

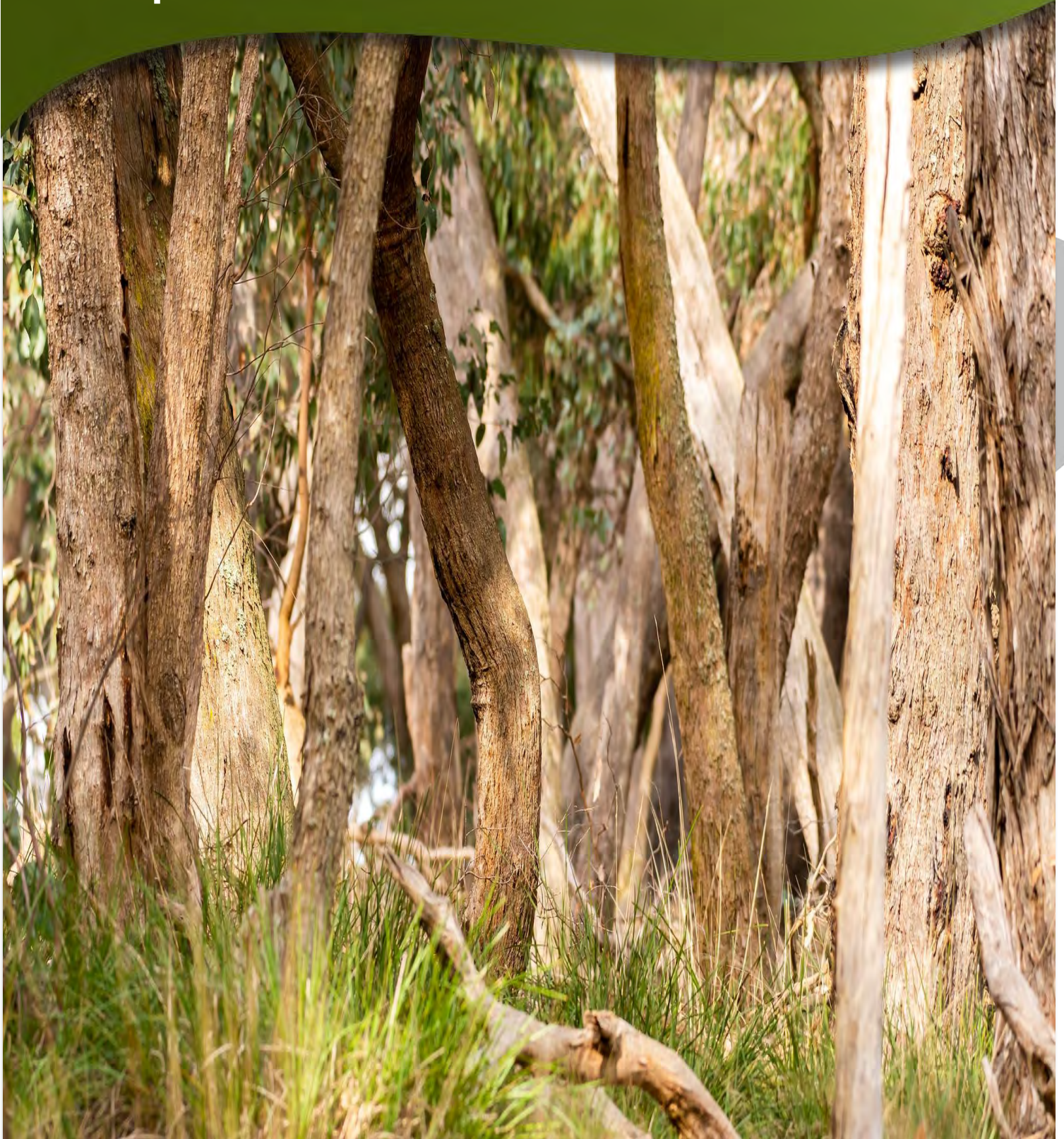
Adopted by Council 27 October 2021



**Macedon
Ranges**
Shire Council

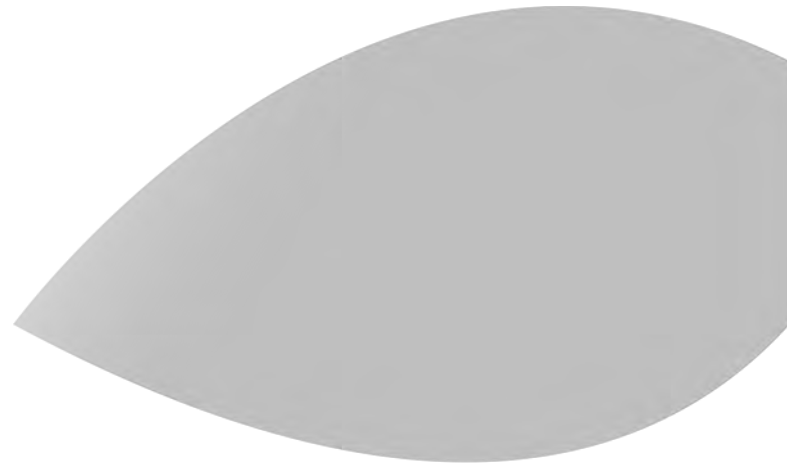
**Strategic Planning
& Environment**

Annual Environment Report 2020/21



Contents

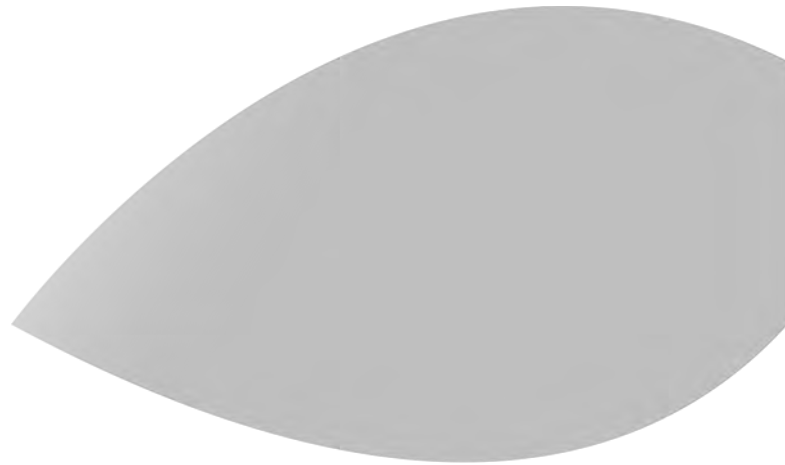
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Introduction

The 2020-21 Annual Environment Report has utilised the indicators included in Council's updated *Environment Strategy Refreshed 2021*.

For some indicators no data is currently available to enable reporting. This data will need to be collected as a part of future projects. In other cases, the 2020-21 report provides baseline data only which will be reported on again in future years to determine trends over time.



Theme 1: Climate Emergency

Highlights

- ✓ Reduced emissions from Council operations by 5.3% from 2019-20, equating to a 34.1% reduction from the 2014-15 baseline year.
- ✓ Establishment of a new electricity contract under the Victorian Energy Collaboration that involves sourcing all of Council's electricity from renewable sources from 1 July 2021.
- ✓ Completion of community climate change action plans for Woodend, Romsey and Lancefield.
- ✓ Preparation of a draft Sustainable Buildings Policy.
- ✓ Completion of environmental audits of 9 Council managed kindergartens and maternal and child health care centres.
- ✓ Security of funds to replace Council's remaining street lights with energy efficient LEDs.
- ✓ Security of funds to install two public, fast charging electric vehicle charging stations in Kyneton and Woodend.

Indicator 1: Greenhouse gas emissions from Council operations

1.1 Total Council emissions

Current target

Council's current greenhouse gas emission targets are:

- 25% reduction by 30 June 2021 from baseline year of 2014-15 (1,910 tonnes of CO₂-e).
- Zero net emissions by 2030.

Emissions 2020-21

During 2020-21, greenhouse gas emissions from Council operations equated to:

- 5,034 tonnes CO₂-e.
- 5.3% reduction from 2019-20.
- 34.1% reduction from Council's baseline year of 2014-15.

Most of these reductions can be attributed to pandemic induced restrictions resulting in the closure of Council facilities and more staff working from home. It is estimated that under "business as usual" Council would have produced 5,370 tonnes CO₂-e equating to a 29.7% reduction from the baseline year.

Data explanation: The emissions shown in Figure 1 do not include LPG gas or “Scope 3” emissions generated from the transportation, extraction and processing of fuels as these emissions were not included in “Council’s 2014/15 baseline year when determining Council’s emission reduction target. The emissions shown in Figure 2 do include LPG gas and “Scope 3” emissions from fuels.

