

Waste as a resource

Our Waste and Resource Strategy 2023-2030



knox





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Executive Summary

A huge transformation of the waste and resource recovery sector is underway. A shift in policy internationally has greatly impacted and highlighted how vulnerable the recycling sector is within Australia, forcing a rethink about how it has been viewed and managed historically.

Community awareness and interest is increasing about the products we purchase, where the products come from and where they end up. There is a need for more information about how waste is managed and a greater awareness of the legacy it leaves behind for future generations.

Our current linear take - make - use - throw away way of doing things does not recognise our natural resources are finite. It does little to reduce how much waste is sent to landfill, and is not sustainable long term.

In a few years there will be no landfills to accept household rubbish in the south east of Melbourne, with remaining options a considerable distance from Knox. Alternatives to sending waste to landfill exist, including proven

technology such as advanced waste processing, or waste to energy being used successfully and safely overseas.

Knox City Council (Council) declared a Climate Emergency in 2022, acknowledging the significant threat climate change poses to our environment and community. The generation and production of materials through to the management, processing and disposal of waste all emit greenhouse gases to the atmosphere, and contributes to climate change.

Policy and legislation at national and state level frames waste management at a local government level, including in Knox. New waste policy applies the principles of a circular economy to waste

Waste

material which has finished its initial use and entered a waste stream including waste we recycle as well as waste we send to landfill.

Resource recovery

the collection, sorting, extraction and recirculation of materials, products or energy from waste. It includes traditional processes such as recycling, reuse, composting, mulching, and newer processes such as conversion of waste into usable heat, electricity or fuel.

A circular economy

seeks to retain the value of materials in 'the loop' for as long as possible, reducing our reliance on the extraction of natural resources and reducing our impact on the environment.

management, and instead of the linear take – make – use – throw away model, this principle recognises the value of material and circulates it in use as long as possible. Across the state change to waste management is being driven by the state government Recycling Victoria policy released in February 2020. This policy describes the most substantial changes to waste management across the state in decades, including changes to Council kerbside bin services.

The purpose of our Waste and Resource Strategy 2023-2030 (Strategy) is to set a clear direction and vision for the future of waste and resource recovery across Knox to 2030. It supports delivery of the Knox Council Plan 2021- 2025, and Knox Community Plan 2021 – 2031 goals. The community told us their aspirations for the future include to reuse and recycle as much as possible. Preparing the strategy we consulted with the community

and heard your future priorities for waste management across Knox are regular collections and ease of use. This strategy seeks to strike a balance between the community's future priorities, regulatory requirements and targets, the need to deliver waste services which are both financially and environmentally sustainable, and navigate the challenges and opportunities facing the sector.

The strategy aligns with the ambitious targets set out in state policy, highlights four goals we will set out to achieve, and sets the path for Council to work towards these goals. Success of the strategy relies on Council, the community, business, industry and governments to work together to achieve the best outcomes for our community and environment.





This Strategy:

- > **outlines our vision**
- > **describes the goals we set out to achieve**
- > **sets our aims**
- > **identifies how we intend to achieve our goals**
- > **establishes clear targets**

This Strategy supports delivery of one of the five key directions identified in the Knox Community Plan and Knox Council Plan.

In developing this Strategy, various factors influencing the delivery of waste and resource recovery in Knox now and into the future have been considered.

These factors are described in detail further in the Strategy and include:

- our City's waste and resources
- feedback from our community
- the guiding principles of waste management
- legislation and policies, and accompanying regulatory framework for waste and resource recovery
- the Council Plan's and Community Plan's key directions, aspirations and goals
- shared responsibility of waste management
- challenges and opportunities, and how this influences how Council manages waste and resource recovery.



To guide and focus our efforts towards 2030, our vision is to:

Lead and support our community to move towards a circular economy by avoiding waste and maximising resource recovery.



GOALS	AIMS
Avoid waste	Avoid waste where possible and reduce how much waste we generate
Recover more from our waste	Maximise resource recovery and minimise waste to landfill
Engage and empower our community	Engage and empower our community to make informed decisions about waste and resource recovery
Care for our environment	Keep our local environment clean and manage our closed landfills

This strategy for waste and resource recovery in Knox to 2030 includes goals, aims, commitments of action from Council and sets measurable targets. This strategy aligns with targets set out in state and federal waste policy, including the target timeframe for implementation.

