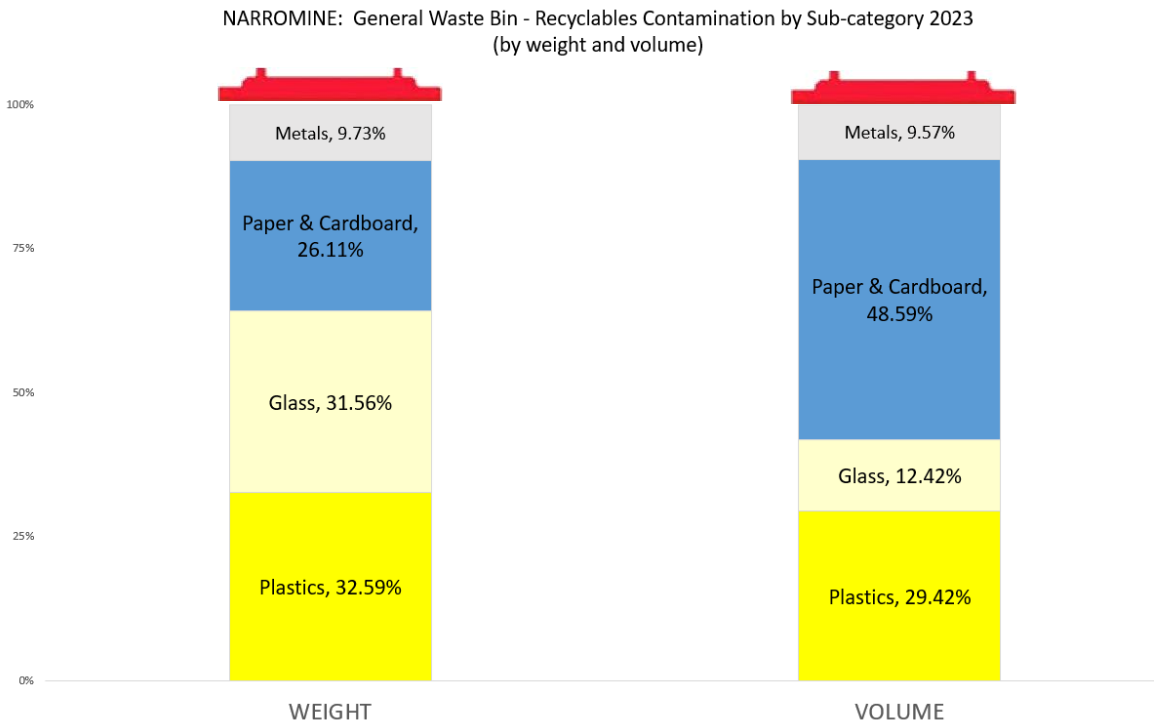



*Figure 11: Recyclables in the general waste stream -weight and volume sub-category comparison*

Figure 12 reports all recyclable materials in descending weight order for their percentage contribution to all recyclables audited in this stream:

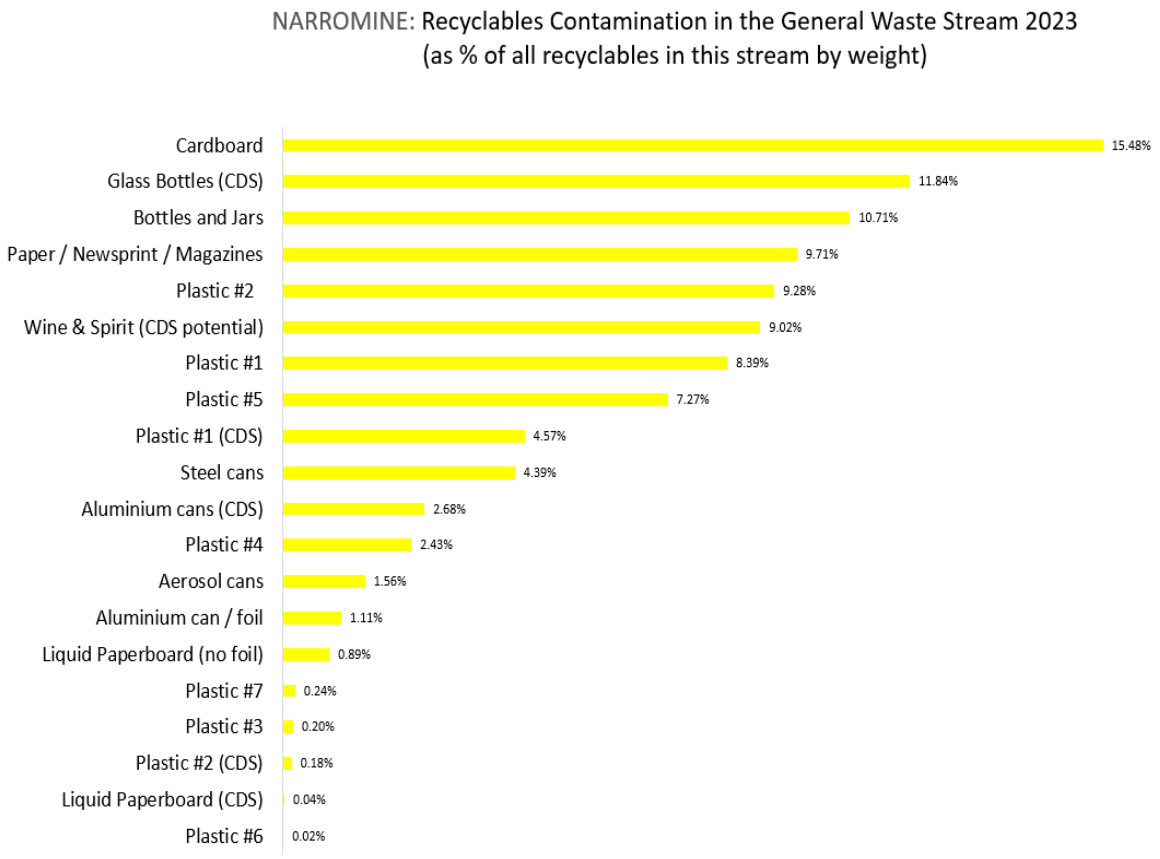



*Figure 12: Recyclables in the general waste stream material breakdown*

### *5.2.4. Breakdown of general waste material*

The auditors assessed 491.12 kg of correctly placed material in this stream, which was **30.42%** of the total sample by weight. These materials were grouped into the following sub-categories (in descending weight order):

- Other General Waste (12 material types) – 13.56% of the *total sample* by weight
- Textiles 5.84%
- Household hazardous waste 3.70% (refer Section 5.6 for further HHW analysis)
- Non-FOGO organics 3.64%
- Aggregates and soils 3.09%
- Rubber 0.60%

Figure 13 lists all audited individual material types in descending weight order, as a percentage of the total sample.

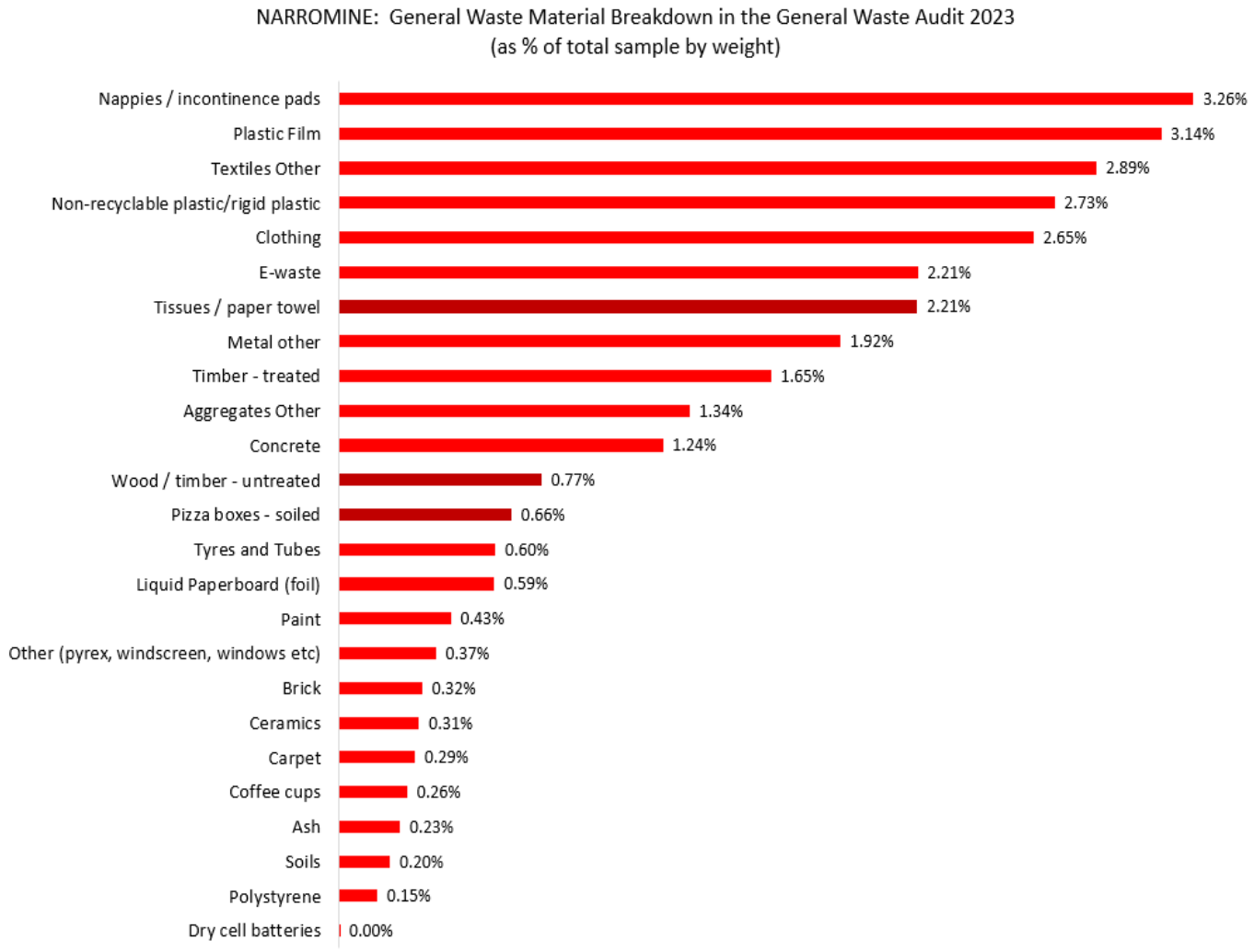



*Figure 13: Breakdown of general waste in the general waste stream*

### *5.2.5. Photos from the general waste stream*

*Picture 1: General Waste audit – photos of non-recyclable plastic, textiles, packaged food, e-waste and soft plastic/medical waste*

### 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*

| Narromine 2023 AUDIT Household Hazardous Waste | General Waste Stream (kg) | Recycling Stream (kg) | Organics Stream (kg) | TOTAL AUDITED WEIGHT (kg) |
|---|---|---|---|---|
| Nappies / incontinence pads | 52.70 | 0.00 | 0.00 | 52.70 |
| E-waste | 35.68 | 0.23 | 0.00 | 35.91 |
| Paint | 6.90 | 0.00 | 0.00 | 6.90 |
| Dry cell batteries | 0.07 | 0.00 | 0.00 | 0.07 |
| Fluorescent Tubes | 0.00 | 0.00 | 0.00 | 0.00 |
| Car batteries | 0.00 | 0.00 | 0.00 | 0.00 |
| Medical Waste (inc sharps) | 0.00 | 0.00 | 0.00 | 0.00 |
| Pharmaceuticals | 0.00 | 0.00 | 0.00 | 0.00 |
| Pet waste/litter/bedding not compostable | 0.00 | 0.00 | 0.00 | 0.00 |
| HHW Other | 0.00 | 0.00 | 0.00 | 0.00 |
| Total Weight per sample (kg) | 95.35 | 0.23 | 0.00 | 95.58 |
| HHW as a % of each waste stream | 5.91% | 0.03% | 0.00% | |

**DATA HIGHLIGHTS:**

- Wednesday1 sample had the most 'nappies', almost twice as much as either of the other two samples
- 'E-waste' was found in all three samples, in both Wednesday samples it was over 15 kg.
- 'Paint' was found in Monday and Wednesday1 samples.

## 5.4. FOGO Stream Analysis

### *5.4.1. Overall composition*

The auditors assessed **4,300.00 kg**[4] of material from 265 FOGO bins which equated to just over thirty cubic metres (30,008 litres) of material. The vast majority of the sample was garden waste (95.39%), with only 3.46% classifiable as 'food waste' and the remainder (1.15%) classified as contamination (Table 4, Figure 14).

The average household FOGO bin weighed **16.23 kg**.

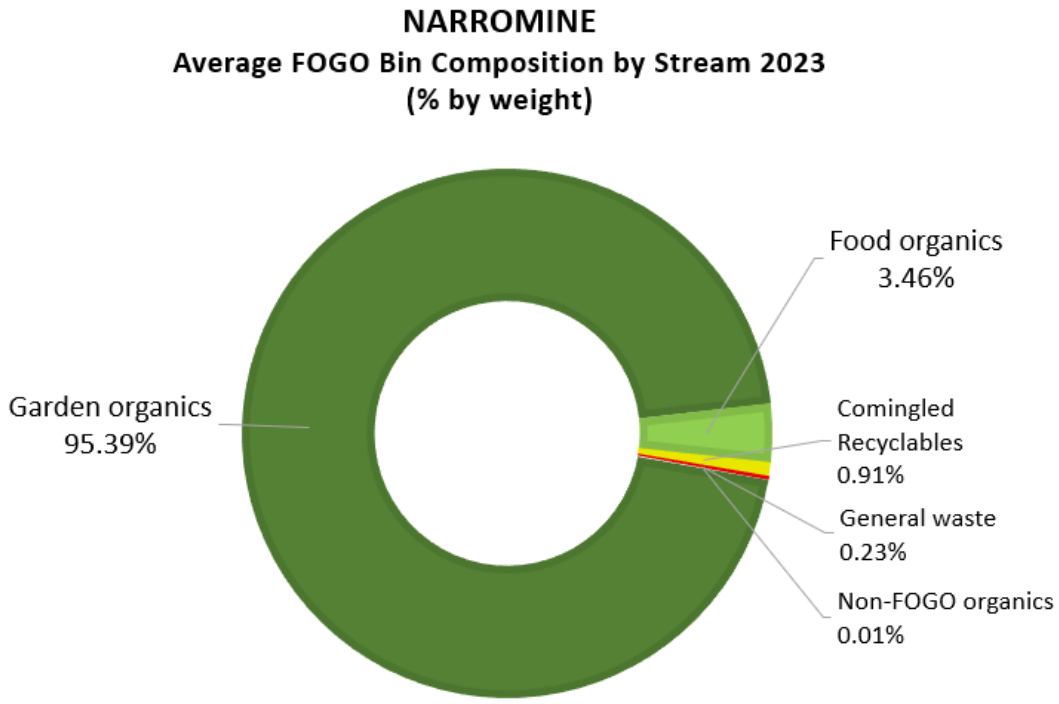



*Figure 14: Overall composition of FOGO stream*

Figure 15 overleaf reports the average household weekly FOGO bin composition.

[4] Refer to Section 4.1.1 for FOGO audit methodology

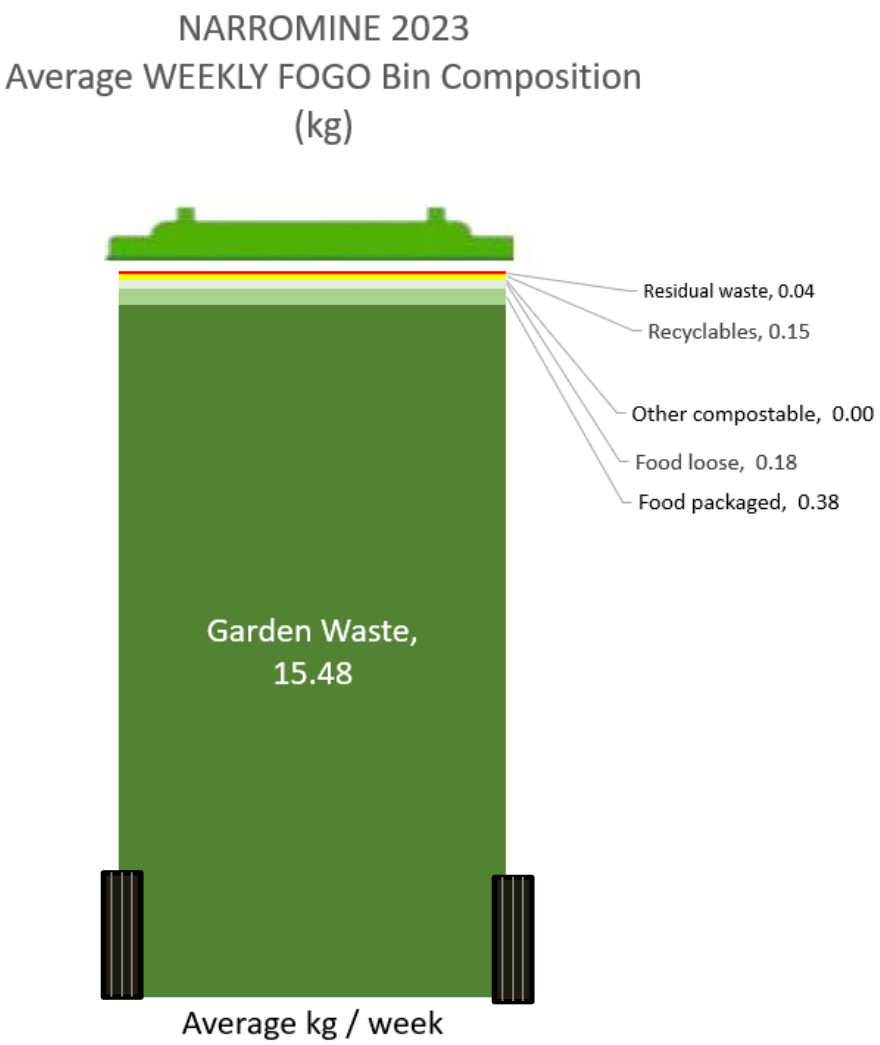



*Figure 15: Average composition of the FOGO bin by sub-category*

**FOOD ORGANICS:**

The auditors weighed just 148.72 kg of food organics in the 4,300.00 kg FOGO sample, split as follows:

- 'Food organics - loose' totaled 47.15 kg, equating to 1.10% of the total sample by weight;
- 'Food organics – packaged' totaled 101.57 kg, being 2.36% of the total sample by weight;
- No compostable caddy bags containing food were found, five 'plastic/plant blend' bags were identified.

**CONTAMINATION:**

The auditors also identified 39.16 kg of comingled recyclables, 9.81 kg of 'general waste' and 0.51 kg of 'non-FOGO organic' materials, together they equated to a contamination rate of 1.15% (Table 4, Figure 14Figure 4). Out of all contaminants, the four main contributors by weight were:

- 'Cardboard' at 26.6 5kg;
- 'Paper/newsprint/magazines' 9.99 kg;
- 'Caddy bags containing non-FOGO material' 4.17 kg;
- Textiles (both clothing and other textiles) totaling 2.83 kg.

**OTHER DATA HIGHLIGHTS:**

- 'Packaged food waste' was more than double the weight of 'food waste loose';
- No '100% compostable caddy bags' containing food waste were found in the 265 FOGO bins sample;
- Only three 'food in plant/plastic blend bags' were found (total weight 1.04 kg);
- Weights of recently re-classified 'non-FOGO organics' were extremely low, only one 'pizza box – soiled' and 0.12 kg of compostable packaging.

### *5.4.1. Average Household FOGO bin – sample comparison*

Two samples were audited, Monday 11/12 had 55 bins and Wednesday 13/12 had 210 bins. Therefore this analysis compares percentages and not net weights.

Figure 16 reflects the sample disparity for paper/cardboard and disposed food waste, with Wednesday's sample returning higher contamination in percentage terms.

*Please note that the Y-axis on*

Figure 16 starts at 90% for clarity.

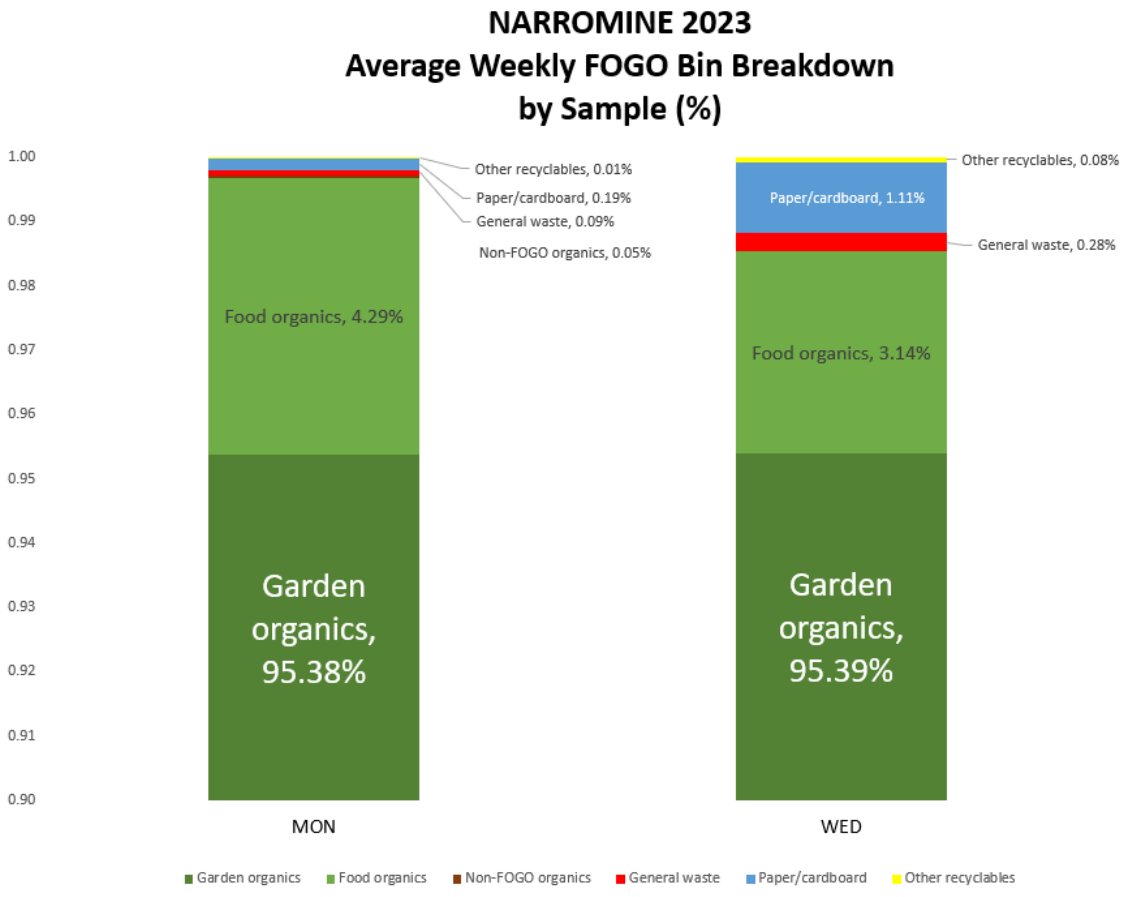



*Figure 16: Compositional difference in the FOGO bin between the two samples*

### *5.4.2. Photos from the FOGO stream*


*Picture 2: FOGO audit – pictures include comingled recyclables, cardboard, treated wood, food waste loose, plastic and plastic/blend caddy bags*

## 5.5. Recycling Stream Analysis

### *5.5.1. Overall composition of the recycling stream*

The auditors weighed **823.63 kg** of material from 110 comingled recycling bins which equated to just over 16 cubic metres (16,288 litres) of material.