Figure 1: Council emissions compared to our target

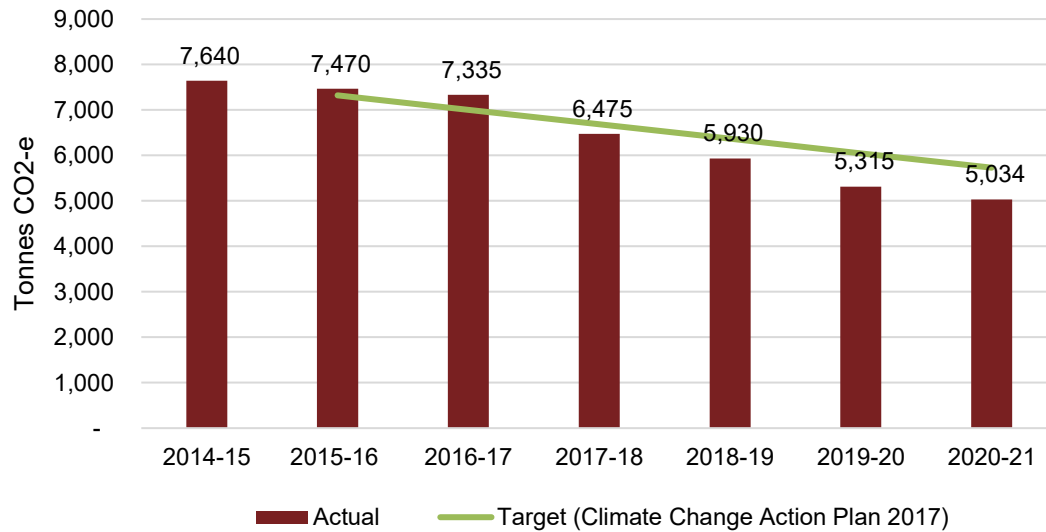
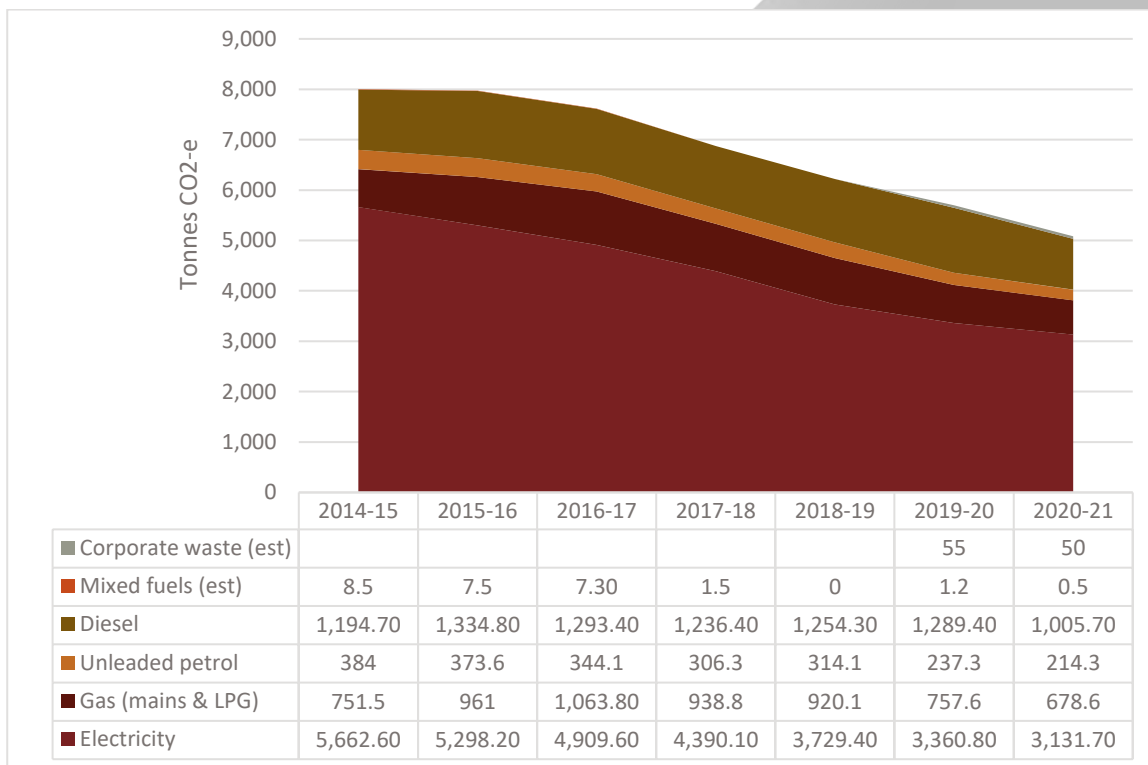


Figure 2: Council emissions by source



1.2 Council emissions from electricity

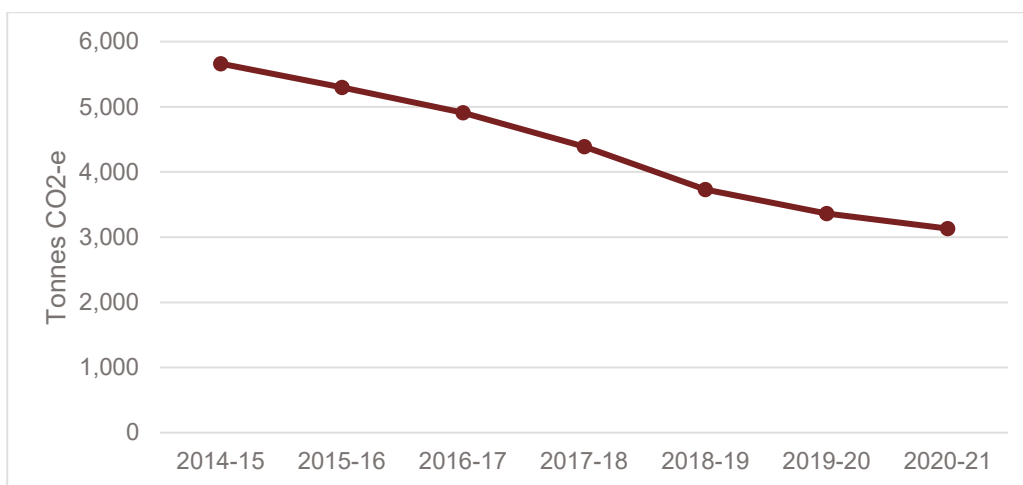
Council emissions from electricity:

- Totaled 3,131.7 tonnes CO₂-e.
- Decreased by 229.1 tonnes CO₂-e from 2019-20, equating to a 6.8% reduction.

This reduction is largely attributable to facility closures and staff working from home due to pandemic induced restrictions.

From 1 July 2021 all of Council's electricity will be sourced from renewable sources as a part of the local government Victorian Energy Collaboration (VECO) bulk procurement contract.

Figure 3: Council emissions from electricity



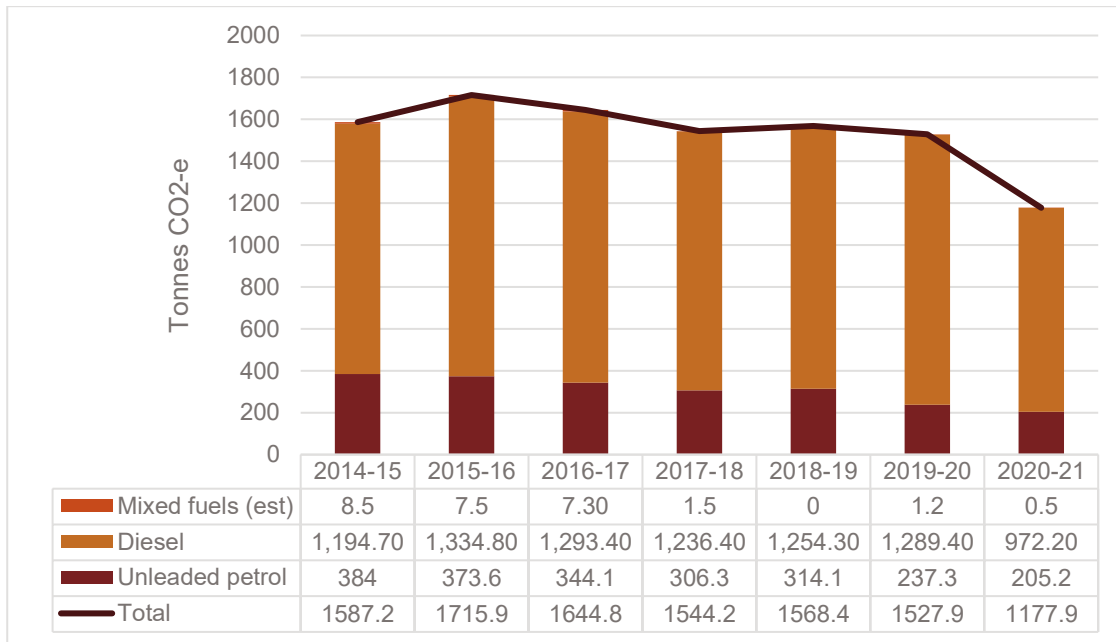
1.3 Council emissions from fuel

Council emissions from fuel:

- Totaled 1,177.9 tonnes CO₂-e.
- Decreased by 350 tonnes CO₂-e from 2019-20, equating to a 22.9% reduction.

This reduction is largely attributable to reduced mobility by Council staff due to pandemic induced restrictions.

Figure 3: Council emissions from fuel



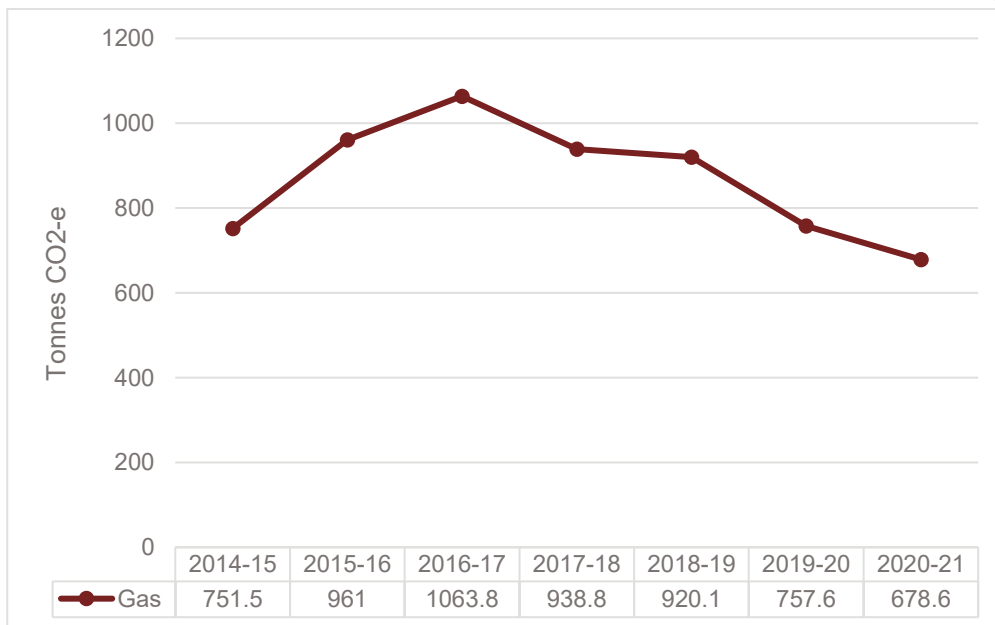
1.4 Council emissions from natural gas and LPG

Council emissions from natural gas and LPG:

- Totalled 678.6 tonnes CO₂-e*
- Decreased by 79 tonnes CO₂-e from 2019-20, equating to a 10% reduction.

**includes estimated mains gas data for June 2021 and estimated emissions from LPG of 4.2 CO₂-e.*

Figure 4: Council emissions from natural gas and LPG



1.5 Council emissions from kerbside waste

Figure 5 shows the emissions from kerbside waste sent to landfill, as well as emission reductions from Council's Food Organics Garden Organics (FOGO) collection service.

Data for emissions from the transportation of waste and the processing of Council's glass or comingled recyclables collection services is not currently available.