A separate Implementation Plan details the specific actions for each goal and Council commitment. Each action includes proposed timelines, resources required and delivery partners, and will work towards achieving our targets.

A check of progress towards the targets, including review of the status of each action in the Implementation Plan will be conducted annually. The Implementation Plan will be revised and updated if needed.

Progress towards each of the targets and status of actions will be reported to the community annually.

Our city



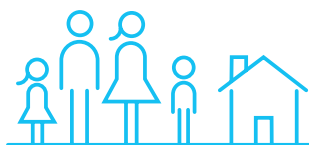
160,484

people call Knox home; this is expected to increase to 169,585 by 2031 and 185,226 by 2041



62,011

households; this is expected to increase to 64,168 by 2031 and 70,334 by 2041



Household composition

37% couples with children, 25% couples, 21% lone persons, 11% one-parent families, 2% group household and 4% other family configurations



Housing type

82% separate house
16% medium density
2% high density



27%

speak language other than English at home



Our waste services

Council manages a wide range of waste and resource recovery services in Knox, outlined below:

SERVICE	DESCRIPTION
Residential kerbside rubbish	Fortnightly collection and disposal
Residential kerbside recycling	Fortnightly collection and processing
Residential kerbside food and garden bin service	Weekly collection and processing
Residential hard waste collection service	Two on-call hard waste collections per financial year
Residential bundled branch/own container service	Fortnightly collection and processing
Public place litter and recycling bins	Collection and processing of rubbish and recycling from public litter bins, and clearing litter from around bins. Frequency of collection alters depending upon season and demand
Dorset Square bin enclosure	User-pays rubbish and recycling bulk bin services at communal waste compound for traders
Business collection service	User-pays rubbish and recycling collection services for offices and small businesses
Mixed use property waste collection (pre-schools, care facilities, Council-run facilities)	Collection and disposal services for a combination of waste, recycling and green waste services. Eligibility for the services, offerings and if user pays is dependent on Council policy and eligibility criteria

SERVICE	DESCRIPTION
Council venues, including community centres and sporting grounds waste service	Collection and disposal rubbish (bulk bins) and 240-litre bins for recycling
Festivals and sporting events waste service	Limited rubbish and recycling services for community festivals and events
Illegally dumped rubbish	Investigation and removal of dumped rubbish from Council property
Compost rebate	Subsidies of up to 60% off a range of products including compost bins, worm farms and bokashi bins, and education on their uses
Waste education	Community workshops and events, bin inspection program, social media campaigns, media campaigns, waste calendar and A-Z guide
Closed landfill management	Manage closed landfills at Llewellyn Park, Cathies Lane and Wantirna Reserve
Knox Transfer Station	Contract management of the Operation and Management of the Knox Transfer Station, and lease of the rear of the property for waste processing to KTS Recycling Pty Ltd until early 2027
Planning permit referrals	Review waste management plans submitted in planning permit applications, assessing waste services for proposed multi-unit developments

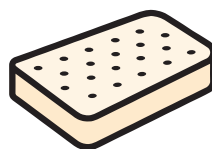
A snapshot of our waste services in 2022/23



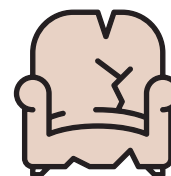
Over **135,200**
public litter and
recycling bin
collections