When categorising the material by the three waste streams, 87.20% was acceptable comingled recyclables, the remainder was general waste (12.80%) (Figure 17) with no FOGO-acceptable material found in this audit. While no FOGO organics were detected, the combined samples did contain a very low amount of non-acceptable organics (total audit weight 9.26 kg), mainly 'tissues/paper towel' and 'pizza boxes – soiled'.

The contamination rate (12.80%) has increased slightly when compared to the 2019 contamination rate of 11.89% but was lower than the 2018 contamination rate of 17.00%.

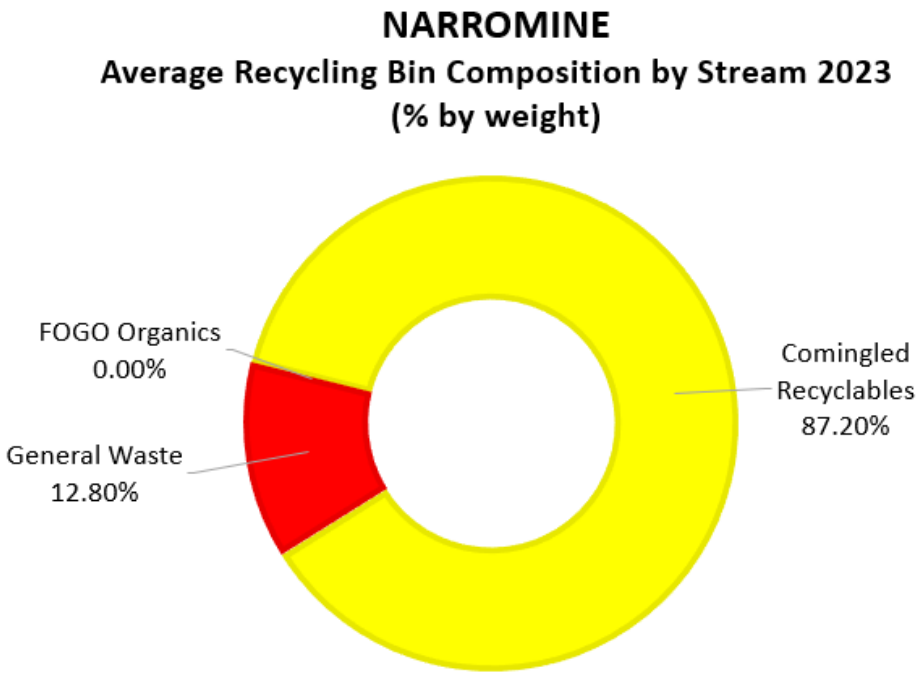



*Figure 17: Overall composition of recycling stream*

The average weekly household recycling bin weight in 2023 was **3.74 kg a week** – a notable drop in average weekly weight when compared to the results of the last two Narromine recycling bin audits - 2019 recorded 5.50 kg and 2018 recorded 5.41 kg per household per week.

Figure 18 looks at the relative weight and material of the recyclables in the fortnightly collected bin.

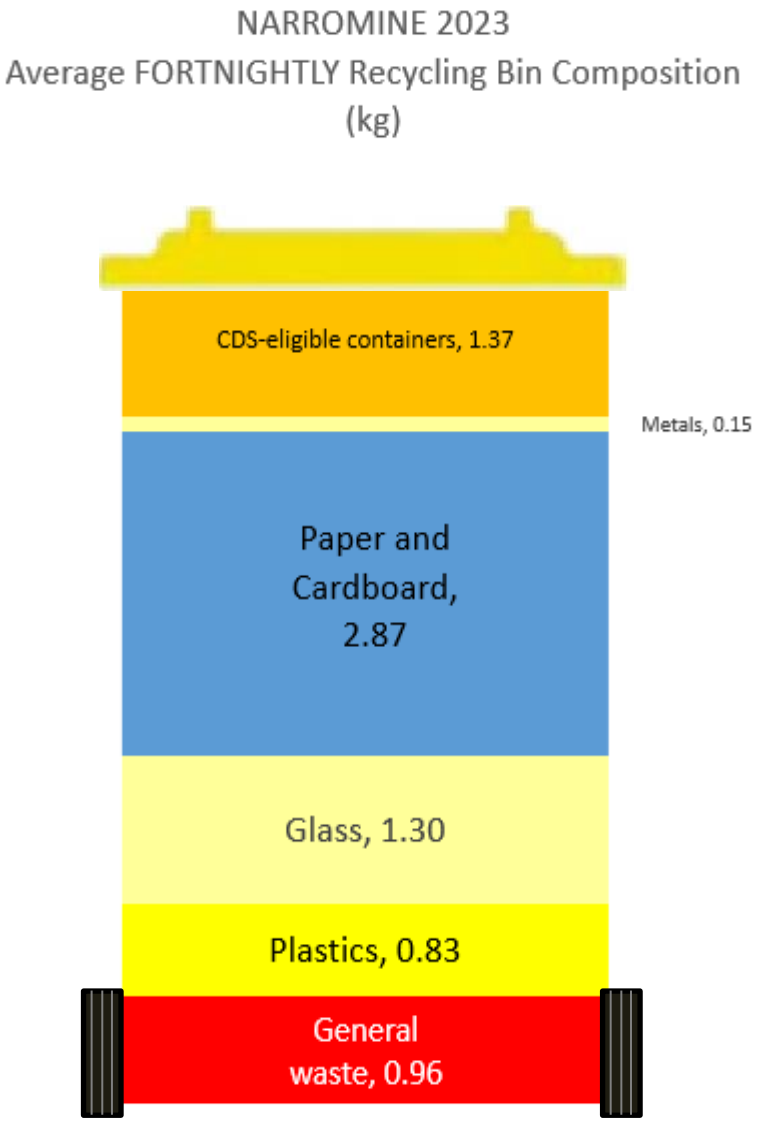



*Figure 18: Average fortnightly household recycling bin weight and material composition.*

### *5.5.2. Sample variation in the recycling stream*

Despite the two samples reviewing the same number of bins (55 each), in this audit there was a notable difference in sample weight – Monday totalled 379.18 and Wednesday was a heavier 444.45 kg. Wednesday's sample had higher net weights for general waste contamination, recyclable glass, and nearly double the net weights for recyclable plastics, in particular HDPE #2 and Plastic #5.

### *5.5.3. Breakdown of contamination in the recycling stream*

Contamination was 12.80% by weight, approximately 8.11% by volume. The three materials that had the most impact in weight terms were 'metal other', 'non-recyclable rigid plastic' and 'plastic film', together these three items were responsible for nearly 10% of the total sample weight (9.26%) and three quarters (72.32%) of all contaminates by weight.

Of note also in this audit was the lack of bagged recyclables (none detected) and very low volume of bagged waste (just 1.21 kg).

Figure 19 reports on all contaminants in descending weight order, reflecting their percentage contribution to the total weight of all contamination recorded.

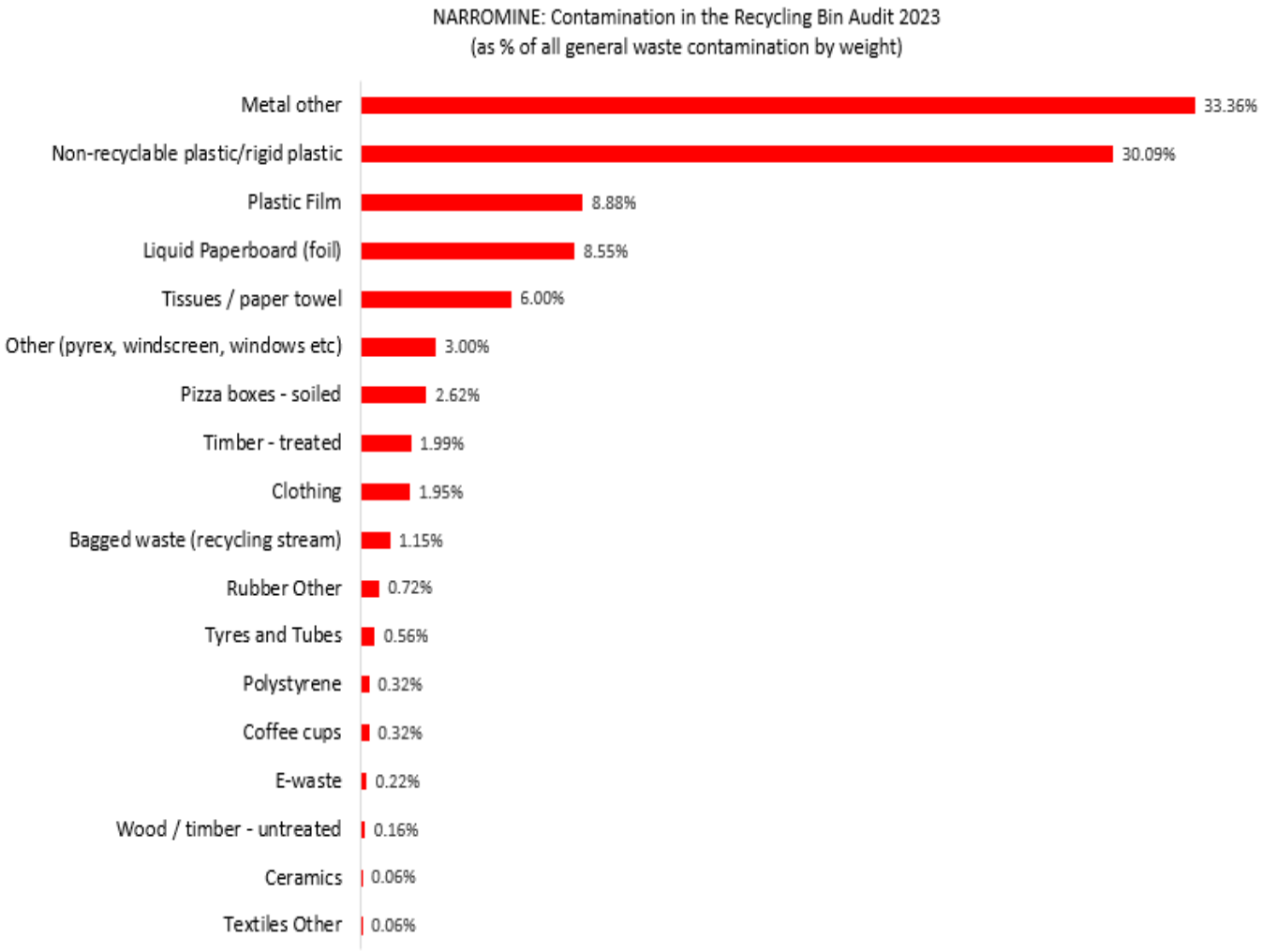



*Figure 19: Breakdown of contamination in the recycling bin.*

### *5.5.4. Breakdown of recyclables in the recycling stream*

The total net weight of the audited recyclables was **718.20 kg**, with the average household fortnightly-collected recycling bin weighing 7.49 kg.

Figure 20 compares the sub-categories audited in relative weight and volume terms – not only is paper/cardboard the dominant category by weight, it takes up almost two thirds of available bin airspace.

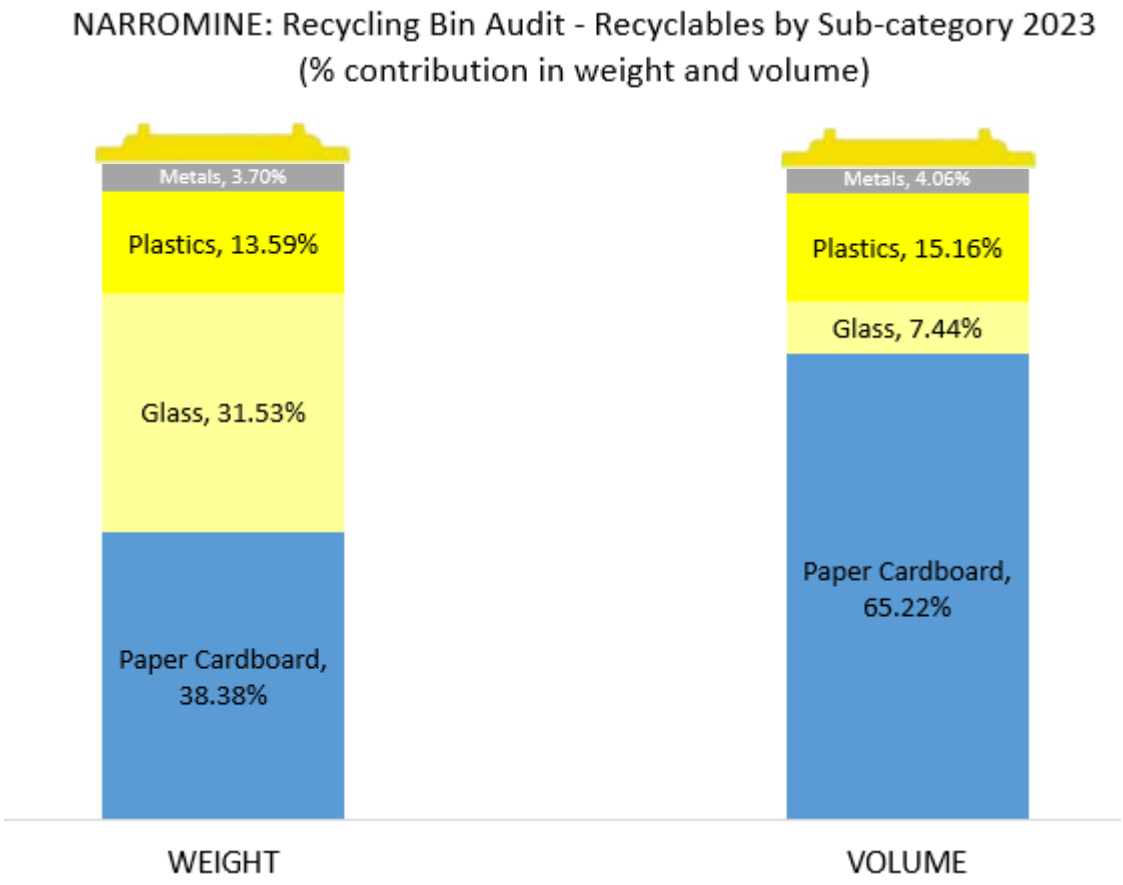



*Figure 20: Recyclables in the recycling stream -weight and volume sub-category comparison*

Figure 21 details all MRF-acceptable comingled recyclable materials in descending weight order, as a percentage of the total sample by weight. 'Cardboard' was responsible for 26.52% of the weight of the total sample, when combined with 'paper/newsprint/magazines' this jumps to 38.38%.

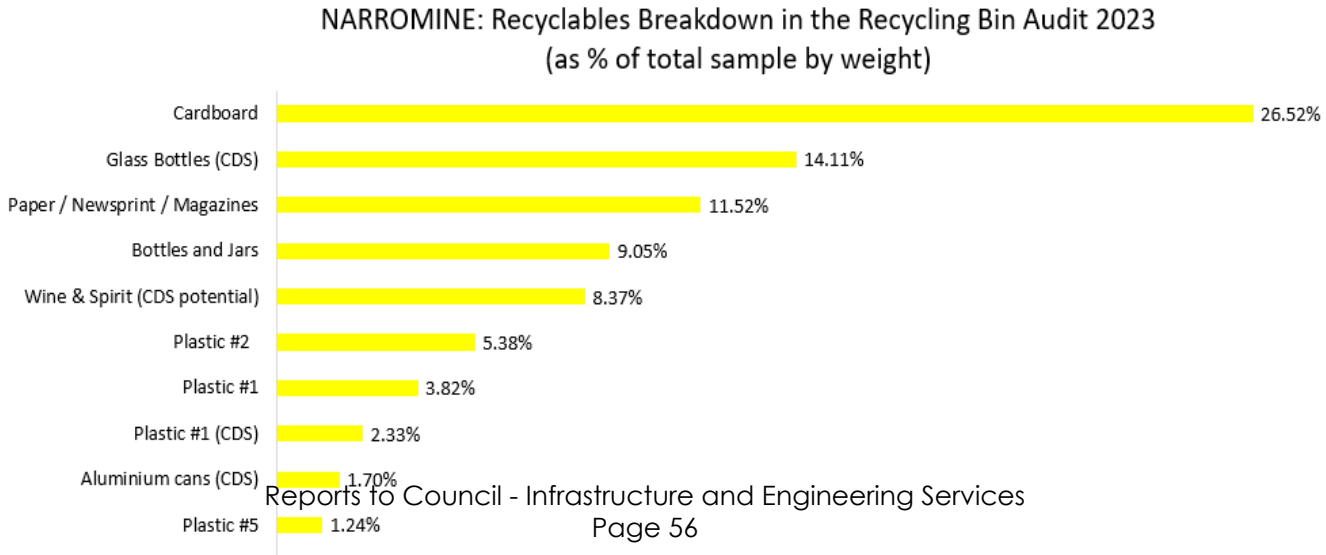


*Figure 21: Breakdown of recyclable material in the recycling bin*

### *5.5.5. Photos from the recycling stream*

*Picture 3: Recyclables audit – pictures include CDS-eligible cans, HDPE #2, plastic film, e-waste, foam, glass non-recyclable.*

### 5.6. Container Deposit Scheme Analysis

The auditors identified 2,457 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).

If all CDS material was removed from kerbside bins, it would have the following impact:

- Recycling bin - average weight drops by 18.34%, bin airspace increases by 9.14%
- General waste bin – average weight drops by 4.16%, bin airspace increases by 3.74%
- FOGO bin – negligible, total weight of CDS-eligible material just 1.45 kg.

The tables overleaf report the net weight and volume results for all five identified CRS eligible container types by stream. No eligible steel cans were identified in any of the three streams.

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

| NARROMINE REFUNDABLE CONTAINER COUNT in the 2023 audit | Recycling Bins (110) | Organics bins (265) | General Waste bins (111) | 2023 TOTAL UNIT COUNT |
|---|---|---|---|---|
| Liquid Paperboard (CDS) | 10 | - | 8 | 18 |
| Glass Bottles (CDS) | 511 | - | 260 | 771 |
| Plastic #1 (CDS) | 476 | 23 | 275 | 774 |
| Plastic #2 (CDS) | 34 | - | 2 | 36 |
| Aluminium cans (CDS) | 518 | 3 | 337 | 858 |
| TOTAL UNITS 2023 | 1,549 | 26 | 882 | 2,457 |

**CDS UNIT PROFILE:** The most frequently discarded CDS-eligible containers were 'aluminium cans', which represented just over one-third (34.92%) of all units discarded. However 'glass bottles' were almost as numerous as were PET #1 plastic bottles.

- WEIGHT IMPACT: As can be expected with units of significantly varying weights, it was 'glass bottles' that had the highest weight impact (52.90% of all CDS material by weight), despite the fact that they only accounted for 31.38% of all units counted.
- VOLUME IMPACT: PET #1 took up the most bin airspace (40.59%), with glass bottles equating to another third of all volume (33.22%) (Table 11).

*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 |
|---|---|---|---|---|
| Liquid Paperboard (CDS) | 0.17 | - | 0.13 | 0.30 |
| Glass Bottles (CDS) | 116.23 | - | 41.18 | 157.41 |
| Plastic #1 (CDS) | 19.18 | 1.33 | 15.90 | 36.41 |
| Plastic #2 (CDS) | 1.55 | - | 0.61 | 2.16 |
| Aluminium Cans (CDS) | 13.97 | 0.12 | 9.32 | 23.41 |
| TOTAL WEIGHT / stream | 151.10 | 1.45 | 67.14 | 219.69 |
| Percentage split by weight by stream | 68.78% | 0.66% | 30.56% | |

*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 |
|---|---|---|---|---|
| Liquid Paperboard (CDS) | 1 | - | 1 | 2 |
| Glass Bottles (CDS) | 510 | - | 256 | 766 |
| Plastic #1 (CDS) | 584 | 29 | 323 | 936 |
| Plastic #2 (CDS) | 18 | - | 1 | 19 |
| Aluminium Cans (CDS) | 376 | 1 | 206 | 583 |
| TOTAL VOLUME / stream | 1,489 | 30 | 787 | 2,306 |
| Percentage split by volume by stream | 64.57% | 1.30% | 34.13% | |

**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 wine and spirit bottles, 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 | 235 | - | 104 | 339 units |
| Wine and Spirit Bottles (kg) | 68.92 | - | 31.37 | 100.29 kg |
| Wine and Spirit Bottles (lt) | 146 | - | 31 | 177 litres |

**DATA HIGHLIGHTS:**

- Wednesday1's audit had double the weight of 'wine/spirit bottles' in their general waste bin when compared to the other two audits.