Figure 5: Emissions from kerbside waste

Kerbside waste	Weight (tonnes)	Emissions (tonnes CO ₂ -e)
Sent to landfill	7,170	26,868
Sent to organic waste facility through FOGO	8,505	-16,160

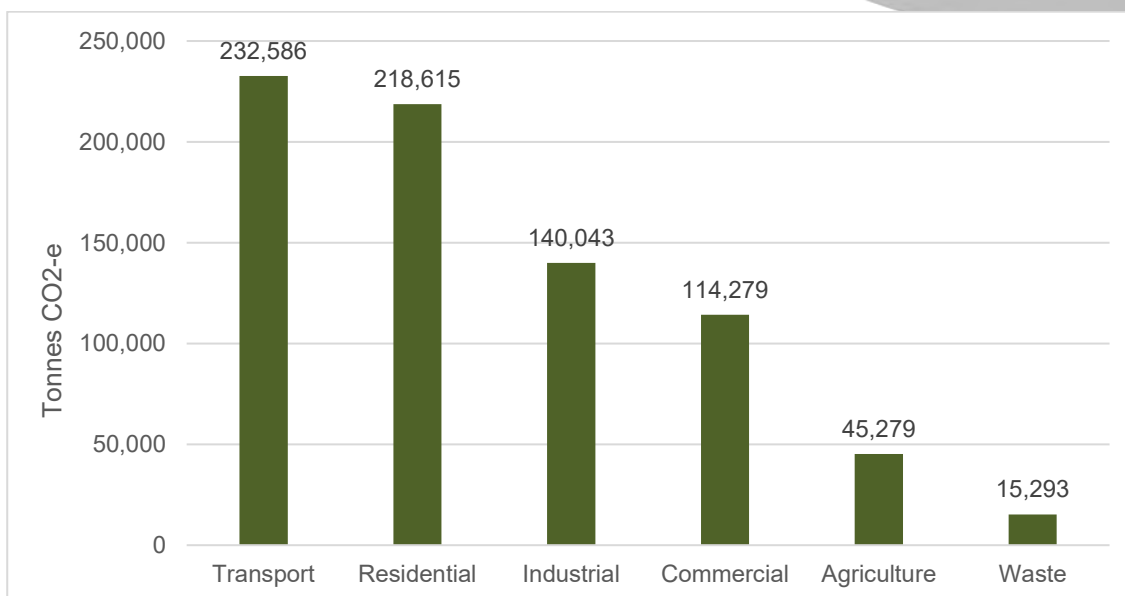
Indicator 2: Greenhouse gas emissions across the shire

2.1 Total community emissions

Snapshot Climate provides the most reliable readily available source of data for emissions from across the shire. This data was compiled by Ironbark Consulting and Beyond Zero Emissions for 2017-18 in accordance with the Global Protocol for community-scale greenhouse gas inventories.

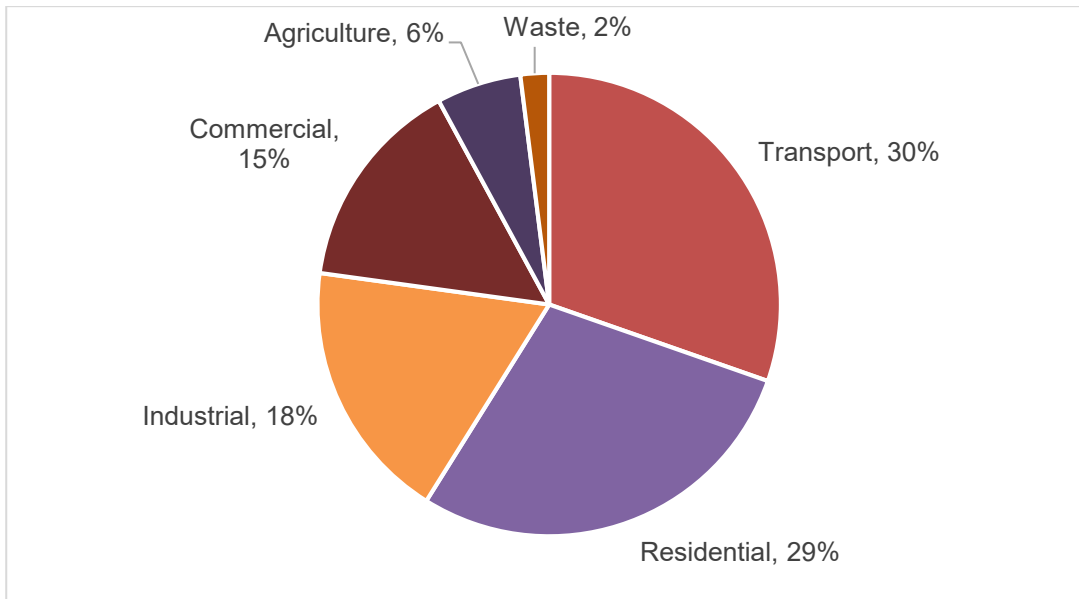
Snapshot Climate estimates that total emissions for Macedon Ranges Shire was **766,094 tonnes CO₂-e**.

Figure 6: Community emissions by sector 2017-18



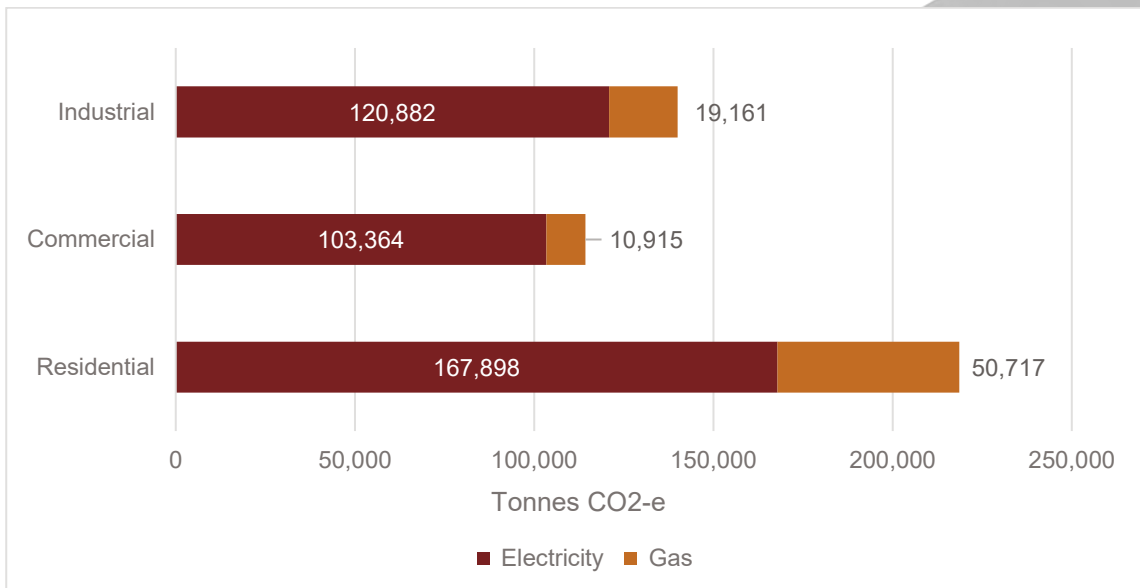
Source: snapshotclimate.com.au

Figure 7: Community emissions by sector 2017-18 (%)



Source: snapshotclimate.com.au

Figure 8: Community emissions by sector and source 2017-18



Source: snapshotclimate.com.au

2.2 Community emissions from residential uses

For 2017-18, total emissions from the residential sector was 218,615 tonnes CO₂-e, 77% of which was from electricity and 23% from gas.

2.3 Community emissions from commercial and industrial uses

For 2017-18, total emissions from the commercial sector was 114,279 tonnes CO₂-e, 90% of which was from electricity and 10% from gas.

For 2017-18, total emissions from the industrial sector was 140,043 tonnes CO₂-e, 86% of which was from electricity and 14% from gas.

Together, emissions from the commercial and industrial sectors accounted for 33% of the shire's emissions.

2.4 Community emissions from transport

For 2017-18, total emissions from transport was 232,586 tonnes CO₂-e, equating to 30% of the shire's total emissions.

This figure accounts for emissions from on-road transport only which is modelled taking into account travel from vehicles registered within the shire as well as inbound and outbound travel.

Indicator 3: Extent of the shire's transition to sustainable transport

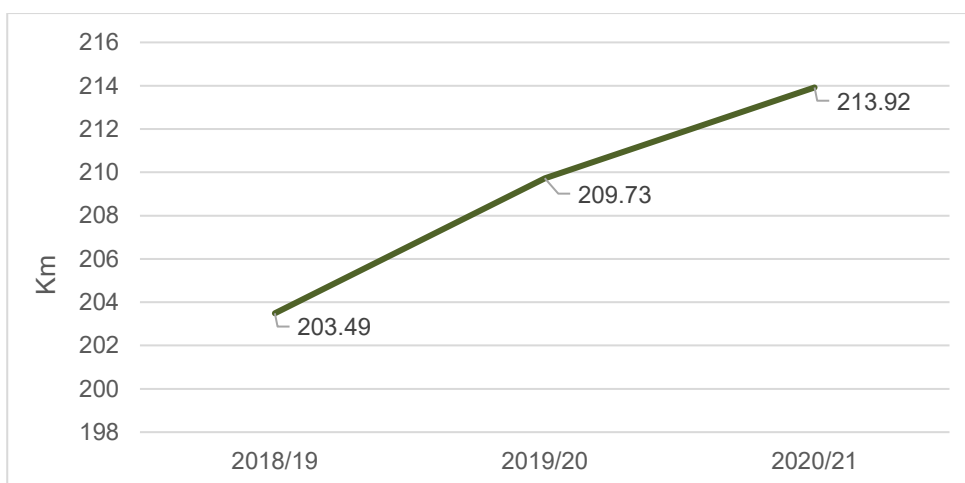
3.1 Extent of the shire's cycling network (on road)

As of 30 June 2021, there was approximately 8km of on-road cycling lanes in the shire.

3.2 Extent of the shire's walking network

In 2020-21 Council added 4.19km of footpaths to the shire's footpath network.

Figure 9: Km of footpaths in the shire



3.3 Number of public electric vehicle charging stations in the shire

As of 30 June 2021 there was one 22kW Tesla public electric vehicle charging station in Kyneton.

At the time of reporting in September 2021, a new 50kw public fast charger had been installed in Kyneton and an additional one was scheduled to be installed in Woodend.

3.4 Use of public electric vehicle charging stations

Data relating to the use of the Tesla public charging station is not available. This indicator is only able to be reported on for Council managed charging stations.

3.5 Number of electric vehicles in Council fleet

As of 30 June 2021 there were no electric vehicles in Council's fleet.

Indicator 4: Community climate change action

4.1 Number of buildings powered by renewable energy

Roof top solar

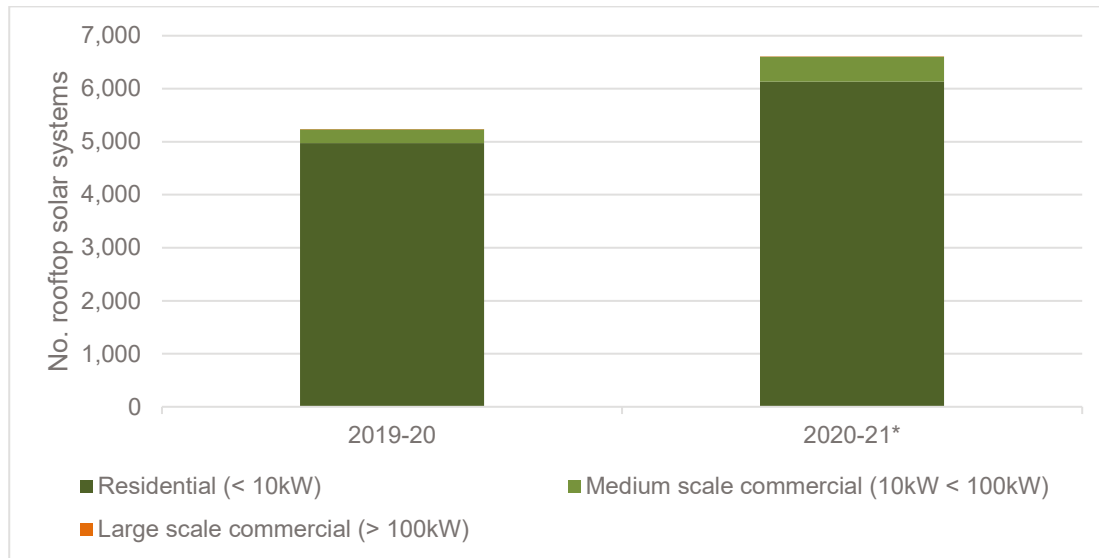
According to the Australian Photovoltaic Institute (APVI), at the time of reporting there were 6,608 roof top solar systems within the shire, equating to approximately 32.7% of total available roofs (20,214). This data is for roof top solar systems only and, therefore, does not capture solar arrays installed at ground level such as the system installed at Hardwicks Meatworks in Kyneton.