12,844
bulk bin
collections from
Council venues



11,568
mattresses



31,565
hard waste
bookings



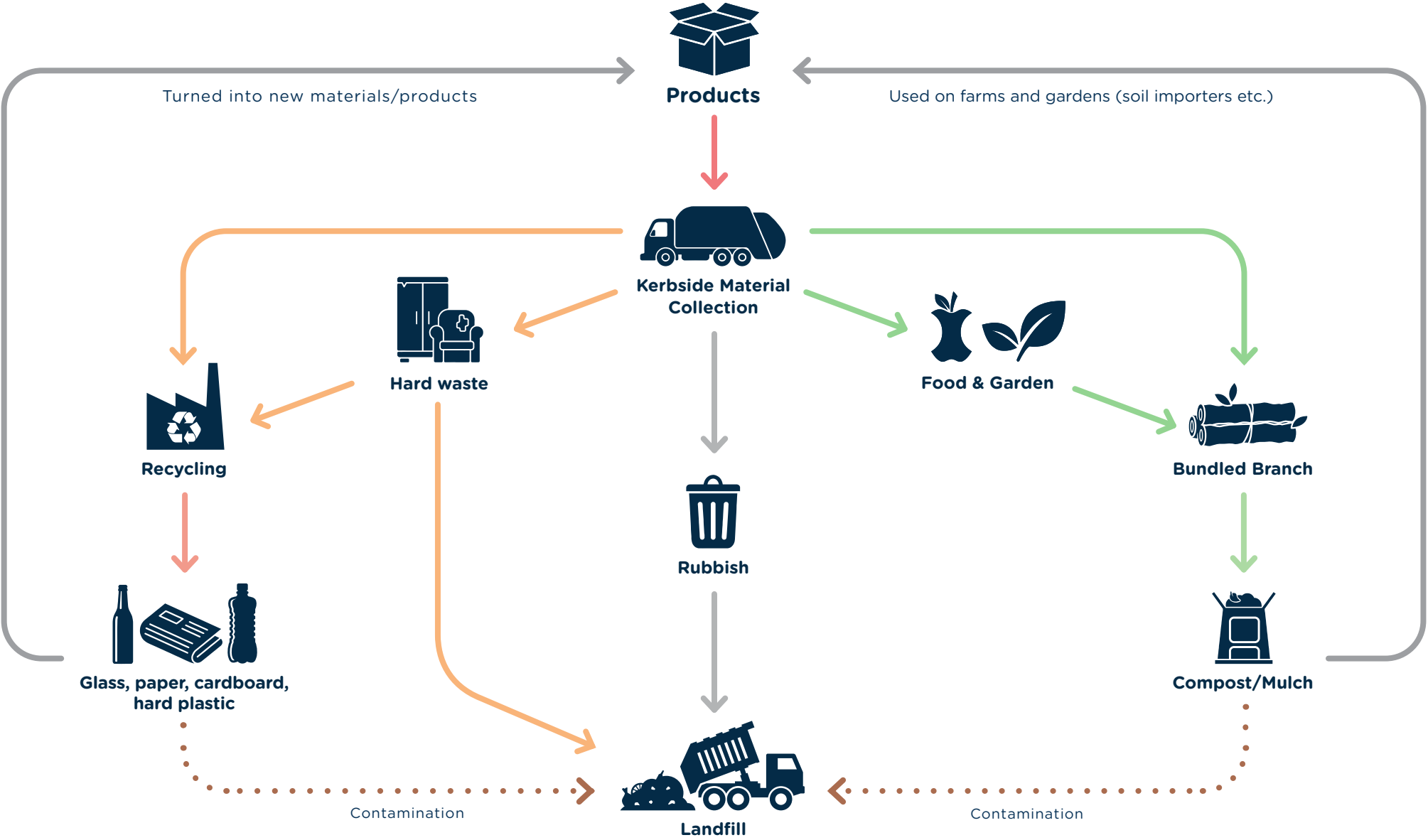
4,850,430
household rubbish
and recycling bin
collections