## 6. RECOMMENDATIONS

### 6.1. FOGO

- Given the volume of food organics in the general waste stream and sharp decline in the correct placement of food waste since FOGO was launched, food waste reduction and FOGO placement should be the key focus areas for waste education.
- Consider adopting some of the intervention recommendations published in the Fight Food Waste Cooperative Research Centre's latest Toolkit, with messaging focusing on both money saving and waste diversion. Data in this audit coupled with bin inspections could further target food waste education at a suburb and street level, e.g. the Monday sample had double the food waste of the other two audits in their general waste bins.
- Use the results in this report to highlight the volume of organic waste going to landfill and its negative impacts on the environment and organic waste diversion targets at a national and state level. Couple householder messaging with win-win solutions emphasising that correct placement of food and garden waste will also free up space in general waste bins.
- 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.
- 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.
- Consider including in messaging a possible review and service reduction for general waste bins to ensure messaging cut-through.
- Assess the cost benefit of providing residents with a free home delivery of Council approved compostable caddy bags, or ease of access e.g. at frequently visited businesses. Set up 'community waste education' stalls near food shopping locations and at community events - entice conversations with give-away compostable caddy bags.
- 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

- Consider reducing the general waste bin size or service, offering different bin configurations or rate rebates on application for specific cases e.g. large households.
- With the FOGO service in operation for over four years, a bin tagging campaign is strongly recommended for general waste bins to encourage the use of FOGO bins in areas with low set-out rates. Consider a 'three-strikes' penalty system for repeated contamination from the same addresses.
- Highlight products made from recyclables, ideally within the community (children's playgrounds, park benches, as appropriate) and the waste of resources (and bin air space) when recyclables are incorrectly placed in general waste bins.
- 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.
- Utilise waste reduction 'days' and 'weeks' promoted by other organisations e.g. Op Shop Week, Organics Week, National Recycling Week, Garage Trail, Stop Food Waste Day, International Repair Day etc, to push Council waste reduction messaging as this capitalises on raised awareness levels.
- Establish a strategic location for a textiles bin outsourced to a charity.
- Provide information about the services available at WTSs and CRC's targeting e-waste, hazardous material and inert materials.
- Investigate opportunities for promoting cloth nappies e.g. through community advocates or a cloth nappy rebate.
- 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.

### 6.3. Recycling

- Given the increasing amount of recyclables in general waste, consider conducting visual bin assessments to identify if recyclables are ending up in general waste due to overspill of recycling bins.
- Consider applying stickers to recycling bins that state what goes in if not already done so. Consider printing stickers for household internal recycling bins (including simple diagrams) and have them freely available at public locations.
- It is worth noting that the first two materials misplaced in recycling bins by weight (non-recyclable metal and non-recyclable rigid plastic) can be due to confusion around their MRF acceptability. In particular 'plant pots' were identified – explore an educational collaboration with local nurseries, promote CRCs as a drop-off point and investigate the opportunity with www.pp5.com.au.
- Emphasise the multiple issues with soft plastic in recycling bins (acts like paper in the sorting process, strong contamination driver, can tangle machinery). Include updates on progress to re-establishing soft plastics recycling, including tips on soft plastic packaging alternatives, but emphasise the current correct placement in general waste bins.
- Waste education messaging could include statistics from this report and Cleanaway's 'Recycling Behaviours Report', using a '"How did we do?" theme to both raise awareness and add a level of competitiveness on where Narromine residents could do better.
- Waste messaging should focus on raising awareness of other disposal options for clothing, textiles and shoes, for example donating to second-hand shops or resource recovery shops sold or traded online, or mailed to the appropriate recyclers e.g. Upparel, Underwear for Humanity etc. Maximise awareness of national and international commemorative days and weeks that focus on sustainability, tying in messaging with key Narromine waste management results and strategies.
- 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.
- 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.

## 7. Appendix 1 – General Waste Dataset

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Mon | Wed | Wed2 | Mon | Wed | Wed2 | | | | |
| | | | | | | | | 11/12/2023 | 13/12/2023 | 13/12/2023 | 11/12/2023 | 13/12/2023 | 13/12/2023 | | | | |
| | CATEGORY TOTAL | | | SUB-CATEGORY TOTAL | | | TOTAL | 37 | 37 | 37 | 37 | 37 | 37 | TOTAL | | | |
| CATEGORY | Weight (kg) | Weight (%) | SUB-CATEGORY | Weight (kg) | Weight (%) | MATERIAL | Weight (kg) | Weight (%) | KG | KG | KG | LT | LT | LT | Volume (lt) | Volume (%) | |
| Comingled Recycling | 347.87 | 21.55% | Paper & Cardboard | 90.83 | 5.63% | Paper / Newsprint / Magazines | 33.77 | 2.09% | 17.03 | 8.16 | 8.58 | 259.00 | 59.00 | 136.00 | 454.00 | 3.14% | |
| | | | | | | Cardboard | 53.85 | 3.34% | 33.86 | 7.72 | 12.27 | 614.00 | 188.00 | 179.00 | 981.00 | 6.78% | |
| | | | | | | Liquid Paperboard (no foil) | 3.08 | 0.19% | 0.81 | 0.20 | 2.07 | 17.00 | 4.00 | 19.00 | 40.00 | 0.28% | |
| | | | | | | Liquid Paperboard (CDS) | 0.13 | 0.01% | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 1.00 | 1.00 | 0.01% | |
| | | | Glass | 109.80 | 6.80% | Bottles and Jars | 37.25 | 2.31% | 21.87 | 4.11 | 11.27 | 144.00 | 27.00 | 50.00 | 221.00 | 1.53% | |
| | | | | | | Glass Bottles (CDS) | 41.18 | 2.55% | 25.49 | 10.04 | 5.65 | 143.00 | 49.00 | 64.00 | 256.00 | 1.77% | |
| | | | | | | Wine & Spirit (CDS potential) | 31.37 | 1.94% | 8.31 | 16.43 | 6.63 | 49.00 | 63.00 | 34.00 | 146.00 | 1.01% | |
| | | | Plastics | 113.38 | 7.02% | Plastic #1 | 29.20 | 1.81% | 12.52 | 6.60 | 10.08 | 387.00 | 196.00 | 158.00 | 741.00 | 5.12% | |
| | | | | | | Plastic #1 (CDS) | 15.90 | 0.98% | 5.34 | 5.39 | 5.17 | 126.00 | 96.00 | 101.00 | 323.00 | 2.23% | |
| | | | | | | Plastic #2 | 32.29 | 2.00% | 3.22 | 16.80 | 12.27 | 184.00 | 263.00 | 296.00 | 743.00 | 5.14% | |
| | | | | | | Plastic #2 (CDS) | 0.61 | 0.04% | 0.00 | 0.61 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.01% | |
| | | | | | | Plastic #3 | 0.70 | 0.04% | 0.53 | 0.17 | 0.00 | 12.00 | 1.00 | 0.00 | 13.00 | 0.09% | |
| | | | | | | Plastic #4 | 8.46 | 0.52% | 2.94 | 3.37 | 2.15 | 82.00 | 56.00 | 56.00 | 194.00 | 1.34% | |
| | | | | | | Plastic #5 | 25.30 | 1.57% | 7.03 | 8.95 | 9.32 | 51.00 | 168.00 | 191.00 | 410.00 | 2.83% | |
| | | | | | | Plastic #6 | 0.08 | 0.00% | 0.02 | 0.06 | 0.00 | 1.00 | 2.00 | 0.00 | 3.00 | 0.02% | |
| | | | | | | Plastic #7 | 0.84 | 0.05% | 0.00 | 0.84 | 0.00 | 0.00 | 10.00 | 0.00 | 10.00 | 0.07% | |
| | | | Metals | 33.86 | 2.10% | Aluminium can / foil | 3.86 | 0.24% | 1.66 | 1.67 | 0.53 | 19.00 | 13.00 | 19.00 | 51.00 | 0.35% | |
| | | | | | | Aluminium cans (CDS) | 9.32 | 0.58% | 0.95 | 4.75 | 3.62 | 32.00 | 94.00 | 80.00 | 206.00 | 1.42% | |
| | | | | | | Steel cans | 15.26 | 0.95% | 5.55 | 6.27 | 3.44 | 82.00 | 42.00 | 39.00 | 163.00 | 1.13% | |
| | | | | | | Aerosol cans | 5.42 | 0.34% | 1.12 | 1.83 | 2.47 | 12.00 | 27.00 | 21.00 | 60.00 | 0.41% | |
| Organics | 775.24 | 48.03% | Food Organics | 664.99 | 41.20% | Food scraps - loose | 587.76 | 36.41% | 264.54 | 148.74 | 174.48 | 1050.00 | 562.00 | 781.00 | 2393.00 | 16.54% | |
| | | | | | | Foods packaged | 77.23 | 4.78% | 29.34 | 35.20 | 12.69 | 163.00 | 106.00 | 112.00 | 381.00 | 2.63% | |
| | | | | | | 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% | |
| | | | Garden | 110.25 | 6.83% | Garden waste | 110.25 | 6.83% | 18.60 | 51.37 | 40.28 | 163.00 | 146.00 | 277.00 | 586.00 | 4.05% | |
| Non-FOGO Organics | 58.78 | 3.64% | Compostables | 58.78 | 3.64% | Pizza boxes - soiled | 10.64 | 0.66% | 4.34 | 2.26 | 4.04 | 106.00 | 42.00 | 49.00 | 197.00 | 1.36% | |
| | | | | | | Compostable Packaging | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | |
| | | | | | | Tissues / paper towel | 35.65 | 2.21% | 9.81 | 15.56 | 10.28 | 169.00 | 136.00 | 122.00 | 427.00 | 2.95% | |
| | | | | | | Wood / timber - untreated | 12.49 | 0.77% | 7.27 | 4.46 | 0.76 | 52.00 | 27.00 | 10.00 | 89.00 | 0.62% | |
| | | | | | | 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% | |
| General Waste | 432.339 | 26.78% | Food | - | 0.00% | Food in plastic caddy bags | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | |
| | | | Rubber | 9.65 | 0.60% | Tyres and Tubes | 9.65 | 0.60% | 4.91 | 4.16 | 0.58 | 13.00 | 39.00 | 8.00 | 60.00 | 0.41% | |
| | | | | | | Rubber Other | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | |
| | | | Aggregates & soils | 49.88 | 3.09% | Soils | 3.15 | 0.20% | 2.17 | 0.00 | 0.98 | 4.00 | 0.00 | 1.00 | 5.00 | 0.03% | |
| | | | | | | Brick | 5.14 | 0.32% | 0.00 | 0.00 | 5.14 | 0.00 | 0.00 | 4.00 | 4.00 | 0.03% | |
| | | | | | | Concrete | 19.97 | 1.24% | 5.39 | 1.10 | 13.48 | 15.00 | 1.00 | 92.00 | 108.00 | 0.75% | |
| | | | | | | Aggregates Other | 21.62 | 1.34% | 0.00 | 0.00 | 21.62 | 0.00 | 0.00 | 147.00 | 147.00 | 1.02% | |
| | | | Textiles | 94.20 | 5.84% | Carpet | 4.69 | 0.29% | 0.00 | 2.74 | 1.95 | 0.00 | 3.00 | 42.00 | 45.00 | 0.31% | |
| | | | | | | Clothing | 42.82 | 2.65% | 14.74 | 14.60 | 13.48 | 194.00 | 110.00 | 92.00 | 396.00 | 2.74% | |
| | | | | | | Textiles Other | 46.69 | 2.89% | 9.15 | 15.92 | 21.62 | 102.00 | 109.00 | 147.00 | 358.00 | 2.47% | |
| | | | HHW | 59.67 | 3.70% | Paint | 6.90 | 0.43% | 4.16 | 2.74 | 0.00 | 4.00 | 3.00 | 0.00 | 7.00 | 0.05% | |
| | | | | | | Fluorescent Tubes | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | |
| | | | | | | Dry cell batteries | 0.07 | 0.00% | 0.02 | 0.02 | 0.03 | 1.00 | 0.00 | 1.00 | 2.00 | 0.01% | |
| | | | | | | Car batteries | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.01% | |
| | | | | | | Medical Waste (inc sharps) | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.01% | |
| | | | | | | Pharmaceuticals | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | |
| | | | | | | Nappies / incontinence pads | 52.70 | 3.26% | 11.47 | 27.06 | 14.17 | 95.00 | 198.00 | 72.00 | 365.00 | 2.52% | |
| | | | | | | 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% | |
| | | | | | | HHW Other | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | |

**General Waste Dataset contd**.

| | | | | | | | | | Mon | Wed | Wed2 | Mon | Wed | Wed2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 11/12/2023 | 13/12/2023 | 13/12/2023 | 11/12/2023 | 13/12/2023 | 13/12/2023 | | |
| | CATEGORY TOTAL | | | SUB-CATEGORY TOTAL | | | TOTAL | | 37 | 37 | 37 | 37 | 37 | 37 | TOTAL | |
| CATEGORY | Weight (kg) | Weight (%) | SUB-CATEGORY | Weight (kg) | Weight (%) | MATERIAL | Weight (kg) | Weight (%) | KG | KG | KG | LT | LT | LT | Volume (lt) | Volume (%) |
| | | | Other | 218.94 | 13.56% | E-waste and electrical | 35.68 | 2.21% | 2.86 | 16.88 | 15.94 | 22.00 | 42.00 | 39.00 | 103.00 | 0.71% |
| | | | | | | Metal other | 30.92 | 1.92% | 13.52 | 10.17 | 7.23 | 108.00 | 42.00 | 20.00 | 170.00 | 1.17% |
| | | | | | | Other (pyrex, windscreen, windows etc) | 5.98 | 0.37% | 1.47 | 3.39 | 1.12 | 14.00 | 10.00 | 6.00 | 30.00 | 0.21% |
| | | | | | | Ceramics | 4.95 | 0.31% | 0.12 | 4.66 | 0.17 | 1.00 | 8.00 | 4.00 | 13.00 | 0.09% |
| | | | | | | Liquid Paperboard (foil) | 9.59 | 0.59% | 1.56 | 5.20 | 2.83 | 39.00 | 61.00 | 32.00 | 132.00 | 0.91% |
| | | | | | | Coffee cups | 4.21 | 0.26% | 0.87 | 1.54 | 1.80 | 17.00 | 14.00 | 30.00 | 61.00 | 0.42% |
| | | | | | | Non-recyclable plastic/rigid plastic | 44.12 | 2.73% | 14.19 | 17.22 | 12.71 | 147.00 | 166.00 | 125.00 | 438.00 | 3.03% |
| | | | | | | Polystyrene | 2.37 | 0.15% | 0.64 | 0.14 | 1.59 | 147.00 | 270.00 | 480.00 | 897.00 | 6.20% |
| | | | | | | Plastic Film | 50.70 | 3.14% | 17.45 | 14.41 | 18.84 | 967.00 | 311.00 | 526.00 | 1804.00 | 12.47% |
| | | | | | | Ash | 3.77 | 0.23% | 3.77 | 0.00 | 0.00 | 19.00 | 0.00 | 0.00 | 19.00 | 0.13% |
| | | | | | | Timber - treated | 26.65 | 1.65% | 6.22 | 8.84 | 11.59 | 22.00 | 48.00 | 143.00 | 213.00 | 1.47% |
| | | | | | | Building materials other | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Bagged recyclables (recycling steam) | 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% |
| | 1,614.23 | 100% | | 1,614.23 | 100.00% | | 1,614.23 | 100% | 596.83 | 512.35 | 505.05 | 5849.00 | 3814.00 | 4806.00 | 14469.00 | 100% |

## 8. Appendix 2 – Comingled Recycling Dataset

| | TOTAL | | | TOTAL | | | TOTAL | | Mon 11/12/2023 55 | Wed 13/12/2023 55 | Mon 11/12/2023 55 | Wed 13/12/2023 55 | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CATEGORY | Weight (kg) | Weight (%) | SUB-CATEGORY | Weight (kg) | Weight (%) | MATERIAL | Weight (kg) | Weight (%) | KG | KG | LT | LT | Volume (lt) | Volume (%) |
| Comingled Recycling | 718.20 | 87.20% | Paper & Cardboard | 316.14 | 38.38% | Paper / Newsprint / Magazines | 94.90 | 11.52% | 58.08 | 36.82 | 1178.00 | 512.00 | 1690.00 | 10.38% |
| | | | | | | Cardboard | 218.44 | 26.52% | 96.98 | 121.46 | 4119.00 | 4750.00 | 8869.00 | 54.45% |
| | | | | | | Liquid Paperboard (no foil) | 2.63 | 0.32% | 0.46 | 2.17 | 42.00 | 21.00 | 63.00 | 0.39% |
| | | | | | | Liquid Paperboard (CDS) | 0.17 | 0.02% | 0.00 | 0.17 | 0.00 | 1.00 | 1.00 | 0.01% |
| | | | Glass | 259.65 | 31.53% | Bottles and Jars | 74.50 | 9.05% | 34.93 | 39.57 | 204.00 | 178.00 | 382.00 | 2.35% |
| | | | | | | Glass Bottles (CDS) | 116.23 | 14.11% | 61.25 | 54.98 | 310.00 | 200.00 | 510.00 | 3.13% |
| | | | | | | Wine & Spirit (CDS potential) | 68.92 | 8.37% | 27.82 | 41.10 | 156.00 | 164.00 | 320.00 | 1.96% |
| | | | Plastics | 111.93 | 13.59% | Plastic #1 | 31.48 | 3.82% | 13.43 | 18.05 | 464.00 | 194.00 | 658.00 | 4.04% |
| | | | | | | Plastic #1 (CDS) | 19.18 | 2.33% | 8.46 | 10.72 | 344.00 | 240.00 | 584.00 | 3.59% |
| | | | | | | Plastic #2 | 44.28 | 5.38% | 18.15 | 26.13 | 624.00 | 282.00 | 906.00 | 5.56% |
| | | | | | | Plastic #2 (CDS) | 1.55 | 0.19% | 1.12 | 0.43 | 4.00 | 14.00 | 18.00 | 0.11% |
| | | | | | | Plastic #3 | 0.49 | 0.06% | 0.26 | 0.23 | 31.00 | 2.00 | 33.00 | 0.20% |
| | | | | | | Plastic #4 | 4.65 | 0.56% | 1.84 | 2.81 | 66.00 | 69.00 | 135.00 | 0.83% |
| | | | | | | Plastic #5 | 10.19 | 1.24% | 0.00 | 10.19 | 0.00 | 126.00 | 126.00 | 0.77% |
| | | | | | | Plastic #6 | 0.11 | 0.01% | 0.00 | 0.11 | 0.00 | 10.00 | 10.00 | 0.06% |
| | | | | | | Plastic #7 | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | Metals | 30.48 | 3.70% | Aluminium can / foil | 1.97 | 0.24% | 0.35 | 1.62 | 4.00 | 31.00 | 35.00 | 0.21% |
| | | | | | | Aluminium cans (CDS) | 13.97 | 1.70% | 4.51 | 9.46 | 181.00 | 195.00 | 376.00 | 2.31% |
| | | | | | | Steel cans | 9.83 | 1.19% | 4.34 | 5.49 | 116.00 | 61.00 | 177.00 | 1.09% |
| | | | | | | Aerosol cans | 4.71 | 0.57% | 2.40 | 2.31 | 46.00 | 28.00 | 74.00 | 0.45% |
| Organics | 0.00 | 0.00% | Food Organics | - | 0.00% | Food scraps - loose | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Foods packaged | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Food in Compostable Caddy Bags | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | Garden | - | 0.00% | Garden | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| Non-FOGO organics | 9.26 | 1.12% | Other | 9.26 | 1.12% | Pizza boxes - soiled | 2.76 | 0.34% | 0.00 | 2.76 | 0.00 | 39.00 | 39.00 | 0.24% |
| | | | | | | Compostable Packaging | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Tissues / paper towel | 6.33 | 0.77% | 0.00 | 6.33 | 0.00 | 42.00 | 42.00 | 0.26% |
| | | | | | | Wood / timber - untreated | 0.17 | 0.02% | 0.00 | 0.17 | 0.00 | 1.00 | 1.00 | 0.01% |
| | | | | | | Pet waste/litter/bedding compostable | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| General Waste | 96.17 | 11.68% | Food | - | 0.00% | Food in plastic bags | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | Rubber | 1.35 | 0.16% | Tyres and Tubes | 0.59 | 0.07% | 0.59 | 0.00 | 11.00 | 0.00 | 11.00 | 0.07% |
| | | | | | | Rubber Other | 0.76 | 0.09% | 0.00 | 0.76 | 0.00 | 4.00 | 4.00 | 0.02% |
| | | | Aggregates & soils | - | 0.00% | Soils | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Brick | 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% |
| | | | | | | Aggregates Other | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | Textiles | 2.12 | 0.26% | Carpet | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Clothing | 2.06 | 0.25% | 0.12 | 1.94 | 1.00 | 16.00 | 17.00 | 0.10% |
| | | | | | | Textiles Other | 0.06 | 0.01% | 0.06 | 0.00 | 4.00 | 0.00 | 4.00 | 0.02% |
| | | | HHW | - | 0.00% | Paint | 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% |
| | | | | | | Dry cell batteries | 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% |
| | | | | | | Medical Waste (inc sharps) | 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% |
| | | | | | | Nappies / incontinence pads | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Pet waste/litter/bedding not compostal | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | HHW Other | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | Other | 92.70 | 11.26% | E-waste | 0.23 | 0.03% | 0.12 | 0.11 | 2.00 | 1.00 | 3.00 | 0.02% |
| | | | | | | Metal other | 35.17 | 4.27% | 25.00 | 10.17 | 4.00 | 41.00 | 45.00 | 0.28% |
| | | | | | | Other (pyrex, windscreen, windows etc) | 3.16 | 0.38% | 3.04 | 0.12 | 28.00 | 1.00 | 29.00 | 0.18% |
| | | | | | | Ceramics | 0.06 | 0.01% | 0.00 | 0.06 | 0.00 | 1.00 | 1.00 | 0.01% |
| | | | | | | Liquid Paperboard (foil) | 9.01 | 1.09% | 1.53 | 7.48 | 97.00 | 42.00 | 139.00 | 0.85% |
| | | | | | | Coffee cups | 0.34 | 0.04% | 0.02 | 0.32 | 3.00 | 12.00 | 15.00 | 0.09% |
| | | | | | | Non-recyclable plastic/rigid plastic | 31.72 | 3.85% | 4.29 | 27.43 | 19.00 | 238.00 | 257.00 | 1.58% |
| | | | | | | Polystyrene | 0.34 | 0.04% | 0.14 | 0.20 | 22.00 | 25.00 | 47.00 | 0.29% |
| | | | | | | Plastic Film | 9.36 | 1.14% | 6.58 | 2.78 | 426.00 | 146.00 | 572.00 | 3.51% |
| | | | | | | Ash | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Timber - treated | 2.10 | 0.25% | 2.10 | 0.00 | 13.00 | 0.00 | 13.00 | 0.08% |
| | | | | | | Building materials other | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Bagged recyclables (recycling steam) | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Bagged waste (recycling stream) | 1.21 | 0.15% | 1.21 | 0.00 | 82.00 | 0.00 | 82.00 | 0.50% |
| | 823.63 | 100.00% | | 823.63 | 100.00% | | 823.63 | 100% | 379.18 | 444.45 | 8601.00 | 7687.00 | 16,288.00 | 100% |