Figure 10: No. roof top solar systems in the shire

Size of solar system	2019-20	2020-21*	Increase
Less than 10kW (assumed residential)	4,977	6,131	1154
10kW - 100kW (assumed commercial)	258	474	216
Greater than 100kW (assumed commercial)	3	3	0
Total	5,238	6,608	1370

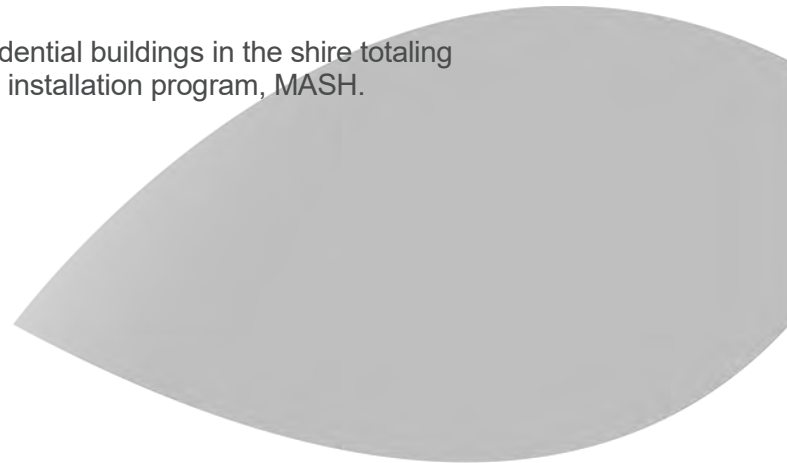
*as of 20 September 2021

Figure 11: No. roof top solar systems in the shire



More Australian Solar Homes (MASH)

In 2020-21, solar systems were installed on 63 residential buildings in the shire totaling 387kW through the not-for-profit solar bulk buy and installation program, MASH.



Theme 2: Biodiversity

Highlights

Fauna monitoring

- ✓ Inspection of 144 nest boxes and completion of a Bird Blitz survey across Council's 86 biodiversity monitoring sites.
- ✓ Completion of two spotlight surveys in each of Council's 8 biolink areas.
- ✓ Completion of surveys for Golden Sun Moth, Amethyst Hairstreak and Yellow Ochre butterflies.

Flora monitoring

- ✓ Completion of surveys for Clover Glycine at Bald Hill and Black Hill reserves.

Plans and assessments

- ✓ Support for planning and property inspections in the Kyneton Woodlands (Black Hill to Greenhill) and Ashbourne biolinks.
- ✓ Completion of a draft Roadside Conservation Management Plan.
- ✓ Completion of cultural heritage assessments of Barringo Reserve, Black Hill Reserve and Bald Hill Reserve by Wurundjeri Woi Wurrung and Taungurung Aboriginal Corporation.

Healthy Landscapes for Healthy Livestock

- ✓ Delivery of the Healthy Landscapes for Healthy Livestock regenerative agriculture program including provision of:
 - individual on-farm advice to 50 farmers.
 - delivery of a Regenerative Grazing Management short course attended by 25 properties.
 - delivery of 8 webinars (450 views), 3 field days (99 participants) and 4 discussion group meetings (50 participants).
 - preparation of a suite of information sheets about regenerative grazing and animal welfare.

Conservation reserves

- ✓ Completion of security upgrades at Hobbs Road Reserve.
- ✓ Completion of track upgrades at Black Hill Reserve.
- ✓ Completion of weed control and tree safety works across the shire's bushland and conservation reserve.
- ✓ Completion of a cultural burn at Daly Nature Reserve by Wurundjeri Woi Wurrung.
- ✓ Closing informal tracks within the Shone and Schultz historical subdivision and promotion of Council's "gift back" program to protect the area's flora and fauna.
- ✓ Making a submission to the Victorian Parliamentary Inquiry into Ecosystem Decline.
- ✓ Support for 13 community members to complete the Nature Stewards environmental capacity building program.
- ✓ Provision of advice on 173 planning permit applications aimed at ensuring development minimises loss of native vegetation and protects the natural environment.



Smoking Ceremony at Black Hill Reserve as a part of the Taungurung Sharing Circle and cultural assessment



Nature Stewards participants from the cities of Hume and Melton and the Shire of Macedon Ranges.

Indicator 1: Biodiversity across the shire

1.1 Presence and abundance of biodiversity indicator species

Biodiversity Monitoring Program

Council's Biodiversity Monitoring Program assesses how Council is tracking against the five objectives in the *Biodiversity Strategy 2018*. Four species are used as indicators of broader ecosystem health – the Brush-tailed Phascogale, Powerful Owl, Greater Glider and the Brown Treecreeper (as part of the temperate Woodland Bird Community).

To monitor these species, Council undertakes the following annual activities:

Monitoring activity	No. sites	Target species
Nest box checks (x144)	48 sites	Brush-tailed Phascogale
Spotlight surveys	16 sites	Brush-tailed Phascogale, Greater Glider and Powerful Owl
Bird Blitz surveys	84 sites	Woodland birds

The monitoring sites have been selected based on a stratification of Council's six biolink areas plus 2 forest blocks (Wombat and Cobaw state forests).

In 2020/21 Council completed all of the above surveys for the first time.

Additional monitoring activities occur on an ad hoc or as needed basis to monitor the presence and population health of specific species.

Birds

In 2020-21 Council conducted its second Bird Blitz across 86 biodiversity monitoring sites. The outcomes of this survey are documented in the [Macedon Ranges Bird Survey Report 2020](#).

Key findings include:

- Less total observations were made in 2020 compared to 2019.
- 94 species were observed across the shire, with greater species diversity observed in the Mount William, Upper Coliban and Cobaw biolinks.
- The Crimson Rosella and Australian Magpie were the two most observed species.
- Five threatened species were recorded at 12 sites.
- Low numbers of introduced bird species were recorded across all biolink areas.

The outcomes of Council's annual Bird Blitz will become more meaningful each year as annual data is able to be compared and trends are able to be observed.

While the indicator listed in the Biodiversity Strategy 2018 is for woodland birds, the data for woodland bird species in isolation is currently insufficient to draw conclusions from.

Figure 12: Total bird observations during 2020 Bird Blitz

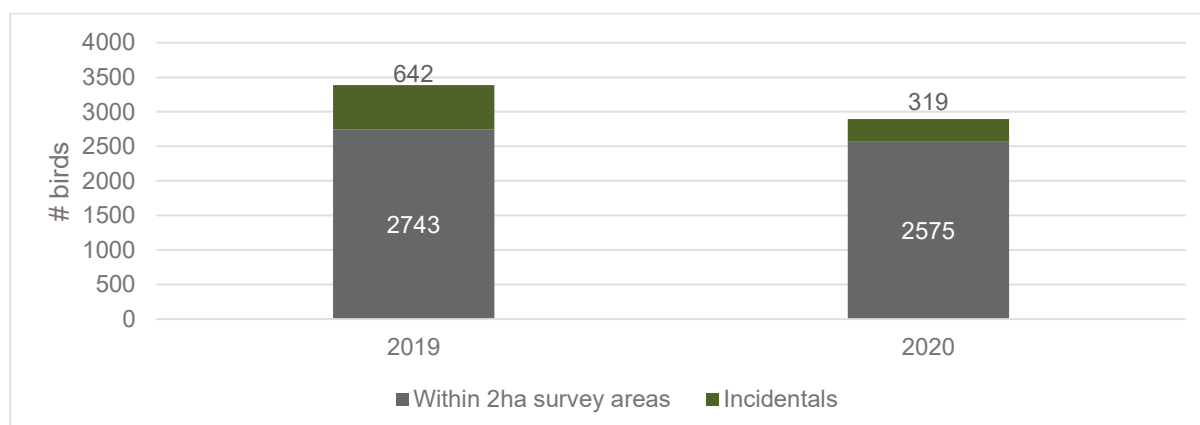


Figure 13: Number of bird species recorded during 2020 Bird Blitz by Biolinks

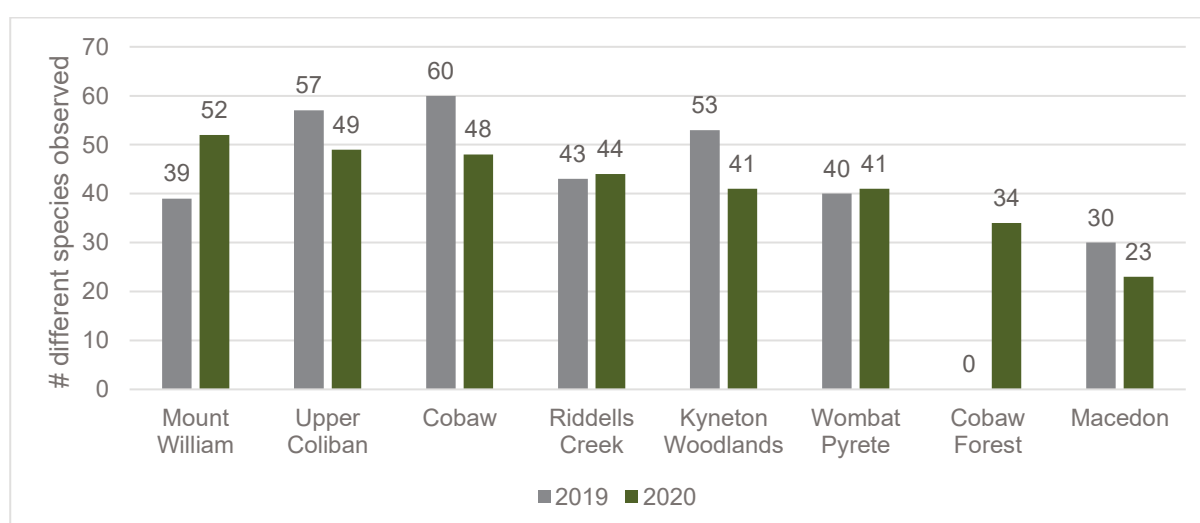


Figure 14: Native versus introduced birds recorded during 2020 Bird Blitz

Biolink	No. native birds	No. introduced birds
Cobaw	436	0
Cobaw Forest	242	1
Kyneton Woodlands	390	7
Macedon	86	1
Mount William	370	11
Riddell	277	3
Upper Coliban	400	5
Wombat Pyrete	328	18
Total	2529	46

Brush-tailed Phascogale

Data from the Victorian Biodiversity Atlas indicates that there are high numbers of Phascogale sightings in biolink areas which reflects the habitat values present as well as more recent survey effort in these locations.