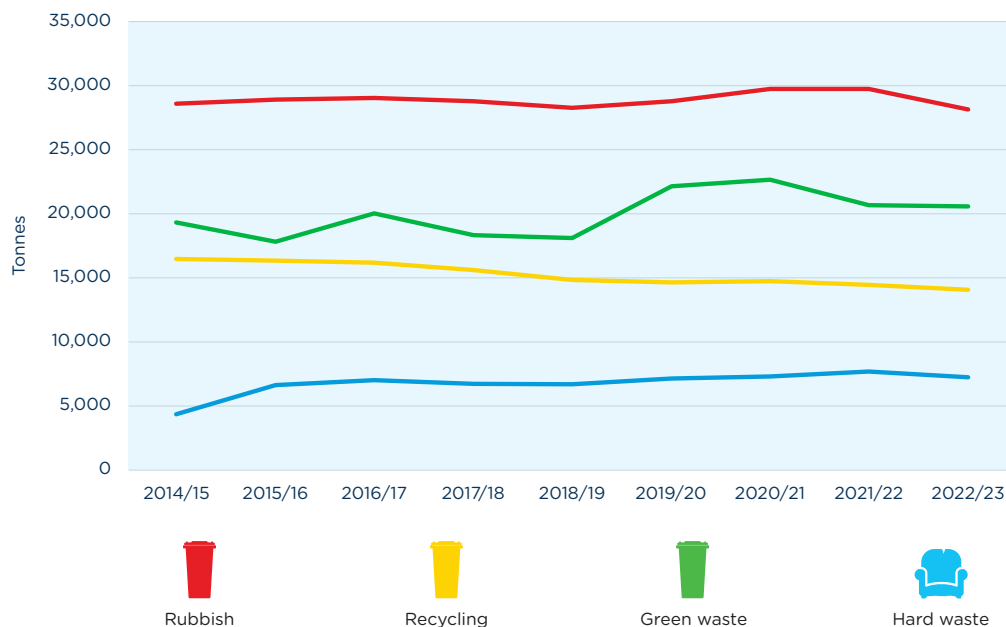
157
compost rebates



Where our waste goes



Our waste and resource profile



Looking at the tonnes of waste collected in Knox each year since 2014/15, we can see:

- The amount of rubbish collected remains fairly consistent, with the least collected in 2022/23.
- Over time, the amount of recycling collected is steadily decreasing, likely due to the increased use of lightweight materials for packaging such as plastic, instead of heavier materials such as glass.
- The stream which fluctuates the most is garden waste, with increases in 2019/20 and 2020/21 attributed to COVID-19 lockdown periods, consistent with the experience of other metropolitan Melbourne councils. This data does not include the food and garden bin service.

- The booked hard waste system was introduced in 2015/16, with hard waste tonnes collected slightly increasing over the years.

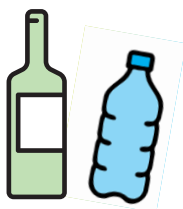
Over this time period the population of Knox increased by approximately 3,500 residents.



A snapshot of tonnes of kerbside waste collected in 2022/23



27,804
rubbish



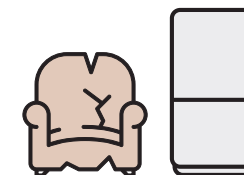
13,963
recycling



17,545
garden waste



3,018
bundled branch/
own containers



7,181
hard waste

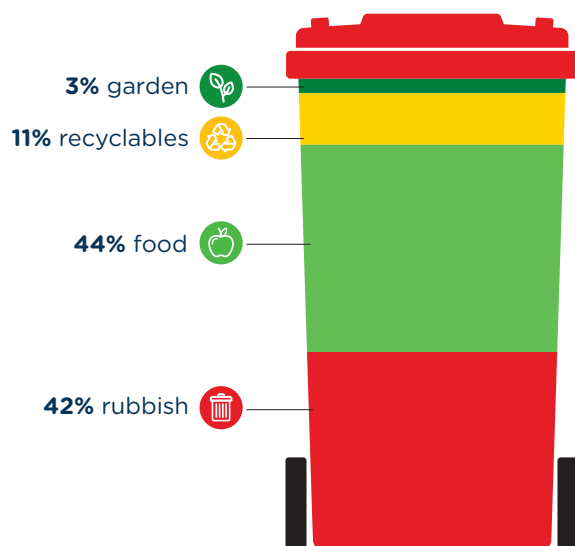
Our rubbish

On average, each property in Knox throws out 443 kilograms of rubbish every year, which ends up in landfill.

This is comparable to the rest of metropolitan Melbourne, and 9 kilograms more than the state average (Recycling Victoria database 2023).

Each year, randomly selected rubbish bins are audited to provide a snapshot of what is presented for collection.