## 9. Appendix 3 – FOGO Dataset

| | TOTAL | | | TOTAL | | | TOTAL | | Mon 11/12/2023 55 | Wed 13/12/2023 210 | Mon 11/12/2023 55 | Wed 13/12/2023 210 | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CATEGORY | Weight (kg) | Weight( %) | SUB-CATEGORY | Weight (kg) | Weight (%) | MATERIAL | Weight (kg) | Weight (%) | KG | KG | LT | LT | Volume (LT) | Volume (%) |
| Comingled Recycling | 39.16 | 0.91% | Paper & Cardboard | 36.64 | 0.85% | Paper / Newsprint / Magazines | 9.99 | 0.23% | 0.72 | 9.27 | 21.00 | 56.00 | 77.00 | 0.26% |
| | | | | | | Cardboard | 26.65 | 0.62% | 1.50 | 25.15 | 86.00 | 339.00 | 425.00 | 1.42% |
| | | | | | | Liquid Paperboard (no foil) | 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% |
| | | | Glass | - | 0.00% | Bottles and Jars | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Glass Bottles (CDS) | 0.00 | 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% |
| | | | Plastics | 2.40 | 0.06% | Plastic #1 | 0.17 | 0.00% | 0.00 | 0.17 | 0.00 | 6.00 | 6.00 | 0.02% |
| | | | | | | Plastic #1 (CDS) | 1.33 | 0.03% | 0.15 | 1.18 | 1.00 | 28.00 | 29.00 | 0.10% |
| | | | | | | Plastic #2 | 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% |
| | | | | | | Plastic #3 | 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% |
| | | | | | | Plastic #5 | 0.90 | 0.02% | 0.00 | 0.90 | 0.00 | 20.00 | 20.00 | 0.07% |
| | | | | | | Plastic #6 | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Plastic #7 | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | Metals | 0.12 | 0.00% | Aluminium can / foil | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Aluminium cans (CDS) | 0.12 | 0.00% | 0.00 | 0.12 | 0.00 | 1.00 | 1.00 | 0.00% |
| | | | | | | Steel cans | 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% |
| Organics | 4250.47 | 98.85% | Food Organics | 148.72 | 3.46% | Food scraps - loose | 47.15 | 1.10% | 27.20 | 19.95 | 108.00 | 73.00 | 181.00 | 0.60% |
| | | | | | | Foods packaged | 101.57 | 2.36% | 24.27 | 77.30 | 98.00 | 305.00 | 403.00 | 1.34% |
| | | | | | | Food in Compostable Caddy Bags | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | Garden | 4,101.75 | 95.39% | Garden Waste | 4101.75 | 95.39% | 1144.56 | 2957.19 | 8800.00 | 19900.00 | 28700.00 | 95.64% |
| Non-FOGO Organics | 0.56 | 0.01% | Other | 0.56 | 0.01% | Pizza boxes - soiled | 0.44 | 0.01% | 0.44 | 0.00 | 14.00 | 0.00 | 14.00 | 0.05% |
| | | | | | | Compostable Packaging | 0.12 | 0.00% | 0.12 | 0.00 | 4.00 | 0.00 | 4.00 | 0.01% |
| | | | | | | Tissues / paper towel | 0.00 | 0.00% | 0.00 | 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% |
| | | | | | | Pet waste/litter/bedding compostable | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| General Waste | 9.81 | 0.23% | Food | 1.04 | 0.02% | Food in plastic bags | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Food in plant/plastic blend bags | 1.04 | 0.02% | 1.04 | 0.00 | 10.00 | 0.00 | 10.00 | 0.03% |
| | | | Rubber | - | 0.00% | Tyres and Tubes | 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% |
| | | | Aggregates & soils | - | 0.00% | Soils | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Brick | 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% |
| | | | | | | Aggregates Other | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | Textiles | 2.83 | 0.07% | Carpet | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Clothing | 2.17 | 0.05% | 0.00 | 2.17 | 0.00 | 18.00 | 18.00 | 0.06% |
| | | | | | | Textiles Other | 0.66 | 0.02% | 0.00 | 0.66 | 0.00 | 4.00 | 4.00 | 0.01% |
| | | | HHW | - | 0.00% | Paint | 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% |
| | | | | | | Dry cell batteries | 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% |
| | | | | | | Medical Waste (inc sharps) | 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% |
| | | | | | | Nappies / incontinence pads | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Pet waste/litter/bedding not composta | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | HHW Other | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | E-waste | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | Other | 5.94 | 0.14% | Metal other | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 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% |
| | | | | | | Ceramics | 0.00 | 0.00% | 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% |
| | | | | | | Coffee cups | 0.16 | 0.00% | 0.00 | 0.16 | 0.00 | 4.00 | 4.00 | 0.01% |
| | | | | | | Non-recyclable plastic/rigid plastic | 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% |
| | | | | | | Plastic Film | 1.34 | 0.03% | 0.00 | 1.34 | 0.00 | 81.00 | 81.00 | 0.27% |
| | | | | | | Ash | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Timber - treated | 0.27 | 0.01% | 0.00 | 0.27 | 0.00 | 1.00 | 1.00 | 0.00% |
| | | | | | | Building materials other | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Bagged recyclables | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Bagged waste | 0.00 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% |
| | | | | | | Caddy bags containing general waste | 4.17 | 0.10% | 0.00 | 4.17 | 0.00 | 30.00 | 30.00 | 0.10% |
| | 4,300.00 | 100% | | 4,300.00 | 100.00% | | 4,300.00 | 100% | 1200.00 | 3100.00 | 9142.00 | 20866.00 | 30,008.00 | 100% |

# KERB, GUTTER AND FOOTPATH CONTRIBUTION POLICY

*Adopted By Council 11 September 2019*
*Resolution No 2019/241*

**Created By:** Infrastructure and Engineering Services Department
**Version No:-** 21.0
**Adopted:-** 11 September 2019
**Review Date:-** April 2024

## INTRODUCTION

This policy outlines the Council's stance on providing funding for new kerb, guttering, and footpaths that are not included in Council's programmed capital works. This policy establishes Council's position with regard to funding new kerb, gutteringand footpaths outside of Council's programmed capital works.

## OBJECTIVES

In compliance with Section 217 of the Roads Act 1993, this document outlines the method used by the Council to determine kerb and guttering charges for adjacent landowners.

Additionally, it details the process by which the Council will assess the construction of new kerb, guttering, and footpaths that are not currently included in the Council's Aasset Mmanagement Sstrategy. To document the determination of kerb and guttering and footpath charges to adjacent landowners, in accordance with Section 217 of the Roads Act 1993.

To provide landowners with information on how Council will determine theconstruction of new kerb, guttering and footpaths not included in Council's asset management strategy.

## SCOPE

This policy applies to all requests from landowners for the construction of kerb, guttering and/or footpaths which are not part of Council's strategic direction.

## DEFINITIONS

Footpaths: – are defined as the work constructed for the specific purpose of conveying pedestrian traffic (whether or not it may also be used by bicycle traffic). Footpaths are separate from roads or driveways and are designed for walking and not for vehicles.

Kerb and Guttering: – is defined as the civil works necessary to contain and/or to convey stormwater runoff from the roadway to the stormwater system. the raised edge of a sidewalk or pavement that is used to separate the road from the pedestrian walkway. The gutter is the channel or slope at the edge of the kerb that collects and directs rainwater runoff away from the road and footpath.

## LEGISLATION

Section 217 – Roads Act 1993

**RELATED DOCUMENTS**

~~Council's~~ Narromine Shire Council Pedestrian Access Mobility Plan (2024)
Narromine Shire Council~~'s~~ Disability Inclusion Action Plan (DIAP)
Council's Capital Works Program
Council's Asset Management ~~Strategy and~~ Plan (AMP)~~s~~
~~Council's Property Access and Nature Strips Policy Relevant Australian Standards~~
Statewide Mutual – Best Practice Manual – Footpaths – December 2022
~~Statewide Mutual - Best Practice Manual –Footpaths (Nature strips, medians and shared paths) – August 2019~~

**POLICY STATEMENT**

**Footpaths**

Council will prioritize new footpath construction projects based on the Pedestrian Access Mobility Plan (PAMP) and the Disability Inclusion Action Plan (DIAP). These projects will be funded by Council and included in long-term financial plans and budgets.

If a land owner requests construction of a new footpath that is not identified in the PAMP, DIAP, or Asset Management Plan, Council will:

- Have the area inspected
- Evaluate the project against PAMP and DIAP priorities
- Have the project added to the footpath priority list

If the land owner wishes to proceed with the footpath construction outside of Council's programmed works schedule they will be required to contribute 100% of the construction cost. The length of footpath requiring contribution will be based on the property plan (frontage of property facing the road).

All new footpath infrastructure will be designed and constructed according to Australian Standard AS1428. Existing driveways will remain in place and the footpath will meet on either side. If there is no existing driveway, Council will lay the footpath through the driveway easement.

The new asset will be included in Council's Asset Management Plan to ensure the sustainability of the footpath network.

~~1. Construction of new footpaths will be in accordance with Council's Pedestrian Access Mobility Plan (PAMP), Council's Disability Inclusion Action Plan (DIAP) and Council's Asset Management Strategy and Plans (AMSP). Council will fully fund the construction of these identified assets.~~
   ~~• Requests for construction of new footpaths outside of Council's PAMP, DIAP and AMSP shall only be undertaken following assessment by Council staff toevaluate that the new asset is required, designed to standard, addresses pedestrian and other user safety concerns and provides a structure that willperform well over its entire life.~~
~~2. If Council staff determine the construction of the footpath is feasible, the owners of land adjoining the public road will be liable to contribute half of thecost of its construction as per section 217 of the Roads Act 1993.~~
~~3. Council shall determine the lengths of footpath requiring landowner's contribution based on lengths as defined in the registered property plan forthe subject allotment.~~
~~4. All new footpath infrastructure will be designed and constructed to Australian Standard AS1428 (Set) – Design for Access and Mobility Set.~~
~~5. All existing concrete driveways (or equivalent) will remain in place with thenew footpath to meet it on either side. Where there is no concrete (or equivalent)~~

~~driveway, Council will lay the concrete footpath through the driveway easement.~~

6. ~~The new asset will be included in Council's Asset Management Plan and form part of Council's Integrated Planning and Reporting process to ensure the sustainability of the entire footpath network.~~

**Kerb and Guttering**

Council will prioritize new kerb and gutter construction projects based on historic drainage information and AMPs. The keurb and gutter construction program is funded by Council and included in long-term financial plans and budgets. Council's Stormwater Management Levy is one source of funding for drainage projects.

If a land owner requests kerb and gutter that is not identified in the Asset Management Plan, Council will:

- Have the area inspected
- Evaluate the project against AMP priorities
- Have the project added to the kerb and gutter priority list

If the land owner wishes to proceed with the kerb and gutter construction outside of Council's programmed works schedule they will be required to contribute 100% of the construction cost.

For Council funded projects, Council will install one 3 metre layback (driveway access) within the kerb and gutter at no cost to the landowner. Additional accesses will incur a charge.

1. ~~Council will fully fund the construction of new kerb and guttering via its levy for stormwater management.~~
2. ~~The construction of new kerb and guttering will be in accordance with Council's Asset Management Strategy, Asset Management Plans and Capital Works Program.~~

All new kerb and guttering infrastructure will be designed and constructed toAustralian Standard AS 2876-2000- Concrete Kerbs and Channels (Gutters) – Manually or Machine Placed.

# Road Management Strategy

Adopted by Council:

Resolution Number:

May 2024

**Narromine Shire Council**

## Document Control

| Rev | Description | Created by | Date |
|---|---|---|---|
| 1.0 | Document Created | EMC | June 2013 |
| 2.0 | Document updated following community consultation | EMC | |
| 3.0 | Document updated following restructure | | |
| 4.0 | Document reviewed, formatted and updated based on current guidelines and information – DRAFT Document issued for public exhibition. | AP | July 2022 |
| 5.0 | Document updated and modified after community consultation and streamlining document. Some content was relocated in appendices. | MS | March 2024 |

# Contents

# 1 Introduction

This Roads Management Strategy (the Strategy) has been developed to ensure the operational functions of Council are in line with:

- The legislative requirements such as the NSW Roads Act 1993, and Roads Regulations 2008;
- Relevant guidelines and standards to ensure a consistent and industry adopted approach in terms of road planning, road design, road construction and road maintenance;
- Strategic directions adopted by Narromine Shire Council Asset Management Strategy, Asset Management Plans and Long-Term Financial Plans;
- Community (Residential, Commercial and Industrial) needs and expectations;
- NSW Government Future transport Strategy 2056; and
- Draft Central West and Orana Regional Transport Plan, October 2021

This Strategy describes how Council manages its road network to ensure that Council has a consistent, clear and sustainable approach to its road management and roads operations.

It principally addresses matters relating to roads and streets which are the responsibility of Council as the Roads Authority, these include:

- Regional Roads;
- Local Rural Roads;
- Local Urban Streets;
- Bridges and culverts; and
- Other ancillary infrastructure (roadside drainage, signs, line marking, traffic islands, pedestrian crossings, guard rails, etc.).

The Strategy provides a transparent sustainable management approach for Narromine Shire Council to construct and maintain roads under its control which reflect the needs of the community as the road network authority, to provide infrastructure that allows safe, convenient and comfortable travel to, from, and within the Region. This involves both maintaining existing roads and planning for future improvements. This Strategy seeks to consolidate and define a number of procedures such as:

- Roles and responsibilities for different departments within Council;
- Road hierarchy descriptions, standards and requirements;
- Customer query, complaint, and request management;
- Frequency based inspection regimes;
- Programmed maintenance and intervention standards;
- Capital works identification and prioritisation;

- Levels of service and response guidelines for defects;
- Reporting guidelines, content and audience; and
- Implementation and quality control of road work.

The Local Government Area will experience significant growth in the future as a result of the construction of Inland Rail (requiring temporary accommodation, haul roads, etc.), various developments within the Local Government Area and expansion of the mine at Tomingley, and development.

Further to this, growing attention to extreme weather events and the long-term impacts of climate change have begun to focus efforts nationally and internationally on the ability of society and infrastructure to adapt to and recover from future changed conditions and associated disasters. The term "*resilience*" has generally come to represent this adaptation/recovery ability. In the last decade, resilience has become a priority consideration in the planning, design, construction, operations, and maintenance of infrastructure.

In the transportation sector, a shift in focus has begun to develop guidance on how scientific climate change predictions can be expected to impact transportation infrastructure and operations. More recently, this guidance has included how resilience can be integrated into infrastructure as a means to address both long-term climate change impacts and short-term extreme events.

It is Council's objective to have all roads with hierarchy 1-3 fully sealed by 2050.

# 2 Roads Classifications in NSW

## State Roads

State Roads have the followings function in NSW:

- Links major commercial, industrial and residential areas and distribution centres and ports within the Sydney, Newcastle, Wollongong and Central Coast urban centres;
- Links major NSW towns (pop. 10,000-100,000) with the Sydney, Newcastle, Central Coast and Wollongong urban centres;
- Link major NSW towns with each other where there is significant interaction; and
- Links major regions throughout the State with each other.

## Regional Roads

Regional Roads have the following functions in NSW:

- Links smaller towns within the State Road network;
- Connects smaller towns with each other;
- Performs a sub-arterial function in major urban centres by:
    - Supplementing the State Road network for significant intra- urban flows; and
    - Providing access for significant flows to other commercial and industrial centres.
- Provides access from the State Road network to major recreation and tourist areas of State significance;
- Provides a town or suburban centre relief route for significant flows of through traffic, especially freight vehicles;
- Provides access for significant flows of freight vehicles to major rural intermodal interchanges and urban distribution areas.

The above list is the broad summary of the criteria and there are additional tests for function that are too numerous to provide in this Strategy.

## Local Roads

Local Roads has the following function:

- Provide for local circulation and access

Local roads are the responsibility of Councils to fund, determine priorities and carry out works.

The State Government provides only limited assistance under special programs (e.g. Urban Bus Routes) for local roads.

The Federal Government has a long-standing role in providing road funds to councils. In 2000, the Federal Government introduced the Roads to Recovery Program to provide additional funding to councils. Councils have discretion to use their Federal funds for works on any category of road. More information about road classification can be found on Transport for NSW's website.

# 3 Legislative Requirements

The following is a summary list of legislation and Acts that are applicable to the Roads Assets at Narromine Shire Council, but not limited to:

- Local Government Act, 1993;
- Roads Act, 1993;
- Roads (General) Regulation 2018;
- Biodiversity Conservation Act, 2016;
- Environmentally Hazardous Chemicals Act 1995;
- Environmentally Hazardous Chemicals Amendment Act 1996;
- Environmental Planning and Assessment Act 1979;
- NSW Work Health and Safety Act 2011;
- Mine Health and Safety Act 2004;
- Dangerous Goods Act 1975; and
- All regulations, awards, codes and/or guidelines pursuant to any of such Acts and any enactments in lieu of such Acts as may be repealed.

## 4 Roles and Responsibilities

A description of inter departmental roles and responsibilities are presented in Table 1.

Table 1 Inter-departmental roles and responsibilities

| Description | Role | Responsibility |
|---|---|---|
| Councillors | Determine level of service, and needs of the community.<br><br>Approve and give concurrence to policies, budgets and planned projects. | Review all considerations and make decisions.<br><br>Actively participate at relevant Section 355 Committees or working groups. |
| Mayor | | Ensure decisions are made by councillor concurrence.<br><br>Lobby for support at all levels of Government. |
| General Manager | Ensure Council staff are aware of their roles and responsibilities with regards to roads planning and operations | Implement decisions of council. |
| Director of Finance and Corporate Strategy | Ensure staff are aware of their responsibility, and have appropriate skills and qualifications. | Advise what funding is available for Capital and Operating budgets<br><br>Manage funding revenue and expenditure reporting. |
| Director of Infrastructure and Engineering Services | Ensure staff are aware of their responsibility, and have appropriate skills, competencies and qualifications. | Identify works and operational programs in consultation with various stakeholders and management plans for implementation<br><br>Ensure relevant documentation and strategies are reviewed and updated to align with best practice, market trends and current technology while satisfying Council's risk appetite.<br><br>Ensure allocated projects are delivered on time, to specified quality and budget.<br><br>Communicate priorities to |

| Description | Role | Responsibility |
|---|---|---|
| | | Councillors and the general public.<br><br>Provide scopes and budgets for projects |
| Director Community & Economic Development | Ensure staff are aware of their responsibility, and have appropriate skills, competencies and qualifications | Assist with grant applications or other funding sources in consultation with the Director of Infrastructure and Engineering.<br><br>Assist with public consultation |
| Manager Infrastructure Delivery | Management of the engineering side of road infrastructure operation, maintenance and capital works. | Allocated projects delivered on time, to specified quality and budget.<br><br>Operations are constantly reviewed in line with current best practice and working environment.<br><br>Set maintenance programs and address immediate safety concerns |
| Manager Engineering Services | Responsible for design of capital works, preparation of detailed project plans, monitoring and control of project quality and delivery. | Detailed planning and design, signing off when project milestones are achieved.<br><br>Investigation and prioritisation of projects. Preliminary planning and costing |
| Roads Supervisor | Deliver project plans and project scoping | Day to day project management, supervision and leadership of crews and contractors on site. |
| Civil Designer | Design support | Project investigations, prepare cost estimates, and scope of work from which a detailed plan can be formulated. |
| Asset Inspector | Conduct inspections and recommend corrective actions. | Planned condition assessment inspections, traffic count, visual inspections.<br>Asset management data capture and recording |

## Engineering Services

Engineering Services (ES) has a role in the asset management across all categories of Council assets. In the roads space ES is responsible for:

- The strategic planning of the road network;
- Determination and allocation of budgets for capital works (new and renewal) under the guidance of Finance and Corporate Strategy;
- Grant funding applications to relevant State and Federal roads agencies as well as through the assistance of the Economic Development section to other external funding streams;
- Inspection of network to determine asset performance, condition, replacement and maintenance;
- Creation of Capital Works and Maintenance Programs in consultation with the Infrastructure Delivery group;
- Supporting the relevant sections with Asset Revaluations;
- Financial reporting and acquittal of grants with assistance from the Finance Section; and
- Capturing and recording relevant financial and Asset Management Information System (AMIS) for reporting.

## Infrastructure Delivery

The Infrastructure Delivery team is responsible for:

- Implementing the asset management plans prepared by the ES;
- Implementation of relevant works programs; and
- Recording of relevant data in the Asset Management Information System

## 5 Stakeholders

The table below shows the relevant stakeholders and key engagement requirements.

| Stakeholder | Stakeholder matters | Key messages | Engagement from Council |
|---|---|---|---|
| **State and Federal Government** | Provide funding<br><br>Create and uphold legislation | Council's grant applications to meet set criteria and be submitted on time.<br><br>Equitable distribution of funds between local government areas. | Project updates.<br><br>Local Traffic Committee Meetings.<br>Road Safety Audits. |
| **Councillors** | Have a say in proposed strategy.<br><br>Endorsement of Strategy and Council's long term program of work. Create awareness and supports the implementation of this Strategy. | This Strategic plan is a communication tool and a pathway to a sustainable network<br><br>The plan determines what is required and the priority of the work.<br><br>Regular benchmarking and quality management. KPI's measured ensures Council is getting value for money. There is a strategy, and a fair planning | Council reports<br><br>Staff engagement, Councillor Workshop<br><br>Asset Management Plans<br><br>Long term financial plans |
| **Residents and Commercial Businesses** | Provide feedback on current road state and preferred road state.<br><br>Obey all road rules, including road closures and weight restrictions | Participate in community consultation, including strategy feedback<br><br>"All weather service" regardless of location. Responsiveness to request for service. | Community consultation. |
| **Council staff** | Provide feedback into strategy<br><br>Provide information to the public as needed. Undertake works to deliver the planned works program | This Strategic plan is a communication tool and a pathway to a sustainable fair network with no extra burden to residents, business, or industry within financial constraints of Council.<br><br>The system determines what is required and the priority of the work. Regular benchmarking and quality management. KPI's | Engineering and Assets team reviews, Councillor workshop. |

## 5.1 Community Needs

Road use purpose can loosely be divided into the following categories.