The absence of Phascogale sightings in the Riddells Hills biolink potentially reflects the lack of surveys conducted in this area as well as the type of habitat present which is less suitable for Phascogales compared to other biolinks.

Greater Glider

Data from the Victorian Biodiversity Atlas indicates that, since 2018, Greater Gliders are currently confined to Kangaroo Creek on Council's western most boundary with Hepburn Shire. This finding reflects their reduced range rather than an absence of survey effort as there were a significant number of surveys conducted between 2017 and 2019 as a part of Council and Upper Campaspe Landcare Network's Spotlight on Species project. This project resulted in no sightings outside the Kangaroo Creek area and Wombat State Forest.



Female Phascogale with her young

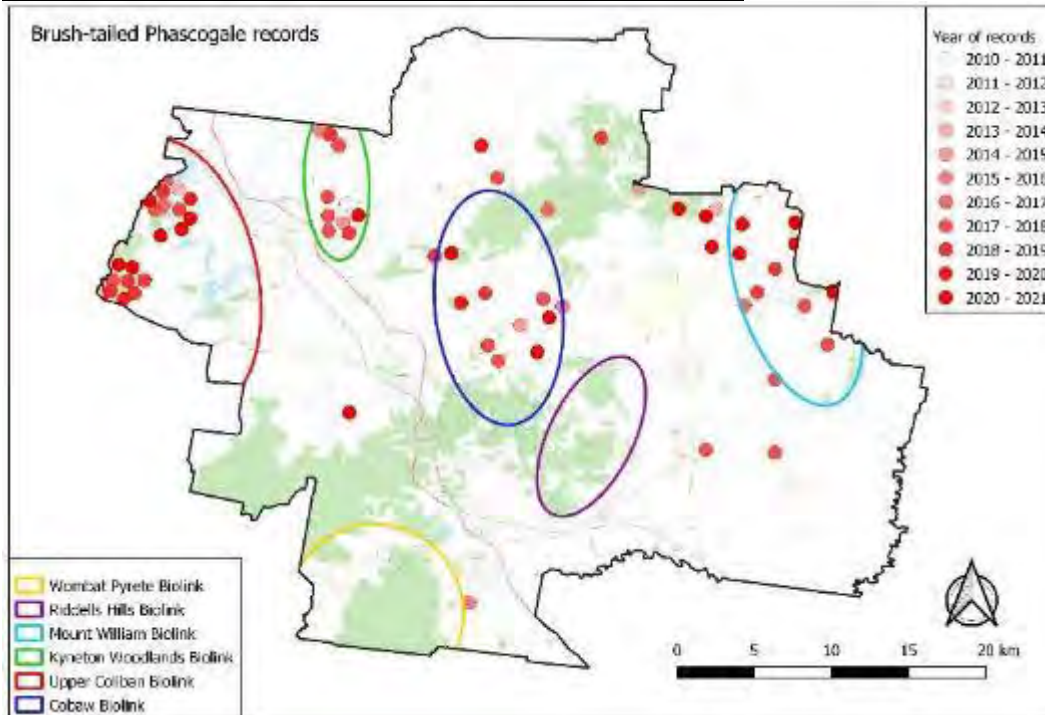
Powerful Owl

The Powerful Owl occupies large home ranges and is notoriously difficult to detect. Data from the Victorian Biodiversity Atlas indicates the absence of Powerful Owl sightings in the Mount William Range biolink, potentially reflecting the lack of survey effort and / or the lack of data uploads to the Victorian Biodiversity Atlas in this area.



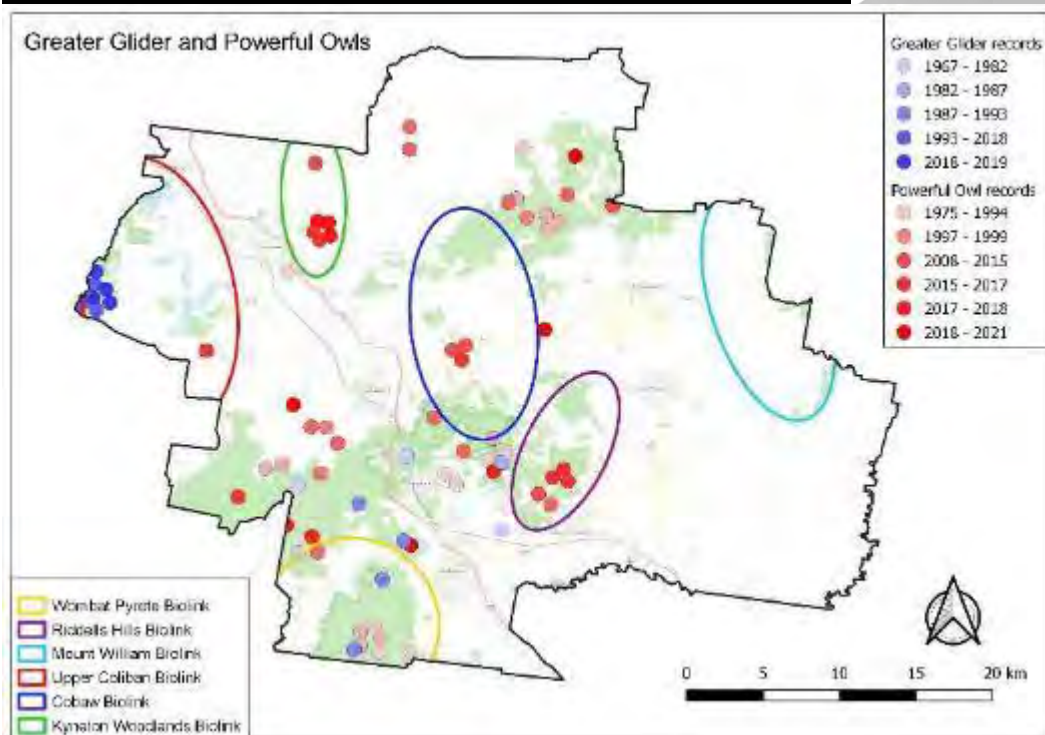
A Powerful Owl photographed by Council staff in March 2021 at Bald Reserve, Kyneton.

Figure 15: Brush-tailed Phascogale records 2010-2021



Source: Victorian Biodiversity Atlas

Figure 16: Greater Glider and Powerful Owl records 1967-2021



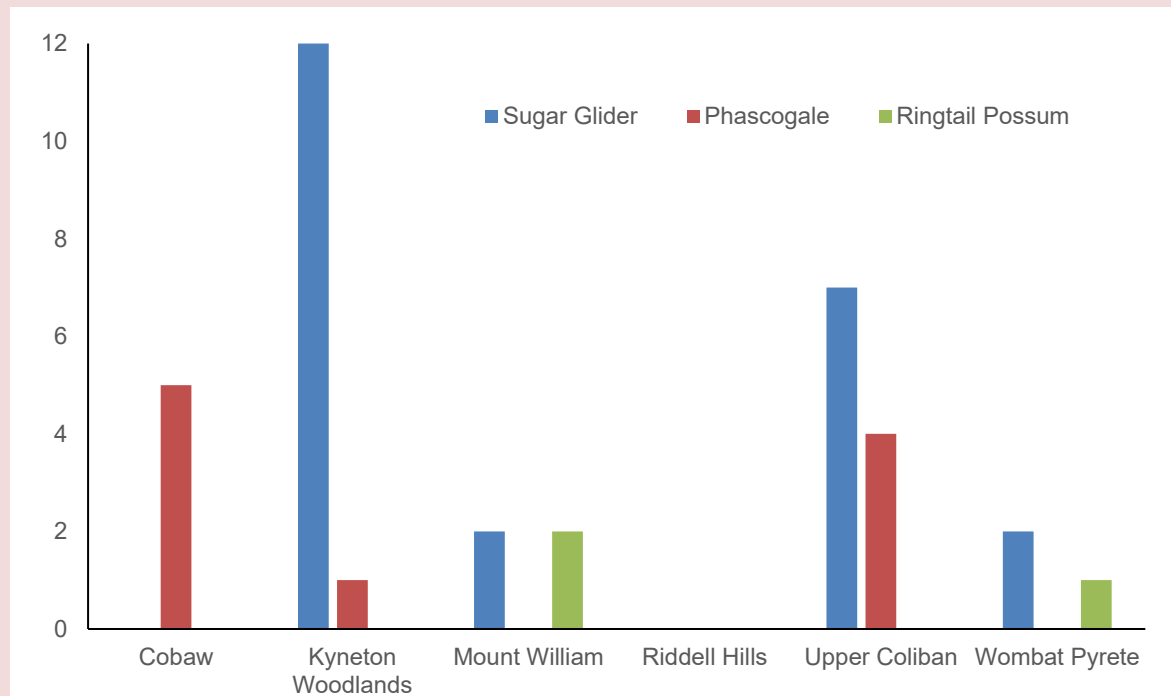
Source: Victorian Biodiversity Atlas

Council's Nestbox Program

In 2020-21, Council inspected most nest boxes installed across 48 biodiversity monitoring sites. The outcomes of this survey across Council's biolink areas are shown below. In summary:

- 26% of nest boxes were in use.
- 7.2% of boxes were being used by Brush-tailed Phascogale, including 5 boxes which contained nests, demonstrating that the boxes were being used for breeding. One of these nest sites was being used by a female Phascogale to raise her eight young.
- 16.6% of boxes were used by Sugar Gliders.
- Nest box occupancy across biolink areas varied and is likely to reflect the variation in habitat. Further meaning will be extracted from the nest box surveys in future years as Council gathers further information about patterns and trends in occupancy.