The contents of the bin is hand-sorted into waste type and weighed. Based on data obtained over the last four years, before the start of the food and garden bin service, by weight the typical rubbish bin in Knox contains:

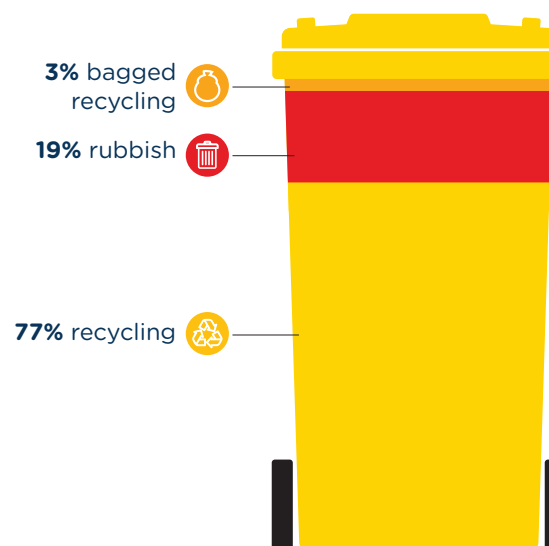


Our recycling

On average, each property in Knox separates 220 kilograms of recycling into its recycling bin for collection and processing every year.

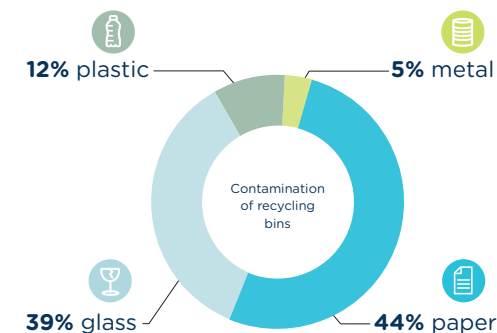
This is 8 kilograms more than the metropolitan Melbourne average, and 13 kilograms more than the state average.

Based on data obtained from bin audits over the last four years, by weight the typical recycling bin in Knox contains:



Contamination of our recycling bins has potential to impact on the ability to process materials, create hazards and in some contracts incurs additional costs.

Taking out contamination, our recycling is mostly made up of:



The Container Deposit Scheme (CDS) will commence in Victoria in November 2023. Eligible beverage containers (glass beer bottles, plastic drink bottles, aluminium cans) receive a refund when returned to a collection point. This is expected to remove these items from the typical household recycling bin.

The new weekly food and garden service rolled out across Knox by July 2023. The next bin audit (scheduled February 2024) is expected to show a decline in food waste presented in rubbish bins, as indicated by current collection tonnages from the first few months of the new service

The separate glass service, to be offered by councils under Recycling Victoria reforms by 2027, will remove glass from the recycling bin not covered by the CDS (such as jars and wine bottles).

Our garden waste

An optional fortnightly garden bin service operated in Knox until May 2023, when a new food and garden bin service for all residents started rolling out.

In July 2023 the food and garden bin service collection frequency changed to weekly (and the rubbish changed to fortnightly).

A separate fortnightly bundled branch/own container service also operates for all residents.

Over 80% of garden waste across Knox is collected through the garden bin service, with the remainder collected by the fortnightly bundled branch/own container service.

Before the start of the food and garden bin service, on average, each property with an optional green waste bin service in Knox deposited 385 kilograms of garden waste into their bins, and every property put out 56 kilograms of bundled/branches each year.

This is 48 kilograms more than the Melbourne average, and 35 kilograms more than the State average per property for the food and garden bin service.

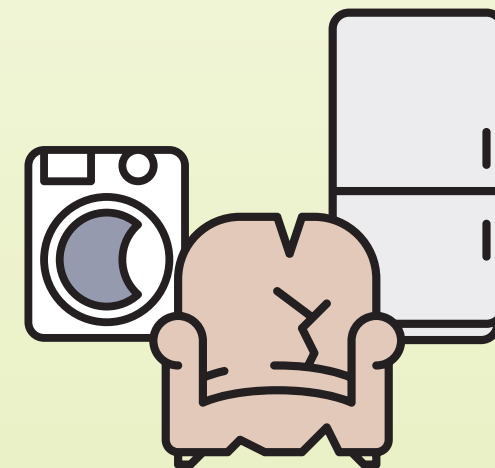
Audits of trucks at the processing facility report a very low contamination rate of less than 1%, which by weight includes rock, rubble, bricks and concrete.