- **Residents** – Utilise urban roads, desire smooth roads to reduce noise, minimal heavy vehicle movement and are aesthetically pleasing. Additionally local residents desire streets that enhance vehicular, pedestrian and bicycle safety, and maintain mobility and access to critical areas of the town including shopping precincts, food eateries and medical facilities.
- **Commercial / Industrial Sector** - To aid the operation of business in general, the commercial / industrial sector requires roads that are aesthetically pleasing, enable easy and safe access to and from their business, provide sufficient parking to potential customers, and provide safe pedestrian access to their premises.
- **Agriculture** - To aid the operation of business in general, the agriculture sector requires roads that are trafficable in all weather, have pavement that can withstand high heavy vehicle traffic and allow connectivity to agricultural hubs. Agricultural users also require roads to be sufficiently wide and bends appropriately formed to enable long vehicles including road trains to travel safely. Bypasses around towns and away from urban areas are important to this user group.
- **Visitors** - Visitors require safe roads that minimise delays and an aesthetically pleasing township.

# 6 Asset Planning And Asset Lifecycle

## General

Transport for NSW (TfNSW) is the Responsible Road Authority for funding and managing the arterial road network (State Roads) that passes through Narromine Shire which consists of:

- Mitchell Highway (National Route 39) and its corresponding road reserve,
- Newell Highway (National Route 32) and its corresponding road reserve,
- Manildra and Culling Streets and their corresponding road reserve.

Narromine Shire Council would in the future like to transfer the a number of roads to State jurisdiction, these are shown in Table 3.

Table 3 Proposed roads for reclassification

| Road Name | Proposed Status | Current Status | Length (km) | Average Annual Daily Traffic (AADT) | % Heavy Vehicles |
|---|---|---|---|---|---|
| Peak Hill Rd (MR 89) | State | Regional | 37.5 | 1019 | 35 |
| Warren Rd | State | Local | 0.7 | TBA | TBD |
| Eumungerie (MR 572) | State | Regional | 34.77 | 770 | 46 |
| Trangie-Dandaloo (MR 347 D) | State | Regional | 31.09 | 423 | 25 |
| Trangie- Collie (MR 347 C) | State | Regional | 44.66 | 695 | 25 |
| Tullamore Road (MR 354) | State | Regional | 41.18 | 787 | 48 |
| Gainsborough[1] | Regional | Local | 1.8 | Approx. 787 | Approx. 48 |

[1] Gainsborough Road has been identified to be upgraded to convey heavy vehicles from Tullamore Road to Tomingley / Peak Hill Road (MR 89) through Narromine.

Narromine Shire Council is the Responsible Road Authority for managing the remaining road network within the Narromine shire boundaries. Narromine's Road network is classified into 3 categories:

- State Roads managed by Transport for NSW with capital works funded by the State Government;
- Regional Roads managed by Council with capital works majority funded by State Government while maintenance works are funded by Council;
- Local Roads managed by Council and majority funded by Council with some federal assistance.

Generally, Town Streets (Narromine, Trangie, and Tomingley) are managed and funded entirely by Council.

Council's Road Register includes details of public roads for which Council is responsible. Council is generally responsible for the overall management and development of the Council's local road network. Council does not maintain privately owned roads.

Inspections of the road network form the cornerstone of the maintenance or renewals program and are undertaken on a regular basis to ensure that the road assets are being maintained in an appropriate manner and that adopted intervention levels are being met.

## Sustainability

Consideration must be given to reduce dependence on non-renewable natural resources such as gravel.

A circular economy that uses a systems-focused approach and involves industrial processes and economic activities that are restorative or regenerative by design, enable resources used in such processes and activities to maintain their highest value for as long as possible, and aim for the elimination of waste through the superior design of materials, products, and systems (including business models) should be adopted. It is a change to the model in which resources are mined, made into products, and then become waste. A circular economy reduces material use, redesigns materials to be less resource intensive, and recaptures "waste" as a resource to manufacture new materials and products.

Council is committed to utilizing sustainable material and products where possible and is constantly reviewing new technologies and procedures to increase operational sustainability.

## Gravel

Council has identified a number of source within the LGA to source gravel for road construction. Council is the owner and operator of the following gravel pits.

*Table 1: NSC owned and operated gravel pits*

| Quarry | Comment on status, operation and products | Comment on ability to supply materials | Lot and DP Number |
|---|---|---|---|
| Collyburl | Borrow pit | Medium, used in road renewal/ restoration where appropriate. | Lot 1 DP 117366 |
| Fairview | Quarry | Medium, no recent workings or stockpiles evident | Lot 46 DP 755105 |
| Merrylands | Borrow pit, weathered granite | Limited, further exploration required to define resource | Lot 39 DP 755121 |
| Lot 90 | Quarry | High, based on neighbouring Macquarie Manor operation. No workings yet. Recently obtained confirmation regarding land- use. | Lot 90 DP 727134 |

# 7 Narromine Shire Council's Town Streets

The table below lists all the town streets within the Local Government Area.

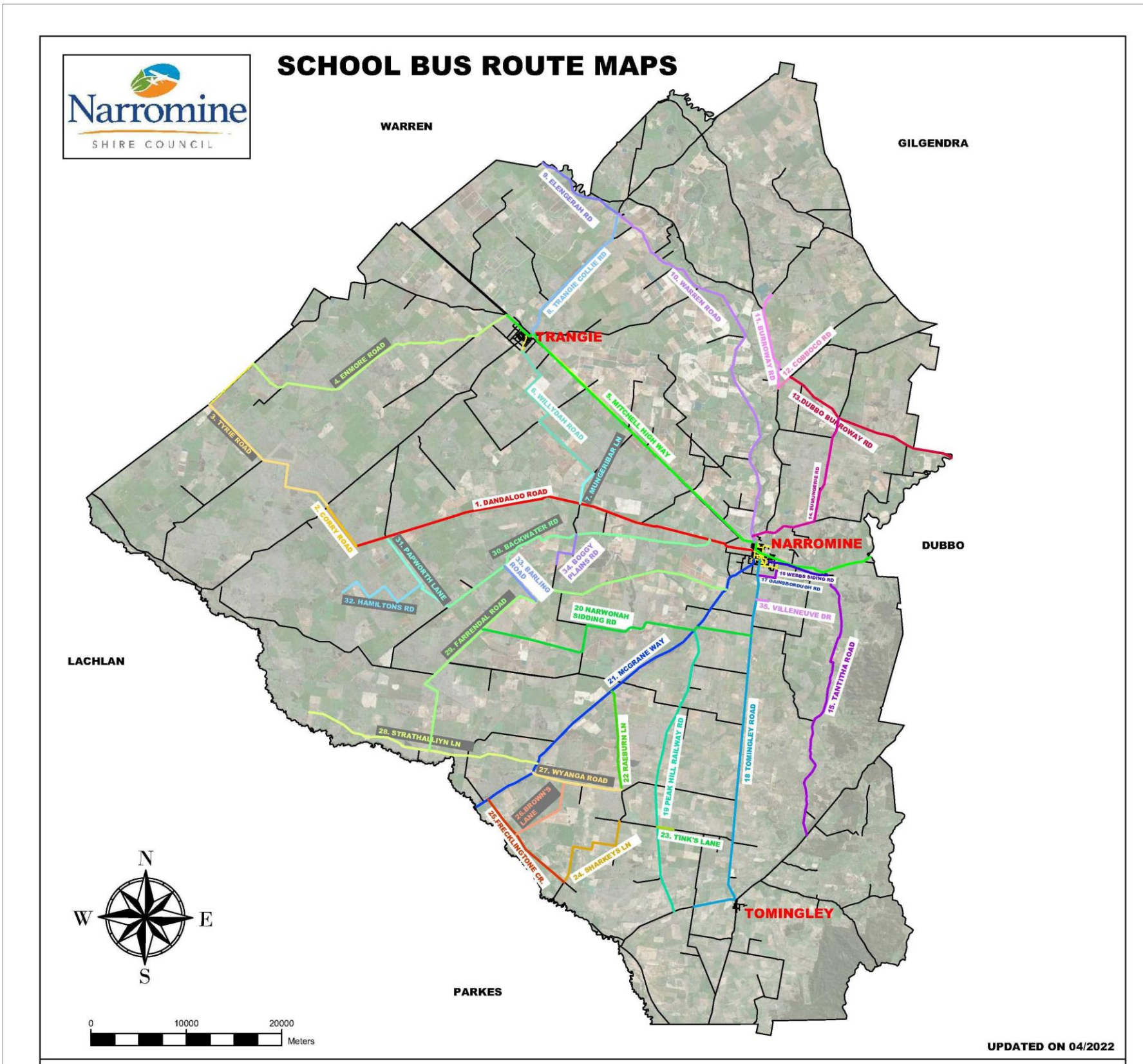
Table 16 Town streets within the Narromine LGA

| Town | Road Name | Road Number | Town | Road Name | Road Number |
|---|---|---|---|---|---|
| Narromine | FIRST AVENUE | 301 | Narromine | FIFTH AVENUE LANE WAY | 361 |
| Narromine | SECOND AVENUE | 302 | Narromine | THIRD AVENUE LANE WAY | 362 |
| Narromine | THIRD AVENUE | 303 | Narromine | DANDALOO STREETLANE WAY | 363 |
| Narromine | FOURTH AVENUE | 304 | Narromine | MERILBA STREET LANE WAY | 364 |
| Narromine | FIFTH AVENUE | 305 | Narromine | TEMOIN STREET LANE WAY | 365 |
| Narromine | SIXTH AVENUE | 306 | Narromine | MERYULA STREET LANE WAY | 366 |
| Narromine | A'BECKETT STREET | 307 | Narromine | ALAGALAH STREET LANE WAY | 367 |
| Narromine | ALGALAH STREET | 308 | Narromine | MANILDRA STREET LANE WAY | 368 |
| Narromine | OLD BACKWATER ROAD | 309 | Narromine | BOOTH STREET LANE WAY | 369 |
| Narromine | BIRCH STREET | 310 | Narromine | CULLING STREET LANE WAY | 370 |
| Narromine | BOOTH STREET | 311 | Narromine | ELLENGERAH STREET LANE WAY | 371 |
| Narromine | BURRAWAY ST | 312 | Narromine | KINGSFORD SMITH PLACE | 372 |
| Narromine | CATHUNDRIL STREET | 313 | Narromine | NANCY BIRD-WALTON DRIVE | 373 |
| Narromine | COMMODORE CRES | 314 | Narromine | EWEN WAY | 378 |
| Narromine | CULLING ST | 315 | Narromine | POWELL PLACE | 379 |
| Narromine | DANDALOO ST | 316 | Narromine | HAYDEN CIRCUIT | 377 |
| Narromine | DAPPO RD | 317 | Narromine | MURGAH STREET | 375 |
| Narromine | DAVIS DRIVE | 318 | Trangie | ALBERT STREET | 401 |
| Narromine | DERRIBONG AVE | 319 | Trangie | ALLEN STREET | 402 |
| Narromine | DERRIBONG ST | 320 | Trangie | BELGROVE STREET | 403 |
| Narromine | DUFFY STREET | 321 | Trangie | BIMBLE BOX LANE | 404 |
| Narromine | ELLENGERAH STREET | 322 | Trangie | BURRAWAY STREET | 405 |
| Narromine | ELM CLOSE | 323 | Trangie | CAMPBELL STREET | 406 |
| Narromine | GARDEN AVENUE | 324 | Trangie | CROUDACE STREET | 407 |
| Narromine | INDUSTRY AVENUE | 325 | Trangie | DANDALOO STREET | 408 |
| Narromine | JERRY SMITH STREET | 326 | Trangie | DERRIBONG STREET | 409 |
| Narromine | KURRAJONG PARADE | 327 | Trangie | ENMORE STREET | 410 |

| Town | Road Name | Road Number | Town | Road Name | Road Number |
|---|---|---|---|---|---|
| Narromine | MACQUARIE DRIVE | 328 | Trangie | GEORGE STREET | 411 |
| Narromine | MANILDRA STREET | 329 | Trangie | GOAN STREET | 412 |
| Narromine | MAPLE CRESCENT | 330 | Trangie | HARRIS STREET | 413 |
| Narromine | MERILBA STREET | 331 | Trangie | JOHN STREET | 414 |
| Narromine | MERINGO STREET | 332 | Trangie | MCLEAN STREET | 415 |
| Narromine | MERYULA STREET | 333 | Trangie | MULLAH STREET | 416 |
| Narromine | MINGELO STREET | 334 | Trangie | MUNGERY STREET | 417 |
| Narromine | MINORE STREET | 335 | Trangie | NICHOLAS STREET | 419 |
| Narromine | MOSS AVENUE | 337 | Trangie | POINCAIRE STREET | 420 |
| Narromine | MURGAH STREET | 338 | Trangie | SWIFT STREET | 421 |
| Narromine | NELLIE VALE | 339 | Trangie | VICTOR STREET | 423 |
| Narromine | NYMAGEE STREET | 340 | Trangie | WEEMABAH STREET | 424 |
| Narromine | OAK CRESCENT | 341 | Trangie | ENMORE STREET LANE WAY | 425 |
| Narromine | PAYTON CLOSE | 342 | Trangie | MULLAH STREET | 426 |
| Narromine | PEGALE PLACE | 343 | Trangie | SWIFT STREET | 427 |
| Narromine | SCOTT COURT | 344 | Trangie | WEEMABAH STREET LANE WAY | 428 |
| Narromine | SHORT STREET | 345 | Trangie | MACLEAN DRIVE LANE WAY | 429 |
| Narromine | SUNGIFT AVENUE | 346 | Trangie | GOAN STREET LANE WAY | 430 |
| Narromine | TANCRED STREET | 347 | Trangie | DANDALOO STREET LANE WAY | 432 |
| Narromine | TEMOIN STREET | 348 | Trangie | VICTOR STREET LANE WAY | 433 |
| Narromine | TERANGION STREET | 349 | Trangie | NARROMINE STREET LANE WAY | 434 |
| Narromine | TRANGIE ROAD | 350 | Tomingley | BIRIDOO STREET | 441 |
| Narromine | WATTLE CRESCENT | 351 | Tomingley | BUDGERIE STREET | 442 |
| Narromine | WARREN RD | 352 | Tomingley | BURRELL STREET | 443 |
| Narromine | WRIGHT ROAD | 353 | Tomingley | GENANAGIE STREET | 444 |
| Narromine | CROSSLEY DRIVE | 355 | Tomingley | GUNDONG STREET | 447 |
| Narromine | BOWDEN FLETCHER | 356 | Tomingley | MERILBA STREET | 445 |
| Narromine | TOM PERRY | 357 | Tomingley | MYALL STREET | 446 |
| Narromine | SIXTH AVENUE LANE WAY | 360 | Tomingley | YAROBIL STREET | 448 |

## 8 School Bus Routes

School bus routes will be confirmed every 4 years, with new routes added and routes no longer in service removed. The map below shows current school bus routes.




**LIST OF COUNCIL ROADS USED FOR SCHOOL BUSES**

| | | | | | |
|---|---|---|---|---|---|
| 1. DANDALOO ROAD | 7. MUNGERIBAR LN | 13.DUBBO BURROWAY RD | 19 PEAK HILL RAILWAY RD | 25. FRECKLINGTON'S CR | 31. PAPWORTH LANE |
| 2. CORRY ROAD | 8.TRANGIE COLLIE RD | 14. EUMUNGERIE RD | 20. NARWONAH SIDING RD | 26. BROWN'S LANE | 32. HAMILTONS RD |
| 3. TYRIE ROAD | 9. ELLENGERAH RD | 15.TANTITHA ROAD | 21. MCGRANE WAY | 27. WYANGA ROAD | 33. BARLING ROAD |
| 4. ENMORE ROAD | 10. WARREN ROAD | 16 WEBBS SIDING RD | 22 RAEBURN LN | 28. STRATHALLIYN LN | 34. BOGGY PLAINS RD |
| 5. MITCHELL HIGH WAY | 11. BURROWAY ROAD | 17 GAINSBOROUGH RD | 23. TINK'S LANE | 29. FARRENDALE ROAD | 35. VILLENEUVE DR. |
| 6. WILLYDAH ROAD | 12. COBBOCO RD | 18 TOMINGLEY ROAD | 24. SHARKEYS LANE | 30.BACKWATER RD | |

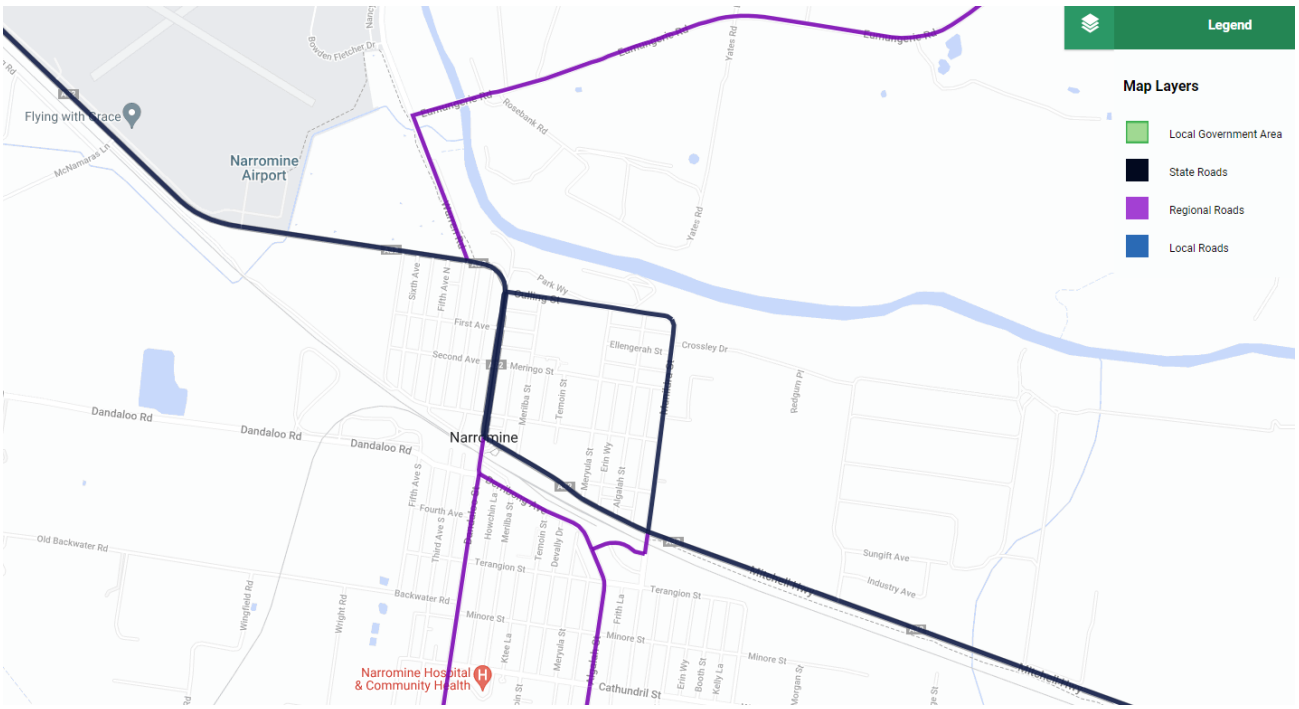
Figure 15 School bus routes as at 29 April 2022

# 9 Narromine Heavy Vehicle Route

Tomingley (MR 89) and Eumungerie Roads (MR 572) is the preferred alternative heavy vehicle route to the Newell Highway bypassing Dubbo.

Therefore, Narromine Shire Council in the medium term and in conjunction with all relevant stakeholders should develop a long-term heavy vehicle bypass strategy for Narromine. Future versions of this document should reflect the preferred long-term options and a corresponding funding mechanism to ensure it is delivered.

The map below shows the current short-term strategy in terms of heavy vehicle movements through Narromine. Council is in the process of creating a Heavy Access Strategy to outline current and planned heavy vehicle routes and associated projects in more detail.




Map 1 Heavy vehicle route through Narromine

# 10 Road Hierarchy Definitions

Council's road hierarchy endeavours to match the class of road to its function and to the needs of the community.

The objective of the road hierarchy is to seek a fair and sustainable system based on the variables listed below. Consideration should be given to the road's intended purpose and traffic behaviour i.e. constant or seasonal (intensity-frequency-duration).

The Road Hierarchy is presented in Table 17 below. The desired design standard is achieved by using current guidelines (Austroads, ARRB, IPWEA, research papers, etc.) and is based on environmental, geotechnical and other relevant technical criteria for a particular segment of road.

Maintenance frequency as well as affordability must be considered to ensure level of services are met. Road users should be informed regarding maintenance frequencies, especially to obtain "buy in" or ownership of a particular road as well as to manage expectations of those particular road users. This is to ensure that all roads receive the required maintenance as per the agreed standards and intervals therefore ensuring an equitable allocation.

The Register of Public Roads establishes a Council road classifications or "hierarchy" which is based on the function that each road performs. The road hierarchy adopted by Council reflects the perceived risk associated with the vehicle usage of each road type and is used to differentiate service levels and maintenance standards. Local circumstances such as the influence of schools, hospitals, community facilities or particular concentrations of older, disabled or other potentially vulnerable users are also considered.

### Primarily Variables

The Average Annual Daily Traffic (AADT) which is an international standard measurement based on vehicles per day (VPD) / Average Daily Traffic (ADT) converted to a standard two axle vehicle.