Figure 17: Nest box occupancy by biolink area



Indicator 2: Conservation value of Council managed land

2.1 Treated weeds on roadsides

Woody weeds

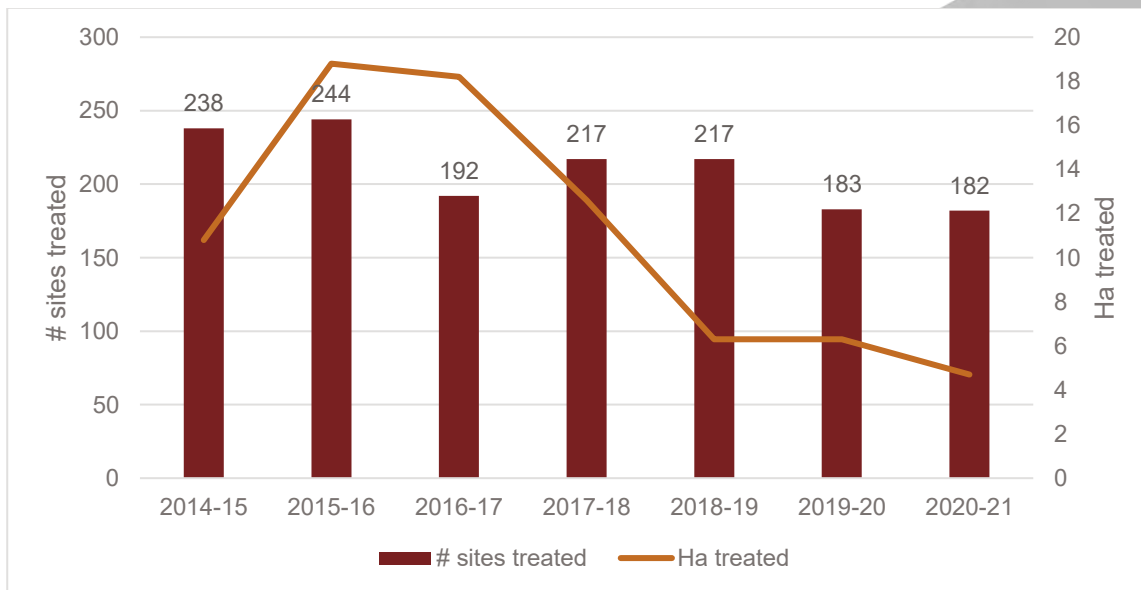
In 2020-21 Council treated:

- 182 roadsides
- 4.7 ha of weeds on roadsides

Figure 17 indicates:

- The number of sites treated has remained relatively consistent.
- The area treated has declined substantially since 2016/17, indicating that, in many cases, the large infestations of woody weeds such as Gorse, Broom and Blackberry have been treated and that the roadside weed program is moving into a “maintenance” phase whereby less weeds need treating across the same area.

Figure 18: Roadside weed control



Serrated Tussock and Chilean Needle-grass

In 2020-21 Council treated:

- 130 known populations of Chilean Needle-grass and 350 known populations of Serrated Tussock on roadsides

2.2 Conservation value of bushland and conservation reserves

Not available.

Many methods exist to monitor the condition or conservation value of natural areas. Most methods generate rich data which is time consuming to collect and, therefore, is beyond Council's current capacity to implement. As such, Council is still determining the most efficient and effective method for monitoring and reporting on conservation values in bushland and conservation reserves.

2.3 Ecological and cultural burns completed

Council engaged the Wurundjeri Woi Wurrung Narrap Team to conduct a cultural burn at Daly Nature Reserve.



Cultural Burn by Wurundjeri Woi Wurrung at Daly Nature Reserve

Indicator 3: Community involvement in conservation

3.1 Participation in land management workshops

In 2020-21 Council continued to deliver the Healthy Landscapes for Healthy Livestock project which aimed to build the capacity of livestock farmers in the shire to implement regenerative, sustainable farming practices. The program was funded with a National Landcare Grant. As a part of this program, Council delivered:

- 8 land management workshops and webinars
- 4 discussion group meetings
- 56 property visits
- The Regenerative Grazing Short Course 2020

It is estimated that the program reached over 450 different people.

Figure 19: Land management events 2020-21

What	When	Where	Attendees
Understanding your farm soils series - 1	11 Aug 2020	Online	68
Understanding your farm soils series - 2	18 Aug 2020	Online	36
Understanding your farm soils series - 3	25 Aug 2020	Online	45
<i>Understanding your farm soils Series</i>		<i>Online Council YouTube</i>	<i>Over 100 views</i>
Local Farmer Series – Sam White	8 Sep 2020	Online	71
Local Farmer Series – Patrick Francis	15 Sep 2020	Online	54
Local Farmer Series – Breanne Francis & Gerard Noonan	22 Sep 2020	Online	43
<i>Local Farmer Series - MRSC YouTube</i>		<i>Online Council YouTube</i>	<i>Over 250 views</i>
Understanding your soil test	1 Dec 2020	Online	20
Dung Beetle Field Day	22 Mar 2021	Chintin	47
Regenerative Grazing Short Course 2020	Sep 2020 – Mar 2021	Online/Various venues	20 business
Discussion Group Meetings (x4)	Various	Various	25 different people
Property Visits	Various	Across the shire	48 first visit 8 second visits



Local Farmer Webinar Series – Sam White



Dung Beetle Field Day

3.2 Attendance at biodiversity events such as walks and talks

In 2020-21 Council focused on citizen science events that could be delivered in small groups in order to comply with pandemic related restrictions.

Figure 20: Biodiversity focused events 2020-21

What	When	Where	Attendees
Clover Glycine Webinar	23 Sep 2020	Online	40
Bird Blitz	17 Oct 2020	Various locations	30
Ashbourne Landcare Biolink Workshop	06 Mar 2021	Marsh Court	30
Field Naturalists Walk	13 Mar 2021	Mt Gisborne Reserve	36
Night Time Creatures of the Roadsides in Newham	24 Mar 2021	Newham	45
Daly Nature Reserve Cultural Burn	30 Apr 2021	Daly Nature Reserve	12
Creatures of the night-Spotlight Surveys	04 May 2021	Bullengarook	5
Gisborne Secondary Daly Nature Reserve Visit	05 May 2021	Daly Nature Reserve	25
Creatures of the night-Spotlight Surveys	05 May 2021	Newham	6
Creatures of the night-Spotlight Surveys	18 May 2021	Kyneton	15
Creatures of the night-Spotlight Surveys	19 May 2021	Lauriston	15
Creatures of the night-Spotlight Surveys	26 May 2021	Mount William	14
Creatures of the night-Spotlight Surveys	21 Jun 2021	Riddells Creek	5
<i>Cobaw Biolink Video</i>		<i>Online Council website</i>	<i>816 views</i>
<i>Wildflower Video</i>		<i>Online Council website</i>	<i>476 views</i>

3.3 Health and activity of Landcare and Friends Groups

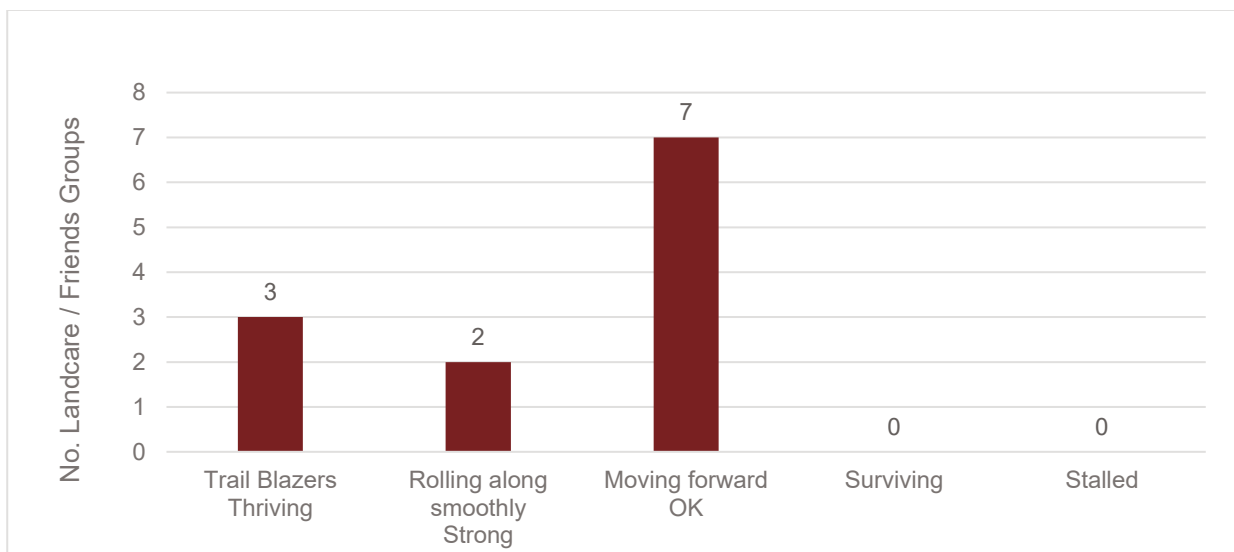
Each year Landcare and Friends groups fill out a “health check” survey if they apply for funding from their relevant catchment management authority.

In 2020-21 12 out of 23 groups applied for funding and, therefore, completed the “health check” survey.

The outcomes indicate that many groups may have decided not to apply for funding due to the difficulty in conducting working bees and meetings as a result of pandemic induced restrictions.

The fact that all groups that responded feel that they are “moving forward” or “thriving” is positive.

Figure 21: Landcare Group Health Check



Source: North Central and Port Philip and Westernport Catchment Management Authority

Theme 3: Water

Highlights

- ✓ Completion of environmental plans for waterways in the southern part of the shire, within the Port Philip and Westernport catchment.
- ✓ Implementation of Stage 1 of the Romsey Five Mile Creek Masterplan including woody weedy removal, revegetation, completion of water sensitive urban design investigations and progression of a Cultural Heritage Management Plan.
- ✓ Large scale woody weed removal along Jacksons Creek, behind Dixon Field in collaboration with Melbourne Water, and along Woodend Five Mile Creek.

Indicator 1: Water consumption from Council operations

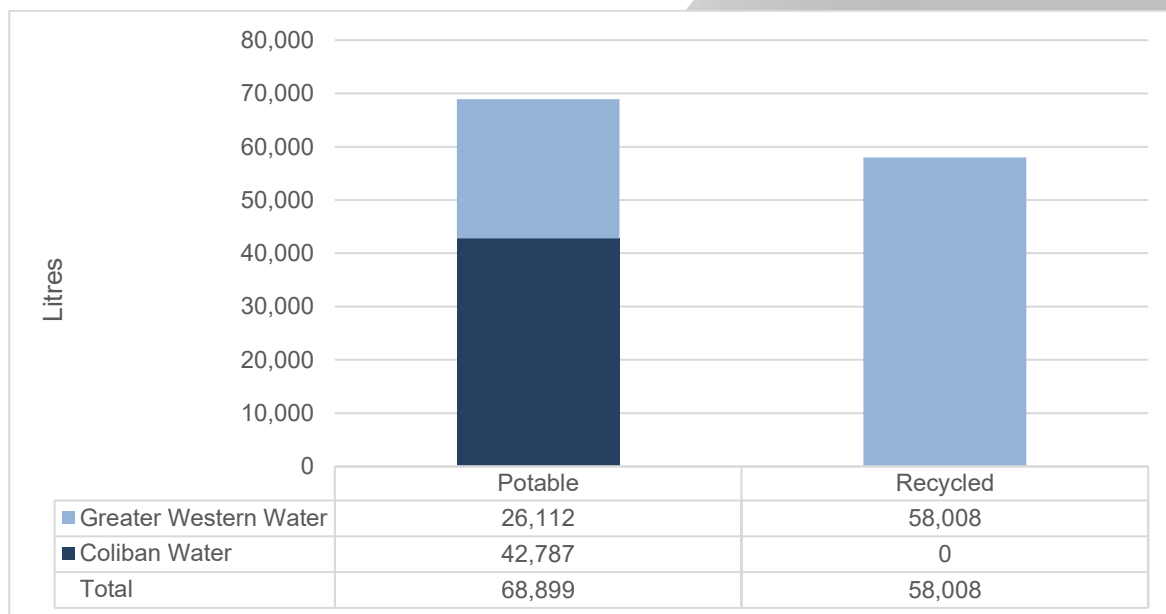
1.1 Consumption of potable water

In 2020-21 Council consumed 68,899 litres of potable water.