### Secondary Variables

Secondary variables for roads on the cusp of meeting the AADT requirements for a higher classing include:

- Percentage of heavy vehicles as a function of the AADT (i.e. high ratio heavy/light vehicles);
- Horizontal and vertical alignment of the road (i.e. hilly or curved);
- Used heavily by harvest traffic / livestock transport;
- No alternate routes that could be taken;
- Having no gates / grids on the road;
- Proximity to School Bus runs; and
- Roadside drainage and proximity / location of floodways

*Table 2: Road Hierarchy*

| Class | Description | Image | Function | Desired Design Standard | ~Km's of Network |
|---|---|---|---|---|---|
| 1 | Arterial Road |  | **Primary:**<br>• AADT > 500<br>**Secondary:**<br>• Traffic movement between regions and service centres.<br>• Permanent School Bus Route<br>• Important heavy vehicle route | • 11m wide pavement and appropriate formation width<br>• Bitumen sealed surface, minimum 9m wide<br>• Two lane carriageways minimum 3.5m each<br>• Minimum 1m stabilised and sealed shoulder<br>• Pavement designed by specialist<br>• Longitudinal and cross drainage.<br>• Line marked centre and edges<br>• Guideposts and other traffic facilities<br>• Guardrail where applicable | 190.1km Sealed<br><br>0km Unsealed |
| 2 | Sub-Arterial Roads |  | **Primary:**<br>• 150< AADT <499<br>**Secondary:**<br>• Traffic movement between collector or access road and arterial road.<br>• Permanent School Bus route<br>• Important heavy vehicle route | • 10m wide pavement and appropriate formation width<br>• Bitumen sealed surface, minimum 8m wide<br>• Two lane carriageways minimum 3.5m each<br>• 0.5m/0.5 Sealed/ unsealed shoulder - stabilised<br>• Pavement designed by specialist<br>• Longitudinal and cross drainage.<br>• Line marked centre<br>• Guideposts and other traffic facilities<br>• Guardrail where applicable | 178.21km Sealed<br><br>0km Unsealed |
| 3 | Collector Road |  | **Primary:**<br>• 70< AADT <149<br>**Secondary:**<br>• Traffic movement between access road and arterial or sub-arterial road.<br>• Permanent School Bus route<br>• Collects from a limited number of local access roads to distribute to an arterial or collector road | Council identifies the following as the bench mark standard for a hierarchy 3 road*:<br>• 8m formation<br>• Sealed with a width of at least 7m<br>• Dual carriageway<br>• Two lane carriage way<br>• Pavement based on design ESA for Heavy Vehicles with CBR of 3<br>• Longitudinal and cross drainage.<br>• No line marking<br>• Guardrails and other safety devices | 316.7km Sealed<br><br>172km Unsealed |
| 4 | Access Road |  | **Primary:**<br>• 20<AADT<69<br>**Secondary:**<br>• Road to access limited properties where people actually reside (rural: ≥ 4 houses).<br>• Permanent School Bus OR Route used to access permanent school bus | • 8m wide formation where appropriate<br>• Unsealed surface, minimum 7m wide gravel<br>• Pavement based on design ESA for Heavy Vehicles with CBR of 3<br>• Longitudinal and cross drainage<br>• Guideposts and other traffic facilities | 67.92km Sealed,<br><br>302.59km Unsealed |
| 5 | Convenience Links |  | **Primary:**<br>• AADT<19<br>**Secondary:**<br>• Road to access limited properties where people actually reside (rural: ≤ 3 houses)<br>• Route used to access a permanent school bus | • 8m wide formation where possible<br>• Unsealed surface, minor gravelled sections by exception<br>• Longitudinal and cross drainage<br>• Guideposts and other traffic facilities<br>• Pavement based on design ESA for Heavy Vehicles with CBR of 3 | 5.2km Sealed,<br><br>272km Unsealed |
| 6 | Service Track |  | **Primary:**<br>• AADT<5<br>**Secondary:**<br>• Access to Private or single property | • Not maintained by Council<br>• Unformed<br>• No Longitudinal and cross drainage<br>• User pays for any grading/maintenance | 1.94km Sealed<br><br>76.7km Unsealed |

*Council notes that currently there are a number of hierarchy 3 roads that do not meet this standard. Council is working towards upgrading and improving these roads as part of the long-term strategy.

Council's Road Hierarchy is included in Appendix A.

# 11 Temporary Closure of Public Roads

## General

Council may close sealed or unsealed roads at any time for various purposes, the most urgent being safety hazards. Council's Temporary Closure of Roads Procedure details the process behind road closures.

## Liability for Damage to a Public Road

A person who causes damage to a public road, or to any road work on a public road or any traffic control facility on a road or road related area within the meaning could be liable to pay to the roads authority the cost incurred by that authority in making good the damage. If the damage referred was caused by a motor vehicle or vessel, the owner and the driver of the motor vehicle or, as the case may be, the owner and the master of the vessel are jointly and severally liable for the damage.

Ordinary wear and tear caused by reasonable use of a public road is excluded, except where the road was closed.

# 12 Road Maintenance

Council's road network continues to increase as new roads are created and previously unsealed roads become sealed. As a result Council's maintenance activities continue to increase. Other factors including aging infrastructure, increasing vehicle weights and increased customer expectation has also increased the required maintenance frequency and required performance of Council roads.

Council has a number of roads that have a narrow seal, this is a seal of 3m, a single carriageway. These roads do not meet current Transport Standards, are a safety risk and are nearing their end of life. Council intends to undertake full reconstruction of these roads to increase seal with to at least 7 metres, however, this is a significant investment both in time and money.

# 13 Identifying And Prioritising Road Works

Council prioritises its work program by using a points-based system to evaluate risk. This system considers: road hierarchy, location, hazard type and road condition.

Calculated Road Risk Ranking Scores used to prioritise roadworks with the highest score having the highest priority.

The formula used to determine the Risk Ranking of a road is:

**Road Risk Ranking (/75) = Hierarchy (/25) + Generic Event Risk (/25) + Condition Assessment (/25)**

The process in determining the Risk Rating of a particular Road is given below

**Step 1**: Determine Hierarchy Rating (Allocated Points /25)

*Table 3: Risk Rating - Road Hierarchy*

| Hierarchy | Description | Allocated Points |
|---|---|---|
| Class 1 | Arterial Road | 25 |
| Class 2 | Major collector Road | 20 |
| Class 3 | Minor collector Road | 15 |
| Class 4 | Local Access Road | 10 |
| Class 5 | Convenience link | 5 |
| Class 6 | Not Maintained by Council | 0 |

**Step 2:** Determine the Likelihood and Consequence of the event occurring **(Score/25)**

- **PART A:** Worst case event – Assess the worst that can happen in each category as a result of the asset in its current condition. The worst Assessment becomes the "Consequence", in the risk matrix in PART B.

| Assessment | Public Safety & Danger | Political | Environmental | Financial | Customers | Public Health |
|---|---|---|---|---|---|---|
| **Catastrophic** Very High impact with very significant Consequences | Fatality or other life threatening incidents. | Sustained adverse media, Loss of confidence in Council. State / Federal MP's involved. | Large scale adverse impact to Environment. Prosecution for negligent act. | >$1M Rehab Costs / lost revenue | Affects > 10% Shire, Widespread complaints | Widespread Properties unable to access medical facilities / services |
| **Severe** High impact with major Consequences | Hospitalisation with multiple serious injuries | Considerable community concern, adverse local media, Mayor / GM Involved. | Significant adverse impact to Environment. Prosecution. | $200k Rehab Costs | Affects 2%-10% Shire. Multiple complaints | Multiple properties unable to access medical facilities |
| **Moderate** Noticeable Impact with visible Consequences | Injury requiring 1 or more day/s off work | Some public concern, multiple letters / Calls received, multiple Councillors involved | Localised adverse impact to Environment. Compliance breach | >$50k Rehab Costs / lost revenue | Affects less than 2% (100 people). Some complaints | Few properties unable to access medical facilities / services |
| **Minor** Minor impact with some Consequences | Injury requiring medical treatment (e.g. cut require stiches) | Minor public concern, Isolated letters / Calls received. Single Councillor involved | Short term reversible impact to Environment. | >$20k Rehab Costs/ lost revenue | Affects less than 1% (50 people). Isolated complaints | Single property unable to access medical facilities / services |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Insignificant**<br>Very Minor impact with Insignificant Consequences | Injury requiring first aid (e.g. Abrasions) | Minimal public concern, single letter / Call received | Temporary Environmental degradation and immediately restored | Minor rehab costs/ lost revenue | Affects less than 10 people. A single complaint | Time to access medical facilities / services is increased |

- **PART B:** Decide likelihood of the event occurring and therefore calculate the "Event Risk" score

| RISK | Very Likely<br>>90% chance in next 12 months | Likely<br>>50% chance in next 12 months | Could Happen<br>Less than 50% chance in next 12 months | Unlikely<br>Less than 50% chance ever | Very Unlikely<br>Less than 10% chance ever |
|---|---|---|---|---|---|
| Catastrophic<br>Very High impact with very significant Consequences | 25 | 20 | 15 | 10 | 5 |
| Severe<br>High impact with major Consequences | 20 | 16 | 12 | 8 | 4 |
| Moderate<br>Noticeable Impact with visible Consequences | 15 | 12 | 9 | 6 | 3 |
| Minor<br>Minor impact with some Consequences | 10 | 8 | 6 | 4 | 2 |
| Insignificant<br>Very Minor impact with Insignificant Consequences | 5 | 4 | 3 | 2 | 1 |

**Step 3**: Condition Assessment Criteria **(Score/25)**

| Condition Assessment | | Catastrophic (25) | Severe (20) | Moderate (15) | Minor (10) | Insignificant (5) |
|---|---|---|---|---|---|---|
| Issue | Description | Very High impact with very significant Consequences | High impact with major Consequences | Noticeable Impact with visible Consequences | Minor impact with some Consequences | Very Minor impact with Insignificant Consequences |
| Structural | Drainage | Unshaped or non- existent | poorly shaped, significant erosion | unevenness, some erosion | minor erosion, works ok | formed drains minimal erosion |
| Structural | Cross Section Shape / Road Profile | Severe Irregularities impeding drainage causing localised ponding. Water flows to the centre on the road. | Obvious development of irregularities that will impede drainage and form depressions | Some unevenness with Camber (Less than 2%) | Good Camber (2%-4%) | Well formed Camber (>4%) |
| Serviceability | Ride quality Roughness Corrugations | IRI* Sealed <2 , unsealed <4 | IRI Sealed <4 , unsealed <8 | IRI Sealed <6 , unsealed <12 | IRI Sealed <8 , unsealed <14 | IRISealed >8 , unsealed >14 |
| Serviceability | Local Road Surface Defects | >10% area trafficable area affected. >100mm deep | >10% area trafficable area affected. >50mm deep | 5%-10% area trafficable area affected. <15mm deep | 1%- 5% area trafficable area affected. <15mm deep | < 1% area trafficable area affected. <15mm deep |
| Serviceability | Signage and Furniture, Line marking | Dangerous condition / location, Road signs & many guide posts missing | Too close to road, Signs / posts in poor conditions, lines need marking | Fair condition, though some appropriately placed | Reasonable condition and appropriately placed | In good condition and appropriately placed |
| Safety | Rutting | Extreme Rutting > 4m long, >100mm Deep | Heavy patches > 4m long, >50mm Deep | Moderate patches > 4m long, <50mm Deep | Moderate patches > 4m long, <15mm Deep | Small Localised, < 4m long, <15mm deep |
| Safety | Edge drop off / Edge Break | Extreme Edge Break > 300mm, drop, >75mm | Heavy Edge Break > 300mm, drop, <75mm | Moderate Edge Break > 300mm, drop, <50mm | Minor Edge Break > 200mm, drop, <30mm | Good Edge Break <100mm, drop, >10mm |

# 14 Operations

## General

When managing a road network there are two areas where funds need to be injected. They are:

- **Asset Preservation:** Maintenance of the road network, including Reactive Maintenance (i.e., pothole patching), Programmed Maintenance (i.e. Grading), and Renewals (i.e. Resealing and Resheeting); and
- **Asset Enhancement**: Improvements to the road network, including improvements to geometry, pavement strengthening, road widening and sealing of unsealed roads (ie, road reconstruction)

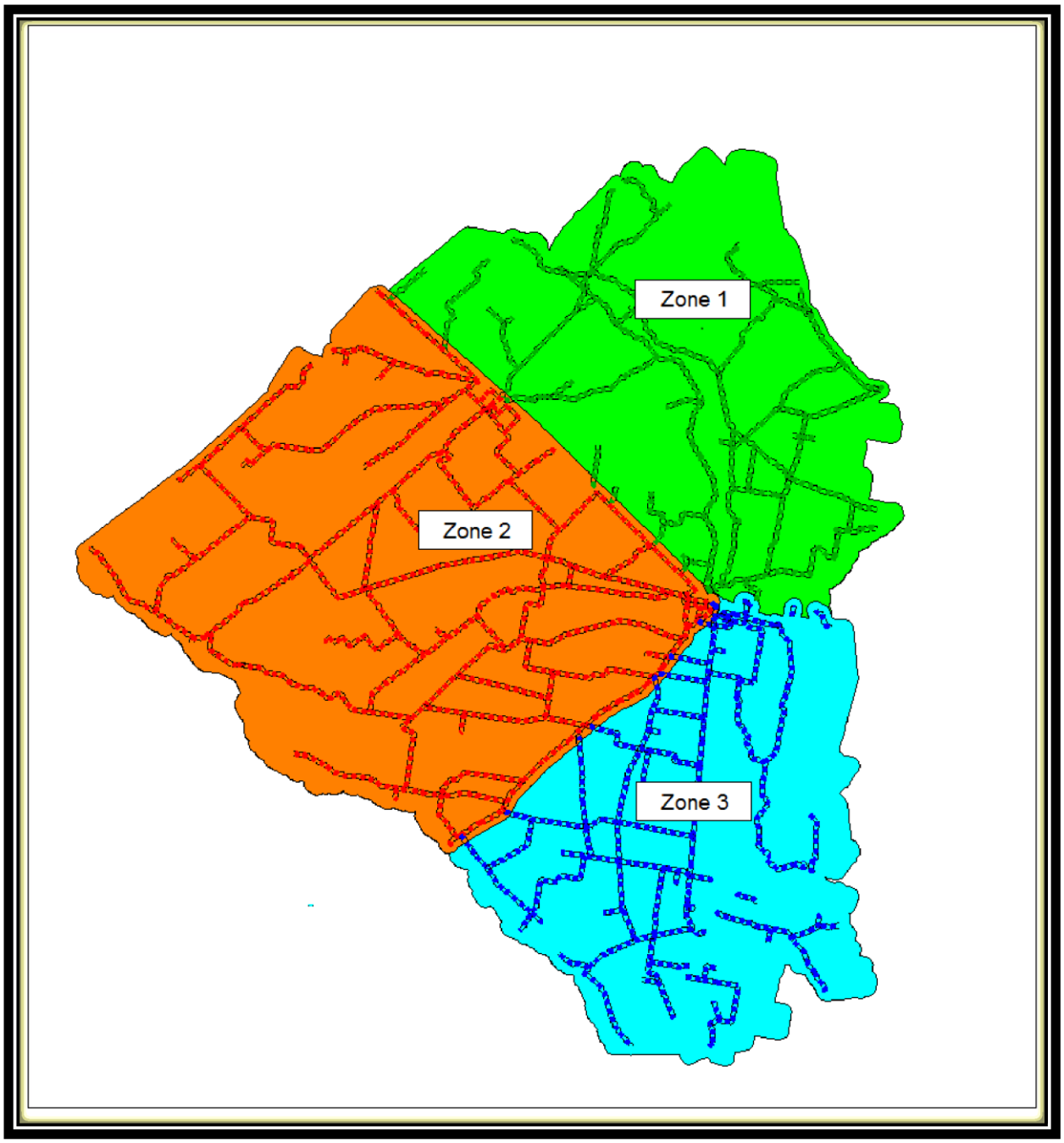
Strategies that are currently adopted by Council for the road network include:

- An annual roads inspection program to identify and assess the condition, quality, function and safety of the roads surface as well as drainage, signage, and to log and report any defects.
- Ongoing vehicle count program to keep up to date information on road usage and heavy vehicle monitoring.
- An unsealed road maintenance grading program which seeks to achieve each road in the shire graded either every year, every second year or every third year with an average return frequency of 18 months but no longer than three (3) years.
- Road maintenance grading for unsealed roads to commence after harvest season (based on road hierarchy), in preparation for the following maintenance grade or harvest season. This ensures that the longevity of the road asset is maintained. Council may consider the frequency and duration of harvests and adjust its maintenance program accordingly.
- A shoulder maintenance grading programme which is integrated with the bitumen resealing programme where possible to achieve the serviceability benefits of a wider seal.
- Capital works road construction program to widen existing sealing to the correct standards, and lay new seal on identified unsealed roads.
- Laser profiling program to get an independent, accurate gauge of the roads roughness that can be used to compare roads, prioritise work and aid in grant applications.
- Grid removal program to remove cattle grids that are no longer required and/or are not up to standard and/or a safety hazard.
- Road side verge slashing program funded by the RFS to reduce fire hazards.

- Road side tree lopping/vegetation removal program to proactively remove potential hazards or debris that could fall on the road, or reduce road safety.
- Road side verge spraying program, to kill off, inhibit and prevent growth of grass and weeds on the sides of the road and at intersections. This intends to aid in shoulder grading on sealed roads, protect drainage, reduce the fire risk, increase sight distances and encourage animals to stay away from the road.
- A bitumen resealing programme to ensure the protective bitumen surface course of any road doesn't attain an age of more than 20 years in the local road, 15 years on Regional roads, and 10 years in the more highly trafficked town street areas. This is dependent on the condition of the existing seal.
- An over-arching Council objective of sealing all roads with hierarchy 1-3 fully sealed by 2050.
- A kerb and gutter construction and reconstruction programme to ensure that every residential property in the urban area (excluding rural residential areas) has a kerbed and guttered frontage and that the road contains stormwater runoff to prescribed service level standards.
- Footpath construction and reconstruction programme to ensure that every residential street in the urban area (excluding rural residential areas) has a designated footpath on at least one side of the street to prescribed service level standards.
- Temporary closure of public roads to ensure road user safety and to protect the road asset.

## Road Zones

Narromine LGA is divided into three road zones which is illustrated in the figure below.



## Roads Inspection Program

A planned inspection system is considered essential to:

- Effectively manage the maintenance program;
- Enable Council to be proactive in maintaining the road infrastructure (thereby reducing complaints and enhancing Council's public image); and
- Provide a risk management system in order to reduce public liability claims.

In deciding if a defect is a hazard, the following needs to be considered:

- The road hierarchy and function (condition, geometry, formation / sealed widths, etc);
- The location of the defect (i.e., in wheel path);
- The effect on pedestrians, cyclists and motor cyclists and other road users;
- The position or proximity in relation to schools, hospitals, aged care facilities, businesses, pedestrian and cycle paths etc;
- Traffic volume (AADT);
- Sharp bends or crests i.e. sight distance issues;
- Speed limit; and
- Weather conditions, soil conditions, vegetation and the environment.

Council undertakes the following road inspections:

- Hierarchy 1 roads are inspected monthly
- Hierarchy 2 – 5 roads are inspected every 12 months.
- Hierarchy 6 roads are not inspected

Council staff, particularly members of the Engineering Department regularly travel Council Roads and undertake ad-hoc inspections. Safety concerns of hazards are reported immediately and inspected.

## Road Count Program

A rolling program occurs to assist Council to maintain up to date information about usage on Council's road network.

Information gathered includes:

- AADT (Average annual daily traffic) measured as two axle pairs;
- VPD (Vehicles per day) measured as vehicle regardless of axles;
- Speed of vehicles;
- Direction of vehicles;
- % heavy vehicles;
- Vehicle class
- Design Equivalent Single Axis

## Capital Road Works: New Road Construction or Upgrades

The 10 Year capital works programs are locked in only for the current and next financial year. Roads identified for capital works from year 2 to year 10 will have to go through an annual re- ranking based on:

- Priority due to safety;
- Condition assessments based on the current year's road inspection data; and
- Future growth or change in traffic behaviour.

The Capital works program is entirely dependent on external grant funding and is susceptible fluctuations outside of Council control.

The program itself is located within the Transport Asset Management Plan which is updated annually.

## Road Renewals

### Resealing

The aim of the Resealing program is to upgrade /renew the entire sealed network. The renewal program is based on condition assessment of the wearing surface. Where possible the following criteria will apply:

- Once every 20 years for Local roads;
- Once every 15 years for regional roads; and
- Once every 10 years for town streets in Narromine, Trangie, and Tomingley.

## Resheeting

The 10-Year resheeting programs are "locked in" only for the current and next financial year. Roads identified for resheeting from year 2 to year 10 will have to go through an annual re- ranking based on priority due to safety and condition assessments based on the current year's road inspection data.

## Reactive Road Maintenance

There is an annual budget set for reactive roads maintenance based on history of previous years. This budget allows for work such as pot hole repair, road patching, removal of debris, and to address imminent safety issues that may present during the year that require immediate attention.

## Programmed Road Maintenance

The programmed maintenance program for roads is a rolling 3-year program whereby each road, depending on its hierarchy, will receive appropriate maintenance required to keep it up to the minimum standard, subject to funds being available. "Win rows" and "back cuts" will be levelled to increase road user safety.

### a) Sealed roads

Sealed roads will receive shoulder grading and drainage and vegetation clearing in the table drains (on average 6 passes with a grader on each side). It is budgeted that on average a grader crew will complete 2km /day on each side.

### b) Unsealed roads

Unsealed roads will receive a full width maintenance grade including the drainage and vegetation clearing in the table drains (on average 9 passes with a grader). It is budgeted that on average grader crew will complete 2km /day for an average 8m wide formation, since most Council's roads require major formation work.

# 15 Levels Of Service

Council is committed to ensuring roads are safe for traveling vehicles at all times and conditions. In additional to the planned inspections listed above, Council will undertake inspections and repairs on road defects and safety hazards reported either internally or externally. This section details the target response times for hazards and defects and presents some examples of potential defects.

Road maintenance can occur in two methods:

- Defects to be repaired under planned maintenance (road or shoulder grading) or within a planned program of work (renewal or capital).
- Defects that require immediate action as they may be hazardous or represent a risk of asset deterioration. These are done as reactive maintenance (patching, filling pot holes).

Where possible, defects that require immediate action are dealt with by repairing or making safe the defect at the time of inspection/identification. If this isn't possible, the ensuing action must involve prompt erection of warning signs (as outlined in Council's standard "Traffic Control Plans) followed by repair as soon as practicable.

When undertaking repairs Council considers the upcoming, scheduled work on the road to determine the appropriate immediate repair option.

While Council will endeavour to meet the response times listed below, if at any time available resources are not sufficient to ensure maintenance works are carried out within the response times then warning signage and/or safety barricading will be installed until such time as the work is completed.

## Target Response Times

The target response times serve as a benchmark and timeline for Council, demonstrating a commitment to the community to promptly complete repair works. These targets represent the maximum timeframe within which Council has committed to addressing any defects.

When a defect is reported to the engineering team, whether through an internal or external party there is a two staged response:

a. Inspection and assessment of the service fault;

b. Schedule and repair of defect.

The following table shows the target response time for varying defects. The risk rating is determined is accordance with the Road Prioritization Matrix in Section 13. The response time is working days. Hierarchy is as-per Appendix A.

| Hierarchy | Risk Score | Target Response Time (working days) |
|---|---|---|
| **1** | <10 | 15 |
| **1** | >10 but <20 | 10 |
| **1** | >20 | 1 |
| **2** | <10 | 30 |
| **2** | >10 but <20 | 20 |
| **2** | >20 | 2 |
| **3** | <10 | 60 |
| **3** | >10 but <20 | 40 |
| **3** | >20 | 10 |
| **4** | <20 | 90 |
| **4** | >20 | 10 |
| **5** | <20 | 90 |
| **5** | >20 | 10 |

Some examples of failures to elicit emergency works are listed below, these would be classified as >20 on the risk rating system.

- Fallen tree or street furniture obstructing traffic path of roadway.
- Hazardous material such as oil, fuel, concrete or dangerous chemicals spilt on road.
- Isolated section of loose stones greater than 10m2 on a sealed road surface in 100km/h speed zone and in the near vicinity of a bend. Excluding roads sealed/resurfaced in the week prior to defect identification.
- Dead animal located on trafficable path of roadway.
- Significant erosion of road pavement due to culvert failure.

## Defect Examples

The following section provides examples of typical defects that can be found within the road network.

### Sealed Road – Pot-holes


Remediation options

| Temporary | Permanent |
|---|---|
| • Fill with Cold Mix<br>• Jet-patcher | • Reconstruct section of road (excavate and replace seal) |

**Sealed Road – Edge Drop**

Remediation options

| Temporary | Permanent |
|---|---|
| • Shoulder Grading<br>• Jet-patcher | • Reconstruct section of road (excavate and replace seal) |

**Sealed Road – Edge Break**

Remediation options

| Temporary | Permanent |
|---|---|
| • Shoulder Grading<br>• Jet-patcher | • Reconstruct section of road (excavate and replace seal) |

**Sealed Road – Pavement Failure**

Remediation options

| Temporary | Permanent |
|---|---|
| - Traffic control<br>- Patch as pot hole to make safe<br>- Jet-patcher<br>- Temporary load restriction or road closure | - Reconstruct section of road (excavate and replace seal) |

**Sealed Road – Crocodile cracking**

Remediation options

| Temporary | Permanent |
|---|---|
| • Jet-patcher | • Wearing surface renewal<br>• Reconstruct section of road (excavate and replace seal) |

**Sealed Road – Pavement rutting / Shoving**

Remediation options

| Temporary | Permanent |
|---|---|
| • Monitor<br>• Jet-patcher | • Review drainage<br>• Reconstruct section of road (excavate and replace seal) |

**Sealed Road – Shoulder Defects**

Remediation options

| Temporary | Permanent |
|---|---|
| • Signage | • Shoulder grading<br>• Shoulder resheeting<br>• Reconstruct section of road consider stabilisation |

**Sealed Road – Flushing / Bleeding**

Remediation options

| Temporary | Permanent |
|---|---|
| • Reseal with Jet-patcher | • Reseal<br>• Reconstruct section of road |

**Sealed Road – Loose stone**

Remediation options

| Temporary | Permanent |
|---|---|
| • Street Sweeping | • Reseal section of road<br>• Reconstruct section of road (excavate and replace seal) |

**Sealed Road – Fitting surface levels**


Remediation options

| Temporary | Permanent |
|---|---|
| • Fill with cold mix | • Reseal of reconstruct section of road around pit |

**Road Guide Posts Deficiency**



Remediation options

Replace sign.

**Road Signs Deficiency**


Remediation options

Replace sign.

**Unsealed Road – Pot-hole / Roughness**

Remediation options

| Temporary | Permanent |
|---|---|
| • Maintenance Grade<br>• **Gravel patching** | • Resheet road |

**Unsealed Road – Corrugations**

Remediation options

| Temporary | Permanent |
|---|---|
| • Maintenance Grade<br>• Gravel patching | • Resheet road |

**Unsealed Road – Rutting**

Remediation options

| Temporary | Permanent |
|---|---|
| • Maintenance Grade<br>• Gravel patching | • Resheet road |

**Unsealed Road – Scouring**

Remediation options

| Temporary | Permanent |
|---|---|
| • Maintenance Grade<br>• Gravel patching | • Resheet road |

**Unsealed Road – Water ponding**

Remediation options

| Temporary | Permanent |
|---|---|
| • Maintenance Grade<br>• Gravel patching | • Resheet road |

# 16 Implementation

### General

Implementation of roads operations generally comprise of the following:

- Maintenance Works – Generally from July to December
- Capital Works – December to June

Capital works are conducted in the warmer summer months when the majority of harvest traffic has decreased, and temperatures are high enough for road pavement seals, without the requirement to use excessive additives.

### Grading

Council has grading/resheeting teams as well as a construction/capital works grading team. Additional staff and contractors will be engaged on an as-need basis.

### Contract Plant

Generally long-term contract plant is engaged by Council under a period contract. Other plant may be engaged under a purchase order.

## 16.1 Contract Works

The major contracts for roadwork are:

- Bitumen sealing contract, including supply of sealing aggregates;
- Emulsion supply (for bitumen patching etc);
- Line Marking;
- Tree Lopping;
- Gravel Testing;
- Stabilisation works;
- Traffic Control; and
- Winning, crushing, pushing and supply of gravel.

Some works (typically culverts, kerb and gutter, footpaths, traffic islands, fencing) are undertaken by (generally) local contractors under Council supervision.

# Narromine Shire Council – Road Hierarchy

| Road Name | Road No. | School Bus Route | Road Classification Sealed Section | Road Classification Unsealed Section | AADT Used | Year Traffic Data Collected | Freq of Grade (unsealed only) | Freq of Shoulder grade or maintenance |
|---|---|---|---|---|---|---|---|---|
| Alison's Road | 1 | No | | 4 | 9 | 2014 | once/2yrs | once/3yrs |
| Backwater Road | 2 | Yes | 3 | 3 | 124 | 2013 | once/yr | once/3yrs |
| Belmont Road | 3 | No | | 4 | 7 | 2023 | once/yr | once/3yrs |
| McNamara's Lane | 4 | No | 2 | | | | - | once/3yrs |
| Back Tomingley West Road | 5 | No | | 5 | | | once/3yrs | once/3yrs |
| Belowrie Road | 6 | No | | 4 | 31 | 2014 | once/3yrs | once/3yrs |
| Bootle's Road | 7 | No | | 5 | 2 | 2022 | once/3yrs | once/3yrs |
| Brummagen Road | 8 | No | | 5 | 5 | 2022 | once/3yrs | once/3yrs |
| Boggy Plains Road | 9 | Yes | | 4 | 6 | 2022 | once/yr | once/3yrs |
| Brennan's Lane | 10 | No | | 5 | 14 | 2013 | once/3yrs | once/3yrs |
| Brown's Lane | 11 | No | | 5 | 1 | 2022 | once/3yrs | once/3yrs |
| Bulgandramine Road | 12 | No | 3 | | 8 | 2014 | - | once/3yrs |
| Bundemar Road | 13 | No | | 4 | 16 | 2013 | once/3yrs | once/3yrs |
| Burroway Road | 14 | Yes | 2 | | 378 | 2013 | - | once/3yrs |
| Anglebone Road | 15 | No | | 5 | | | once/3yrs | once/3yrs |
| Buddah Lake Road | 16 | No | | 4 | 16 | 2014 | once/2yrs | once/3yrs |
| Cathundral Road | 17 | No | | 5 | | | once/3yrs | once/3yrs |
| Cathundral Bogan Road | 18 | No | 3 | 4 | 58 | 2014 | once/2yrs | once/3yrs |
| Ceres Siding Road | 19 | No | | 4 | 77 | 2014 | once/2yrs | once/3yrs |
| Cobboco Road | 20 | Yes | 3 | 4 | 14 | 2022 | once/2yrs | once/3yrs |
| Ashgrove Road | 21 | No | | 6 | | | Slash once/year | Slash once/year |

| Road Name | Road No. | School Bus Route | Road Classification Sealed Section | Road Classification Unsealed Section | AADT Used | Year Traffic Data Collected | Freq of Grade (unsealed only) | Freq of Shoulder grade or maintenance |
|---|---|---|---|---|---|---|---|---|
| Cornucopia Road | 22 | No | | 4 | 46 | 2014 | once/2yrs | once/3yrs |
| Craigie Lea Lane | 23 | No | | 4 | 6 | 2022 | once/2yrs | once/3yrs |
| Currington's Road | 24 | No | | 5 | | | once/3yrs | once/3yrs |
| Cannon's Road | 25 | No | | 6 | | | Slash once/year | Slash once/year |
| Dandaloo Road | 26 | Yes | 2 | | 114 | 2020 | - | once/3yrs |
| Dappo Road | 27 | No | 3 | 5 | 25 | 2013 | once/3yrs | once/3yrs |
| Dilladerry Road | 28 | No | | 4 | 23 | 2014 | once/2yrs | once/3yrs |
| Dubbo-Burroway Road | 29 | Yes | 2 | | 357 | 2013 | - | once/3yrs |
| Dubbo Collie Road | 30 | No | 2 | | 122 | 2014 | - | once/3yrs |
| Dulla Dulla Road | 31 | No | | 4 | 64 | 2013 | once/2yrs | once/3yrs |
| Drew's Road | 32 | No | | 5 | | | once/3yrs | once/3yrs |
| Derribong Road | 33 | No | | 5 | | | once/3yrs | once/3yrs |
| Castle's Road | 34 | No | | 5 | | | once/3yrs | once/3yrs |
| Davis Road | 35 | No | | 5 | | | once/3yrs | once/3yrs |
| Ellengerah Road | 36 | Yes | 3 | 4 | 15 | 2013 | once/2yrs | once/3yrs |
| Enmore Road | 37 | Yes | 3 | | 55 | 2014 | - | once/3yrs |
| Euromedah Road | 38 | No | 3 | 4 | | | once/yr | once/3yrs |
| Ewenmar Road | 39 | No | | 4 | | | once/2yrs | once/3yrs |
| Edmonstone's Road | 40 | No | | 6 | | | Slash once/year | Slash once/year |
| Fairview Siding Road | 41 | No | | 4 | 3 | 2023 | once/2yrs | once/3yrs |
| Farrendale Road | 42 | Yes | 3 | 3 | 4 | 2023 | once/yr | once/3yrs |
| Foreman's Lane | 43 | No | | 5 | 49 | 2013 | once/3yrs | once/3yrs |

| Road Name | Road No. | School Bus Route | Road Classification Sealed Section | Road Classification Unsealed Section | AADT Used | Year Traffic Data Collected | Freq of Grade (unsealed only) | Freq of Shoulder grade or maintenance |
|---|---|---|---|---|---|---|---|---|
| Frecklington's Crossing | 44 | Yes | 3 | 4 | 16 | 2013 | once/yr | once/3yrs |
| Gibson's Lane | 45 | No | | 4 | 42 | 2013 | once/yr | once/3yrs |
| Gordon's Lane | 46 | No | | 6 | | | Slash once/year | Slash once/year |
| Griffith's Road | 47 | No | | 6 | | | Slash once/year | Slash once/year |
| Haberworth Lane | 48 | No | 5 | 5 | | | once/3yrs | once/3yrs |
| Herring's Lane | 49 | No | | 5 | 9 | 2014 | once/3yrs | once/3yrs |
| Kyalite Road | 50 | No | | 4 | 31 | 2013 | once/yr | once/3yrs |
| Jones Road | 51 | No | | 6 | | | Slash once/year | Slash once/year |
| Lincoln Lane | 52 | No | | 4 | | | once/3yrs | once/3yrs |
| Lovers Lane | 53 | No | | 5 | | | once/3yrs | once/3yrs |
| McLeod's Lane | 54 | No | | 5 | 14 | 2013 | once/3yrs | once/3yrs |
| Mungery Hall Road | 55 | No | | 6 | | | Slash once/year | Slash once/year |
| McNiven's Road | 56 | No | | 5 | | | once/2yrs | once/3yrs |
| Merritt's Lane | 57 | No | | 4 | 41 | 2014 | once/2yrs | once/3yrs |
| Merrinong Road | 58 | No | | 6 | | | Slash once/year | Slash once/year |
| Mungeribah Lane | 59 | Yes | 3 | 3 | 69 | 2014 | once/yr | once/3yrs |
| Morris Road | 60 | No | | 5 | 19 | 2014 | once/3yrs | once/3yrs |
| Mumble Peg Road | 61 | No | | 4 | | | once/2yrs | once/3yrs |
| Montgomery's Road | 62 | No | | 5 | 6 | 2022 | once/3yrs | once/3yrs |
| Narwonah Road | 63 | Yes | 3 | 4 | 14 | 2022 | once/yr | once/3yrs |

| Road Name | Road No. | School Bus Route | Road Classification Sealed Section | Road Classification Unsealed Section | AADT Used | Year Traffic Data Collected | Freq of Grade (unsealed only) | Freq of Shoulder grade or maintenance |
|---|---|---|---|---|---|---|---|---|
| Newhaven Road | 64 | No | 3 | 3 | | | once/yr | once/3yrs |
| Momo Road | 65 | No | | 4 | 23 | 2014 | once/3yrs | once/3yrs |
| Gundong (Obley) Road | 66 | No | 2 | | 113 | 2023 | - | once/3yrs |
| O'Leary's Lane | 67 | No | | 4 | | | once/yr | once/3yrs |
| Mandi Road | 68 | No | | 6 | | | Slash once/year | Slash once/year |
| Papworth Lane | 69 | Yes | | 3 | 64 | 2013 | once/yr | once/3yrs |
| Peak Hill Railway Road | 70 | Yes | 3 | | | | - | once/3yrs |
| Pinedene Road | 71 | No | 3 | 3 | | | once/yr | once/3yrs |
| Pineview Road | 72 | No | | 4 | 7 | 2013 | once/2yrs | once/3yrs |
| Raeburn Lane | 73 | Yes | 3 | 5 | 15 | 2023 | once/3yrs | once/3yrs |
| Richardson's Road | 74 | No | | 5 | | | once/3yrs | once/3yrs |
| Rocky Point Road | 75 | No | | 5 | | | once/3yrs | once/3yrs |
| Sharkey's Lane | 76 | Yes | | 5 | 3 | 2022 | once/2yrs | once/3yrs |
| Stevenson's Road | 77 | No | | 6 | | | Slash once/year | Slash once/year |
| Swift's Lane | 78 | No | 3 | 5 | 30 | 2014 | once/3yrs | once/3yrs |
| Trangie Cemetery Road | 79 | No | 3 | 4 | | | once/2yrs | once/3yrs |
| Tantitha Road | 80 | Yes | 3 | 3 | 46 | 2023 | once/yr | once/3yrs |
| Temoin Road | 81 | No | | 5 | | | once/3yrs | once/3yrs |
| Tink's Lane | 82 | Yes | 3 | 4 | 11 | 2013 | once/yr | once/3yrs |
| Tyrie Road | 83 | Yes | 3 | 3 | 41 | 2014 | once/yr | once/3yrs |
| Tomkin's Road | 84 | No | | 5 | | | once/3yrs | once/3yrs |
| Trangie Showground Road | 85 | No | | 3 | | | once/yr | once/3yrs |

| Road Name | Road No. | School Bus Route | Road Classification Sealed Section | Road Classification Unsealed Section | AADT Used | Year Traffic Data Collected | Freq of Grade (unsealed only) | Freq of Shoulder grade or maintenance |
|---|---|---|---|---|---|---|---|---|
| Waikare Road | 86 | No | | 5 | | | once/3yrs | once/3yrs |
| McCarron's Road | 87 | No | | 5 | | | once/3yrs | once/3yrs |
| Warren Road | 88 | Yes | 2 | | 162 | 2022 | - | once/3yrs |
| Weemabah Road | 89 | No | 3 | | 30 | 2023 | - | once/3yrs |
| Widgeree Road | 90 | No | 3 | | 70 | 2014 | - | once/3yrs |
| Willydah Road | 91 | Yes | 3 | | 64 | 2014 | - | once/3yrs |
| Waterloo Road | 92 | No | | 4 | | | once/2yrs | once/3yrs |
| Westbury Road | 93 | No | | 5 | | | once/2yrs | once/3yrs |
| Webb's Siding Road | 94 | Yes | 2 | | 300 | 2017 | | once/3yrs |
| Wyanga Silo | 95 | No | | 6 | | | Slash once/year | Slash once/year |
| Hando's Road | 96 | No | | 6 | | | Slash once/year | Slash once/year |
| Wambianna Road | 97 | No | 2 | | | | - | once/3yrs |
| Reid's Road | 98 | No | | 6 | | | Slash once/year | Slash once/year |
| Emogandy Road | 99 | No | | 5 | | | once/3yrs | once/3yrs |
| Sydney-Smith Road | 100 | No | | 6 | | | Slash once/year | Slash once/year |
| Howe's Road | 101 | No | | 6 | | | Slash once/year | Slash once/year |
| Woodside Road | 102 | No | | 5 | | | once/3yrs | once/3yrs |
| Old Backwater Road | 103 | No | 2 | | 262 | 2019 | - | once/3yrs |
| Bywannah Road | 104 | No | | 6 | | | Slash once/year | Slash once/year |

| Road Name | Road No. | School Bus Route | Road Classification Sealed Section | Road Classification Unsealed Section | AADT Used | Year Traffic Data Collected | Freq of Grade (unsealed only) | Freq of Shoulder grade or maintenance |
|---|---|---|---|---|---|---|---|---|
| Barden's Road | 105 | No | | 6 | | | Slash once/year | Slash once/year |
| Eureka Road | 106 | No | | 4 | 5 | 2014 | once/3yrs | once/3yrs |
| Job's Road | 107 | No | | 5 | | | once/2yrs | once/3yrs |
| Lockwood Road | 108 | No | | 5 | | | once/3yrs | once/3yrs |
| Trangie Saleyard Road | 109 | No | 2 | | | | - | once/3yrs |
| Dawe's Crossing | 110 | No | | 5 | | | once/3yrs | once/3yrs |
| Thornycroft Road | 111 | No | | 5 | | | once/2yrs | once/3yrs |
| Jefferies Road | 112 | No | 3 | | 24 | 2014 | - | once/3yrs |
| Jamea Road | 113 | No | | 4 | 18 | 2013 | once/2yrs | once/3yrs |
| Tyrie North Road | 114 | No | 3 | 5 | 37 | 2013 | once/3yrs | once/3yrs |
| Day's Road | 115 | No | | 6 | | | Slash once/year | Slash once/year |
| Tomingley West Road | 116 | No | 3 | | 74 | 2014 | - | once/3yrs |
| Wyanga Road | 117 | Yes | | 4 | 26 | 2013 | once/2yrs | once/3yrs |
| Wilson's Lane | 118 | No | | 5 | | | once/3yrs | once/3yrs |
| Harrison's Road | 119 | No | | 6 | | | Slash once/year | Slash once/year |
| Hargreaves Road | 120 | No | | 5 | 19 | 2013 | once/3yrs | once/3yrs |
| Ward's Road | 121 | No | | 5 | | | once/2yrs | once/3yrs |
| Macquarie View Road | 122 | No | | 4 | 58 | 2014 | once/2yrs | once/3yrs |
| Hamilton's Road | 123 | Yes | | 4 | | | once/2yrs | once/3yrs |
| Bignell's Road | 124 | No | | 5 | | | once/3yrs | once/3yrs |
| Strathallyn Lane | 125 | Yes | 3 | 4 | 43 | 2013 | once/2yrs | once/3yrs |

| Road Name | Road No. | School Bus Route | Road Classification Sealed Section | Road Classification Unsealed Section | AADT Used | Year Traffic Data Collected | Freq of Grade (unsealed only) | Freq of Shoulder grade or maintenance |
|---|---|---|---|---|---|---|---|---|
| Heywood's Road | 126 | No | | 5 | | | once/3yrs | once/3yrs |
| Hill's Road | 127 | No | | 6 | | | Slash once/year | Slash once/year |
| Springbank Road | 128 | No | | 6 | | | Slash once/year | Slash once/year |
| Greenvale Road | 129 | No | | 6 | | | Slash once/year | Slash once/year |
| Corry Road | 130 | Yes | 2 | | 211 | 2014 | - | once/3yrs |
| Elmore Road | 131 | No | | 5 | | | once/3yrs | once/3yrs |
| Gin Gin Weir Road | 132 | No | | 5 | | | once/yr | once/3yrs |
| Woodleigh Road | 133 | No | | 5 | | | once/2yrs | once/3yrs |
| Heckendorf's Access | 134 | No | | 6 | | | Slash once/year | Slash once/year |
| Ningawalla South Road | 135 | No | | 6 | | | Slash once/year | Slash once/year |
| Trangie Rubbish Tip Road | 136 | No | | 3 | 13 | 2021 | once/2yrs | once/3yrs |
| Wingfield Road | 137 | No | | 5 | | | once/3yrs | once/3yrs |
| Noondoo Road | 138 | No | | 6 | | | Slash once/year | Slash once/year |
| Jones Circuit | 139 | No | 3 | 3 | | | once/2yrs | once/3yrs |
| River Drive | 140 | No | 3 | | | | - | once/3yrs |
| Highpark Road | 141 | No | 3 | | 181 | 2014 | - | once/3yrs |
| Gainsborough Road | 142 | Yes | 1 | 1 | 47 | 2014 | once/yr | once/3yrs |
| Strahorns Access Road | 143 | No | | 5 | | | once/3yrs | once/3yrs |
| Rockbourne Road | 144 | No | | 6 | | | Slash once/year | Slash once/year |

| Road Name | Road No. | School Bus Route | Road Classification Sealed Section | Road Classification Unsealed Section | AADT Used | Year Traffic Data Collected | Freq of Grade (unsealed only) | Freq of Shoulder grade or maintenance |
|---|---|---|---|---|---|---|---|---|
| Wynsley Lane | 145 | No | | 5 | | | once/3yrs | once/3yrs |
| Sharah's Access Road | 146 | No | | 6 | | | Slash once/year | Slash once/year |
| Corry Access | 147 | No | | 6 | | | Slash once/year | Slash once/year |
| Rosebank Road | 148 | No | 3 | | | | - | once/3yrs |
| Tomingley Cemetery Road | 149 | No | 4 | 6 | | | Slash once/year | Slash once/year |
| Rich's Road | 150 | No | | 5 | | | once/2yrs | once/3yrs |
| Yagobie Road | 151 | No | | 6 | | | Slash once/year | Slash once/year |
| Schroeder's Access | 152 | No | | 6 | | | Slash once/year | Slash once/year |
| Barling's Road | 153 | Yes | | 5 | 1 | 2021 | once/3yrs | once/3yrs |
| Sahara Road | 154 | No | 3 | 4 | 14 | 2013 | once/3yrs | once/3yrs |
| Sissian Road | 155 | No | | 6 | | | Slash once/year | Slash once/year |
| Wilson's Lane | 156 | No | | 3 | | | once/2yrs | once/3yrs |
| Park Hill Road | 157 | No | | 6 | | | Slash once/year | Slash once/year |
| Ralbi Road | 158 | No | | 6 | | | Slash once/year | Slash once/year |
| Glenroy Road | 159 | No | | 5 | | | once/3yrs | once/3yrs |
| Links Road | 160 | No | | 5 | | | once/3yrs | once/3yrs |
| Young Road | 161 | No | | 6 | | | Slash once/year | Slash once/year |

| Road Name | Road No. | School Bus Route | Road Classification Sealed Section | Road Classification Unsealed Section | AADT Used | Year Traffic Data Collected | Freq of Grade (unsealed only) | Freq of Shoulder grade or maintenance |
|---|---|---|---|---|---|---|---|---|
| George Street | 162 | No | | 4 | | | once/3yrs | once/3yrs |
| Morgan Street | 163 | No | | 3 | | | once/yr | once/3yrs |
| Villeneuve Road | 164 | Yes | 3 | | | | - | once/3yrs |
| Wallaby Road | 170 | No | | 4 | | | once/2yrs | once/3yrs |
| Harris Street (Rural section) | 413 | No | | 4 | | | once/3yrs | once/3yrs |
| Regional Roads | | | | | | | | |
| Eumungerie Road (MR572) | | Yes | | 1 | | | | |
| Peak Hill Road (MR89) | | Yes | | 1 | | | | |
| Trangie Dandaloo Road (MR347 D) | | No | | 1 | | | | |
| Trangie - Collie Road (MR347 C) | | Yes | | 1 | | | | |
| Tullamore Road (MR354) | | Yes | | 1 | | | | |

Narromine
SHIRE COUNCIL

# Narromine Shire Council

# Policy for the Temporary Closure of Roads

Adopted By Council on 20th November 2012, Resolution Number 2012/438

# Table of Contents

# 1. Amendment List

| No. | Date Adopted | Resolution No. | Date Commenced |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

# 2. Aims of the Policy

- To establish guidelines for staff involved with the temporary closure of roads within the Narromine Shire.
- To set minimum acceptable requirements and standards for the temporary closure of roads.
- To establish suitable standards for the reporting of road conditions.