1.2 Consumption of recycled water

In 2020-21 Council consumed 58,008 litres of recycled water, all sourced from Greater Western Water's waste water treatment plants for use on sports grounds and open space.

Figure 22: Council's water use 2020-21



Indicator 2: Extent of waterway restoration works conducted

2.1 Weed control

In 2020-21 Council conducted weed control along the following waterways:

Figure 23: Weed control conducted along Council managed waterway reserves

Waterway	Reserve	Locality	Comments
Jacksons Creek	Jacksons Creek A	Gisborne	Elm removal behind Dixon Field. Co-funded by Melbourne Water
Coliban River	Marsh Court Reserve	Ashbourne	
Burrungma Dalga Creek	Gisborne Marshland	New Gisborne	
Romsey Five Mile Creek	Romsey Five Mile Creek Reserve	Romsey	Co-funded by Melbourne Water.
Woodend Five Mile Creek	Bowen Street area	Woodend	Large scale woody weed removal.

2.2 Revegetation

The main revegetation project completed in 2020-21 was along Romsey Five Mile Creek with co-funding by Melbourne Water.

Figure 24: Revegetation conducted along Council managed waterway reserves

Waterway	Locality	No. plants	Comments
Romsey Five Mile Creek	Romsey	1,260.	Co-funded by Melbourne Water

Indicator 3: Waterway quality in local creeks and rivers

3.1 Water quality for the Upper Maribyrnong catchment

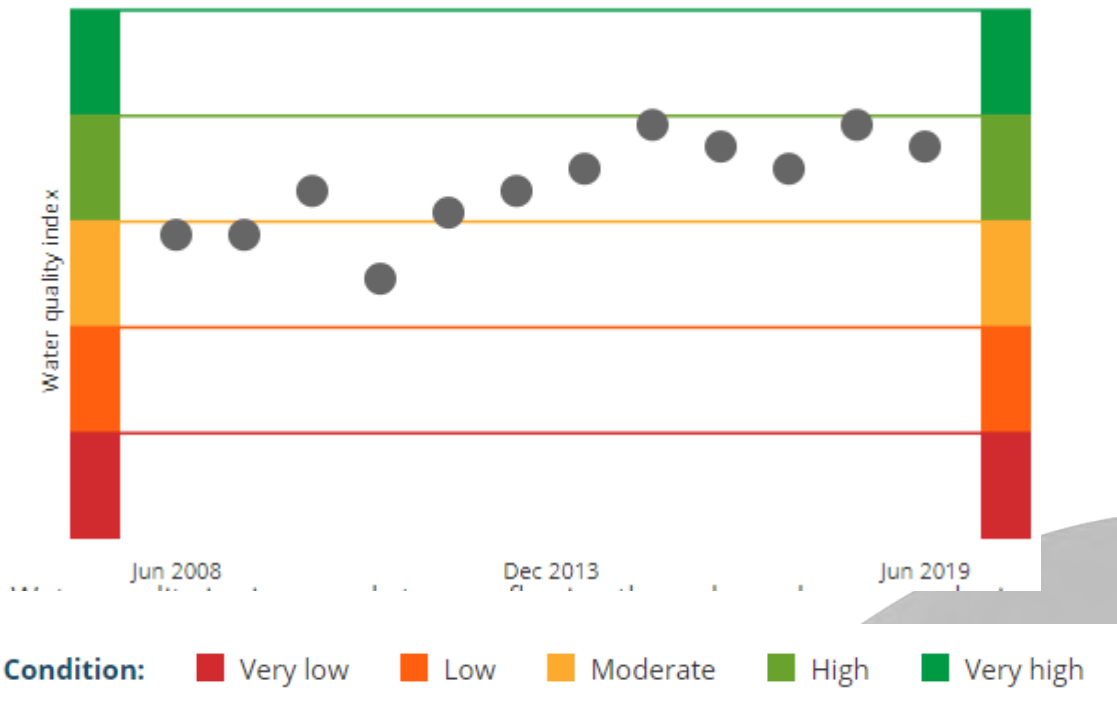
Environmental water quality objectives developed in the State Environment Protection Policy (Waters) are used to evaluate monitoring results. The Victorian Environmental Protection Authority (EPA) developed a Water Quality Index (WQI) based on SEPP Waters which amalgamates the multiple measures of water quality together in a single index.

The following chart shows the water quality index (WQI) score for the monitoring station along Deep Creek at Kennedy's Lane, Romsey between 2008 and 2019. This data shows an improvement in water quality at this monitoring station over time.

More recent data was not available at the time of reporting.

Figure 25: Water Quality Index scores for Deep Creek at Kennedy's Lane, Romsey

Deep Creek at Kennedys Lane, Romsey



Source: Melbourne Water, <https://healthywaterways.com.au/waterway-conditions/water-quality#monitoring>

3.2 Storm water quality

Not available.

This indicator is not able to be reported on until preparation of a shire-wide Storm Water Management Strategy that assesses the quality of storm water entering local creeks and rivers and identifies priority locations for different types of treatments and interventions.

3.3 Water quality for waterways in the North Central catchment

Not available.

Water Quality Index data is not available for the North Central Catchment. Council is currently determining an appropriate data source to report on water quality in the northern part of the shire.

Theme 4: Waste

Highlights

- ✓ Decrease in general waste sent to landfill of 83.5 kg per serviced property (-19.5%).
- ✓ Continued roll-out of a four bin kerbside collection service.
- ✓ Completion of a Towards Zero Single-use Plastics Action Plan.
- ✓ Participation in the Plastic Oceans Australasia's EPIC Business Program aimed at reducing plastic use.
- ✓ Participation of four schools in the shire in the Plastic Oceans Australasia Schools Program – St Mary's Primary School, Heskett Primary School, Tylden Primary School and Braemar College.

Indicator 1: Waste diverted from landfill in the community

1.1 Waste received at transfer stations

Total waste received at transfer stations

For nearly all waste streams, there was a higher amount of materials deposited at transfer stations during 2020-21 compared to 2019-20, especially in regards to garden waste, mattresses and tyres. This may be attributable to two consequences of pandemic-imposed restrictions, namely, people spending more time at home undertaking projects, and the closure of the landfill site at Sunbury during lockdown periods.

Waste transferred to landfill

There was less waste diverted from landfill from transfer stations in 2020-21 compared to 2019-20 (29% compared to 44.8%). This may be due to higher contamination rates in some waste streams or higher amounts of poor quality materials that were not viable to recover or recycle.

Glass and E-waste

The level of glass deposited at transfer stations was higher than expected, given that a kerbside glass collection was available to approximately three-quarters of serviced properties for most of 2020-21.

The amount of e-waste deposited at transfer stations during 2020-21 was lower than expected, given it has not been accepted at landfill sites since 1 July 2019. This may be due to both improved recycling services by industry and improved practices by residents.

1.2 Sales at Kyneton Tip Shop

Sales at the Kyneton Tip Shop were markedly lower in 2020-21 compared to 2019-20, due to its closure for many periods of time in accordance with pandemic-imposed restrictions. Council has commenced plans to establish a tip shop at the Romsey Transfer Station, and the shop is expected to be operational by July 2022.

Figure 26: Waste received at Transfer Stations

Waste stream	2016/17	2017/18	2018/19	2019-20	2020-21	Unit
Paper and cardboard	224.6	235.5	319.88	220.68	256.84	tonnes
Aluminium and steel	1,135.30	1609.55	1,709.56	1,683.90	1,729.00	tonnes
Comingled recycling	107.8	135.53	149.6	122.1	83.92	tonnes
e-waste	86.5	103.1	118.84	146.26	105.35	tonnes
Glass	unknown	unknown	unknown	197.56	166.96	tonnes
Garden Waste	unknown	24,273	22,605	34,186	38,512	cubic meters
Oil	18,500	16,900	22,200	13,800	20,550	litres
Tyres	1,391	1,065	1,102	1,821	3,046	number
Mattresses	1,183	1,423	1,447	1,861	2,583	number
Total diverted from landfill	1,553.93	2,083.68	2,297.88	2,566.92	2,342.00	tonnes
% diverted from landfill	24.40%	32.60%	37.80%	44.80%	28.80%	%
Total disposed of in landfill	4,812.30	4,314.06	3,789.00	3,162.81	5,789.64	tonnes
Total (all items)						
(excludes green waste)	6,366.23	6,397.74	6,086.88	5,729.73	8,131.64	tonnes

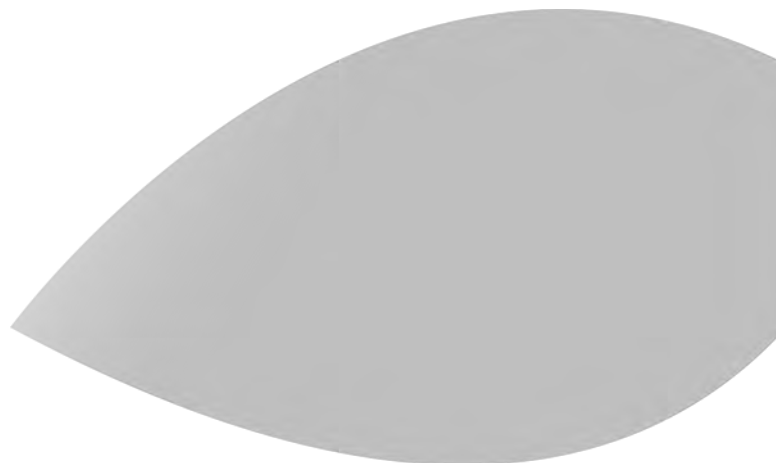


Figure 27: Sales from Kyneton Tip Shop

Category	Mar 2018 – Jun 2018*		2018/19		2019-20		2020-21	
	Qty	Revenue (\$)	Qty	Revenue (\$)	Qty	Revenue (\$)	Qty	Revenue (\$)
Bicycles	91	\$977	136	\$1,409	89	\$845	79	\$437
books			22	\$45	2	\$2	2	\$4
DVDs & CDs	2	\$9	38	\$345	54	\$416	35	\$303
Electrical	7	\$46	444	\$3,987	78	\$437	58	\$377
Furniture	80	\$850	348	\$3,291	180	\$1,885	48	\$515
Lawn Mowers	2	\$18	26	\$251	23	\$200	4	\$31
Miscellaneous	332	\$2,198	1478	\$8,460	660	\$4,199	108	\$658
Steel	354	\$1,717	629	\$4,553	349	\$2,694	169	\$1,366
Toys	15	\$53	45	\$132	16	\$76	6	\$28
Revenue (exc GST)		\$5,869		\$22,312		\$10,734		\$3,719
Revenue (inc GST)		\$6,456		\$24,688		\$11,808		\$4,090.90

*The Tip Shop commenced operation in March 2018.