# 3. Definitions

| Definition | Meaning |
|---|---|
| Council | Narromine Shire Council (NSC) |
| RMS | NSW Roads & Maritime Services (RMS) |
| Media | Radio, newspapers and NSC website |
| Agencies | Local authorities and bodies including neighbouring Councils, local Police, SES, Ambulance, Tourist Information Centre, Post Office, Schools and School bus operators, Fire and Rescue NSW |
| State Roads | Roads classified by the RMS under the Roads Act 1993 as State Roads. These are State Highway 17 (Newell) and State Highway 7 (Mitchell) |
| Regional Roads | Roads classified by the RMS under the Roads Act 1993 as Regional Roads under Council control. These are MR572 Narromine-Eumungerie Road, MR89 Narromine-Tomingley Road, MR347C Trangie-Collie Road, MR347D Trangie-Dandaloo Road and MR354 Tullamore Road |
| Local Roads | All other roads under Council control not designated as State or Regional roads |
| Heavy vehicles | Vehicles having a GVM greater than 4 tonnes (Clause 123 of the Roads Act 1993 – excludes emergency vehicles). Narromine Shire Council vehicles carrying out road inspection and works are excluded. |
| Light vehicles | Vehicles having a GVM less than 4 tonnes |
| Road Closure | The temporary closure of all or part of the road network within Narromine Shire due to wet weather, traffic hazards or road damage from natural or unnatural occurrences |
| Electronic Records System | The records management system currently being used by Council |
| Event | Occurrences other than those described under Road Closure |
| Clause 115, Roads Act 1993 | As per the Act |
| Incident | Chemical or fuel spill on the road network within Narromine Shire |
| Motor Vehicle Accident | A collision or roll over within the Narromine Shire road network involving one or more vehicles and including collisions with animals |
| Street Procession or Rally | Street marches due to Anzac Day, Remembrance Day, car rallies or other festive celebrations |
| Clause 144, Roads Act 1993 | As per the Act |

# 4. Responsibilities

| | |
|---|---|
| Director of Engineering Services | Overall responsibility for Council's road network |
| Roads Operations Superintendent | Responsible for the direct supervision of field staff at supervisor level and inspecting roads as directed by the Director of Engineering Services. |
| Works Crews | Required to take direction from supervisors and act accordingly |

# 5. Application of the Policy

This Policy shall apply to all staff of Council involved with the temporary closure of roads within Narromine Shire in the event of:

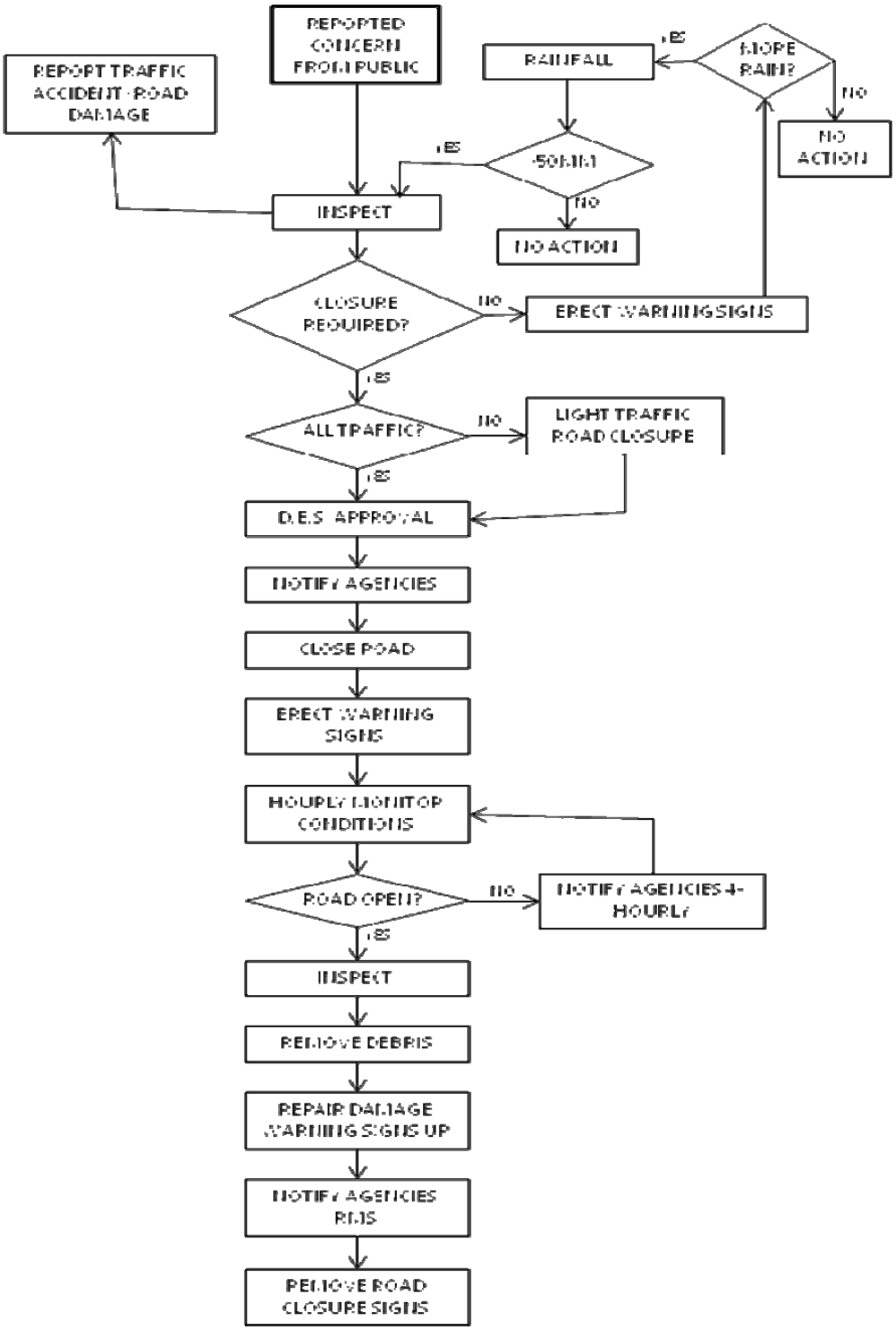
- wet weather
- traffic hazards
- road damage from natural or unnatural circumstances; and
- street processions or rallies

# 6. Determination of Road Closure

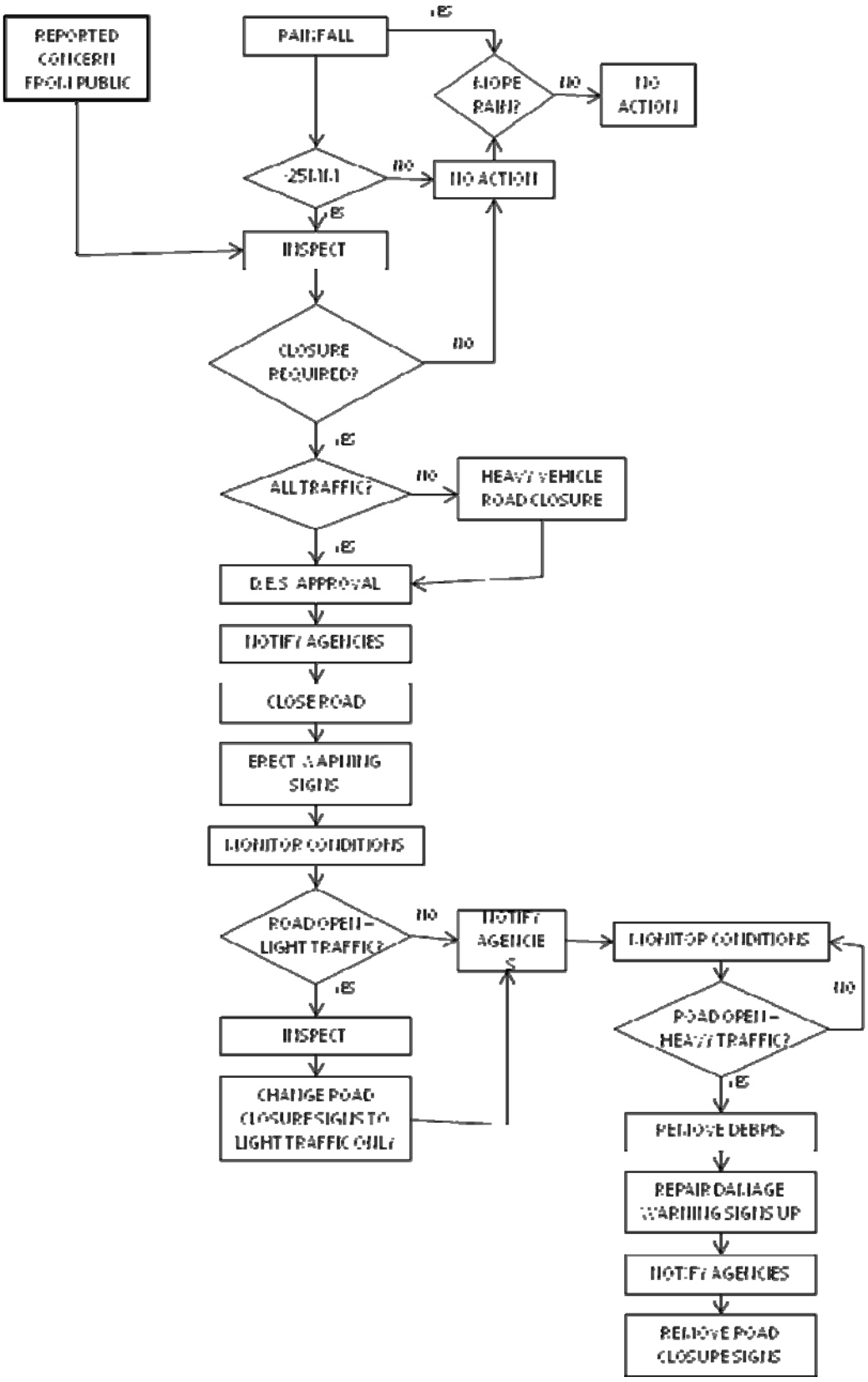
The Director of Engineering Services (or their nominee) is responsible for inspecting the road conditions and determining whether a road (or several roads or all roads) shall be closed due to wet weather, traffic hazards or road damage from natural or unnatural circumstances.

# 7. Road Closure – Sealed Road

The following procedure must be followed in order to close Regional Roads ( these are listed on page 4). The road will generally be closed at causeways and floodways due to localized rain. In the event of generalized rain, the road may be closed for periods of up to 24 hours. The procedure can be used equally for road closures due to damage, accidents or other causes and on sealed roads.



# 8. Road Closure – Unsealed Roads



### *8.1 Heavy Traffic*

The procedure must be followed in the event of:

- rain where roads would become impassable or be damaged by heavy traffic; or
- bulldust conditions because of extreme dry weather

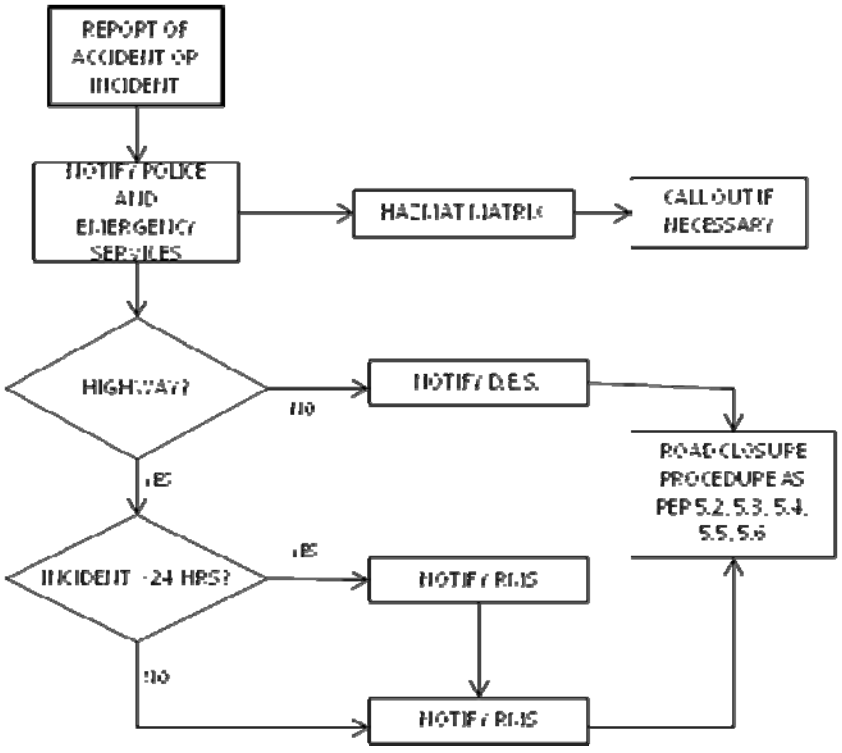
### *8.2 All Traffic*

The procedure must be followed in the event of heavy rainfall within the Narromine Shire.

Note: Due to variance in rainfall, it may only be necessary to close a certain portion of the road network.

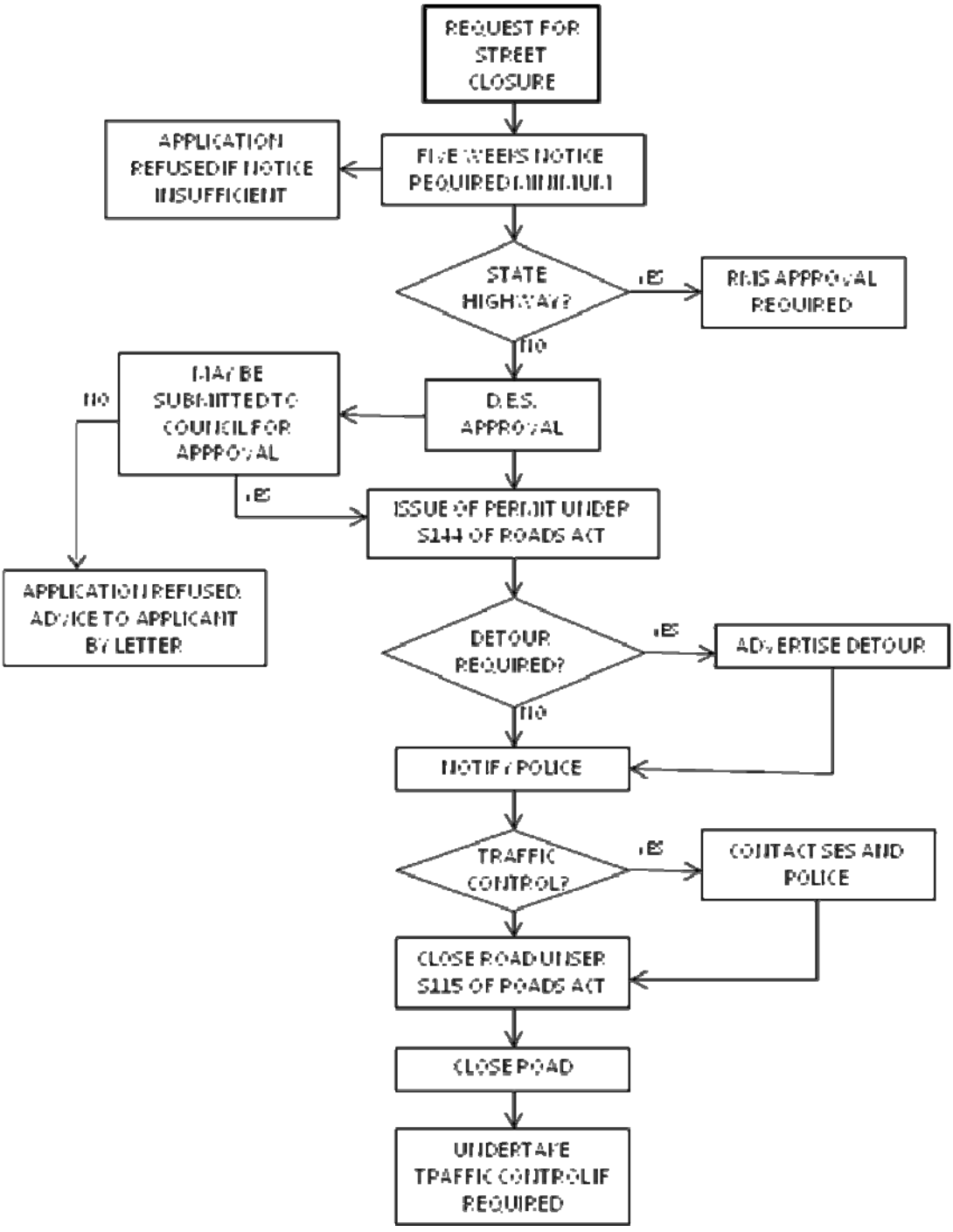
## 9. Road Closure – Motor Vehicle Accident (All traffic)

The following procedure must be followed in order to close any State, Regional or Local road in the event of a motor vehicle accident or incident not related to the closure of roads due to wet weather.



# 10. Road Closure – Street Procession or Rally (All traffic)

The following procedure must be followed in the event of an organisation applying for a road closure for a street procession or rally.



# 11. Council contact phone number

Narromine Shire Council's main switch (02 6889 9999) has an after hours diversion and this number should be used at all times. Email: mail@narromine.nsw.gov.au

The Duty Officer Call-out Mobile Phone will be in the possession of the "on call" member of Council's Engineering staff.

# 12. Contact Personnel and Phone Numbers for Adjoining Councils and Government Authorities

### WARREN SHIRE COUNCIL

Manager Engineering Services
Generic Email: council@warren.nsw.gov.au
Phone: (02) 6847 6600

### LACHLAN SHIRE COUNCIL

Director of Technical Services
Generic email: council@lachlan.nsw.gov.au
Phone: Condobolin – (02) 6895 1900

### GILGANDRA SHIRE COUNCIL

Director of Engineering Services
Generic email: council@gilgandra.nsw.gov.au
Phone: (02) 6817 8800

### CABONNE SHIRE COUNCIL

Director of Engineering and Technical Services
Generic email: council@cabonne.nsw.gov.au
Phone: Molong - (02) 6392 3200

### DUBBO CITY COUNCIL

Director of Works
Generic email: dcc@dubbo.nsw.gov.au
Phone: (02) 68 014 000

**PARKES SHIRE COUNCIL**

Director of Engineering Services
Generic Email: council@parkes.nsw.gov.au
Phone: (02) 6861 2333

**POLICE**

Narromine Police
Phone: (02) 6889 1444

Dubbo Police
Phone: (02) 6883 1599

**AMBULANCE**

Narromine Ambulance Station
Phone: 13 1233

**SES**

Narromine SES
Phone: 13 2500
Email: narromine.ses.ops@bigpond.com

Macquarie Division SES
Phone: (02) 68 822 222
Email: admin@macquarie.ses.nsw.gov.au

## 13. Pro-forma Notification to the Media and Stakeholders

The following wording is to be used as a basis for a road closure media release:

"Narromine *Shire Council wishes to advise the travelling public that ALL UNSEALED ROADS in the Shire are CLOSED until further notice due to rain over the past ……..hours. School buses, emergency vehicles and council maintenance vehicles are exempt from this requirement.*

*Narromine Shire Council appeals to all drivers planning to travel within the area to assist in preventing damage to the unsealed roads by choosing an alternative route or waiting until drier conditions prevail.*

*Flagrant and irresponsible disregard for this appeal could lead to prosecution to the full extent of the law.*

*The next update will be issued at ……am/pm. (usually 4 hourly – at 4, 8 and 12)*

*If you have any further enquiries, please do not hesitate to contact Council on (02) 6889 9999*."

Any time that Council issues a media release, it should be registered in Council's electronic records system.

When the roads re-open, use the following media release:

*"Narromine Shire Council wishes to advise the travelling public that ALL UNSEALED ROADS in the Shire are now OPEN to all vehicles.*

*Narromine Shire Council appeals to all drivers to travel with care when driving on the road network.*

*If you have any further enquiries, please do not hesitate to contact Council on (02) 6889 9999."*

## 14. Contact List for Media, Authorities and Bus Operators

The above information to be completed and sent to the following via email:

Narromine Police
Trangie Police
Narromine Ambulance Station
Trangie Ambulance Station
Narromine State Emergency Service
Narromine Volunteer Rescue Association
Flat Chat News
Narromine News
Narromine School Bus Operators
Trangie School Bus Operators
Tomingley School Bus Operators
St Augustine's Parish School
Narromine High School
Narromine Public School
Narromine Christian School
St John's School Trangie
Trangie Central School
Li'l Tackers Playgroup Tomingley
Macquarie Valley Family Day Care
Narromine Preschool Kindergarten
Narromine Early Learning Centre
Tots on Temoin Trangie
Narromine Hospital
Trangie Hospital
NSW Rural Fire Service
Narromine Fire and Rescue
Trangie Fire and Rescue
Narromine Shire Councillors
Narromine Shire General Manager
Emailed to All Staff

Note: This list also includes Emergency Services, Local and Regional media, surrounding Councils, Schools and School Bus Operators.