1.3 Waste from kerb side collections

Council progressed the roll-out of a four bin kerbside collection service in 2020-21. By June 2020, all serviced properties had bins for general waste, comingled recycling and glass only recycling, and approximately 75% of serviced properties had bins for FOGO (food organics and garden organics). From July 2021, all serviced properties in the shire have a complete four bin collection service, enabling residents to maximise resource recovery.

In 2020-21, the following changes were observed per serviced property compared to 2019-20:

- An increase in total waste of 139.7 kg (+13.7%) across all four waste streams
- A decrease in general waste of 83.5 kg (-19.5%)
- An increase in food and garden organics of 220.4kg (+60.5%)
- A decrease in recyclables of 47.7kg (-26.5%)
- An increase in glass collected of 49.8kg (+116%)

The increase in overall waste and food and garden organics may be due to residents spending more time at home due to pandemic-imposed restrictions. The decrease in co-mingled recyclables is likely due to the introduction of glass collections across the shire.

Figure 28: Weight of different waste streams per serviced property

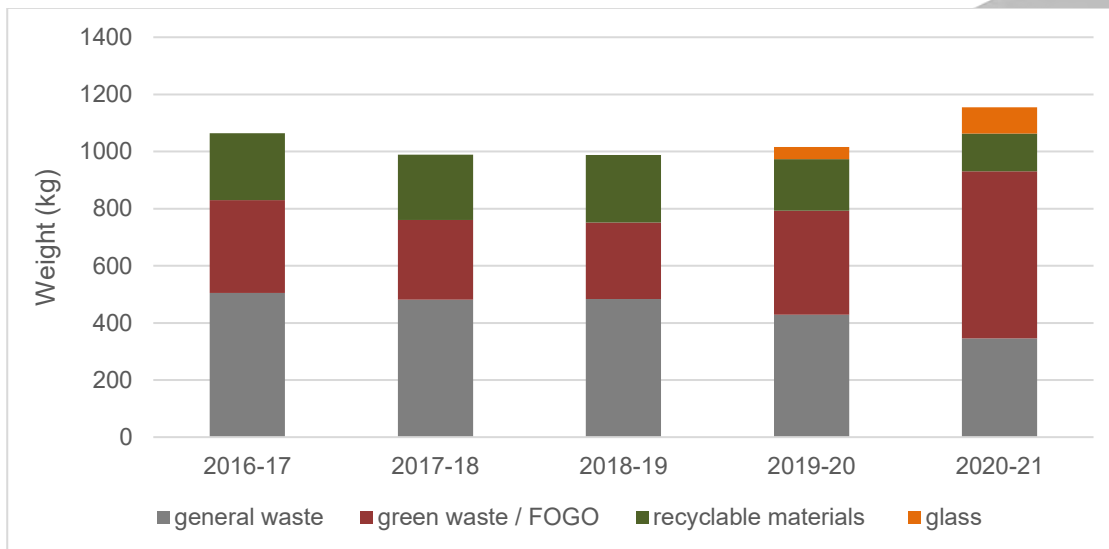


Figure 29: Weight of waste from different waste streams

Waste stream	2016-2017		2017-2018		2018-2019		2019-2020		2020-21		Change Jun 20 - Jun 21
	Total weight (tonnes)	Weight / serviced property (kg)	Total weight (tonnes)	Weight / serviced property (kg)	Total weight (tonnes)	Weight / serviced property (kg)	Total weight (tonnes)	Weight / serviced property (kg)	Total weight (tonnes)	Weight / serviced property (kg)	Weight / serviced property (kg)
General waste	9,179.60	505	8,983.20	481.3	9,222.30	483.9	8,351.00	428.5	7,170	345.3	-83.2
Green waste / FOGO	3,275.10	325	3,033.10	278.8	2,969.40	267.5	5,259.40	364.6	8,504.80	585.5	+220.9
Recyclable materials	4,250.70	233.8	4,260.80	228.3	4,509.50	236.6	3,503.20	179.7	2,715.50	131.9	-47.8
Glass							831.6	42.7	1,903	92.5	+49.8
Total	16,705.40	1,063.80	16,277.10	988.4	16,701.20	988	17,945.20	1,015.50	20,293.30	1,155.20	139.70

Figure 30: Weight of waste from different waste streams



Figure 31: Number of serviced properties for each waste stream

Waste stream	2016-17	2017-18	2018-19	2019-20	2020-21	Change Jun 20 - Jun 21
General waste	18,174.00	18,664.00	19,060.00	19,275.00	20,762.00	1,487.00 7.71%
Green waste / FOGO	10,076.00	10,881.00	11,100.00	14,425.00	14,524.00	99.00 0.69%
Recyclables	18,174.00	18,664.00	19,060.00	19,275.00	20,575.00	1,300.00 6.74%
Glass				19,275.00	20,575.00	1,300.00 6.74%

Thanks for the app Macedon Ranges Shire Council it's handy because I always forget to put the glass bin out I also appreciate the green bin. Anything that diverts waste away from landfill is a plus in my book

My garden thrives on compost, there is no better soil conditioner AND creating compost from FOGO prevents green waste from going to landfill and creating harmful greenhouse gases. Win, Win!

I really like the shire because they care about recycling and composting and I love the glass bins (school

1.4 Waste from public places and events

Not available.

Currently Council's waste contractors are not required to report on waste collected from public places or sports facilities. This may change for 2021-22.

Indicator 2: Resource efficiency within Council operations

2.1 Waste collected from Council facilities

Not available.

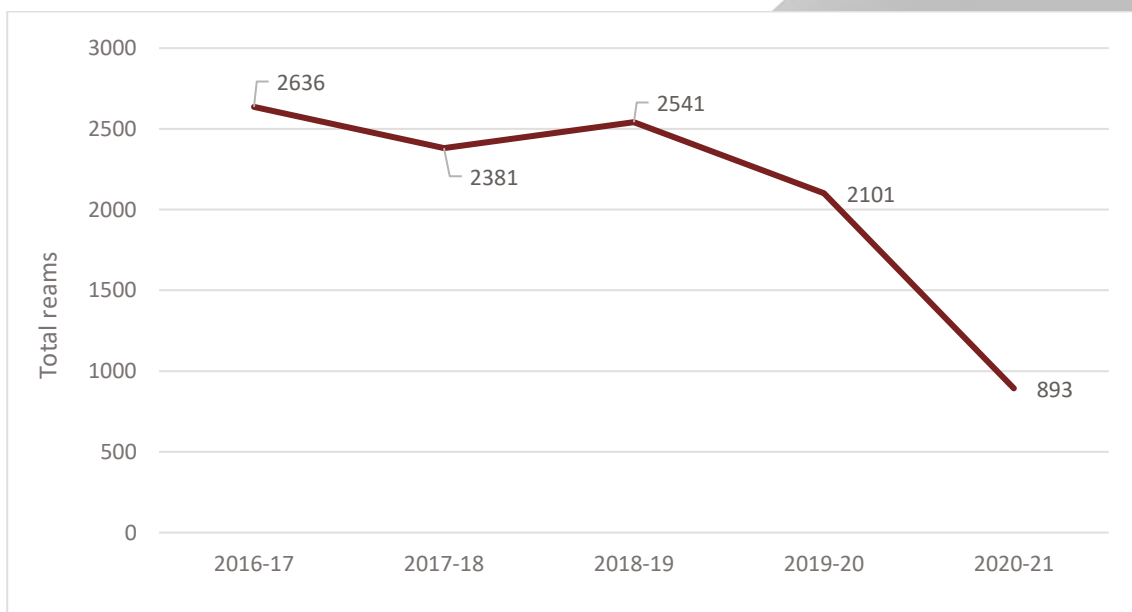
Waste from Council facilities is collected as a part of Council's general kerbside collection service and is not separated. This means that data for waste from Council facilities is currently not available.

2.2 Paper use

In 2021 Council's paper use declined by 57%. This includes all A4, A3 and coloured paper.

The reduction is likely to be attributable to the high numbers of staff working from home due to pandemic related restrictions.

Figure 32: Council paper use



2.3 Single-use plastics use

In 2020-21 Council completed an audit of plastics found at four Council facilities as a part of participation in the Plastic Oceans Australasia's EPIC Business Program. Additional locations were not able to be audited due to the difficulty in accessing sites during the pandemic.

The results from the audit are provided below.

Figure 33: No. plastic pieces by Council location

Location	Total
Woodend Depot	568
Manna Gum Kinder and MHC	426
Woodend Kinder	299
Gisborne Administration Centre	244
Total	1537

Figure 34: Type of plastics from Council waste

Item	No. Pieces
Soft plastic film	353
Soft plastic snack wrappers and food packaging	210
Personal Protective Equipment (PPE)	96
Coffee cups	81
Yoghurt containers	74
Plastic caps	73
PET bottles	66
HDPE bottles	63
Hard plastic food packaging	58
Plastic bags	54
Stationary	51
Yoghurt pouches	49
Plastic straws	40
Takeaway food packaging	39
Coffee cup lids	29
Plastic caps	26
PET punnets and packaging	26
Stationary & Toys	25
Plastic water cups	15
Chux wipes	14

Indicator 3: Community engagement with waste education

3.1 Number of waste education events hosted by Council

Due to pandemic-imposed restrictions, Council was unable to fully deliver its intended program of community engagement activities to promote best practice waste and resource recovery. While some events could be hosted online, many could not proceed. A summary of activities is listed in Table 5 below.

Figure 35: Waste Education Events 2020-21

What	When	Where	Attendees
Reusable modern cloth nappy workshop (online format)	8 August 2020	Online - zoom	10
Reusable modern cloth nappy workshop	6 February 2021	Woodend	12
Woodend Community Farmers Market	6 February 2021	Woodend	Approx. 50
Schools waste education evening	26 May 2021	Woodend	24
Riddells Creek Neighbourhood House Community Open Day	22 June 2021	Riddells Creek	unknown



St Mary's Primary School, Lancefield
Image provided by Plastic Oceans Australasia

3.2 Use of the Wash Against Waste Trailer

The Wash Against Waste Trailer was created in 2019-20 as a collaboration between Council and the Macedon Ranges Sustainability Group. In 2020-21 the trailer was used:

- Five times at farmers markets
- Once by the Woodend Neighbourhood House



Macedon Ranges Wash Against Waste trailer and volunteers with Councillor Anderson

Image from the Macedon Ranges Sustainability Group website