Light plastic (such as plastic bags) has the potential to travel throughout the composting process and impact on the quality of the final product, but due to its light weight, it does not contribute to the overall contamination percentage.

Our hard waste

Over 32,000 hard waste bookings were lodged, with each collection averaging 236 kilograms in 2020/21.

More than 25% of the hard waste collected in Knox is diverted from landfill and includes metals, mattresses, fridges and e-waste.



Comparison data obtained from Recycling Victoria Data Hub, latest data 2021/22 year

Diverting waste from landfill

Since 2014/15, between 45% and 55% of material presented in kerbside bins in Knox has been recycled, composted or mulched and ultimately not sent to landfill.

In 2021/22 the Knox community diverted 45% of material away from landfill which is comparable to the metropolitan Melbourne and state average.



This data takes into consideration the contamination presented in kerbside recycling and food and garden bins which is sent to landfill from the processing facility.

Data reported through the Council Annual Report historically does not take into consideration the contamination presented in bins. Future data will take this into consideration.

Our old waste – closed landfills

Rubbish thrown into household bins 40 years ago ended up in Council operated landfills located in Knox.

Although these landfills closed more than 20 years ago, Council is still responsible today for their ongoing management, in accordance with Environment Protection Authority (EPA) requirements.

The locations of these closed landfills are:



LOCATION	ADDRESS	YEAR OF OPERATION (approximate)
Wantirna Reserve	Mountain Highway, Wantirna	1968-1975
Llewellyn Park	14 Coppelia Street, Wantirna South	1975-1986
Cathies Lane	1180 High Street Road, Wantirna South	1986-2004

Old landfill sites, and the rubbish in them, need to be monitored and managed for many years after they have closed, and can include:

- collection and flaring of landfill gas which consists of methane a greenhouse gas, which is generated by the decomposing organic waste
- collection and treatment of liquid within the landfill
- site inspections
- routine environmental monitoring and annual reporting
- oversight by an independent environmental auditor, including review of monitoring results, risk assessment and recommending improvements.

Monitoring, reporting and maintenance of these closed landfills are ongoing costs to Council; however, they are required to demonstrate compliance with regulations and minimise impact on the surrounding environment.

Both Wantirna Reserve and Llewellyn Park provide open spaces for the public.

Community engagement and feedback

To develop this Strategy, we asked for community feedback on current and future waste and resource recovery services in Knox.

Feedback was sought in August 2022 through online and hard copy surveys, pop-up and drop-in sessions at numerous locations, and an online focus group session.

Topics included:

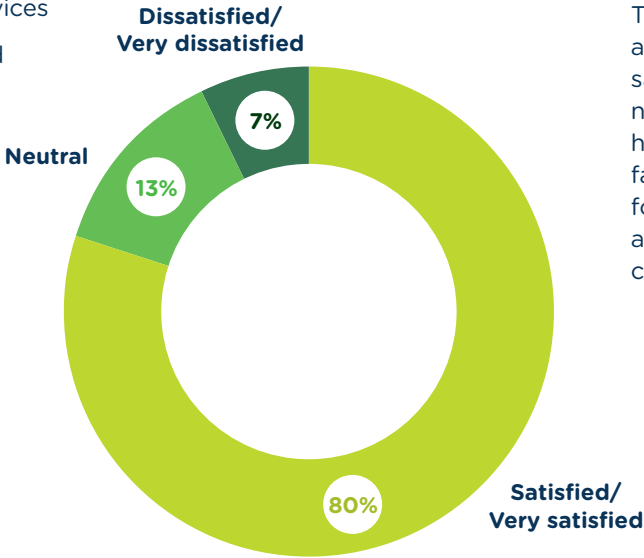
- use and satisfaction with current waste and resource recovery services in Knox
- ranking priorities for what is most important when planning for future waste and resource recovery services
- thoughts about the new food and garden bin service
- opinion about changes to collection frequency

- how Council could support residents through changes to food and garden bin and collection frequency.

In total, we received 1,152 responses, and used the feedback to assist developing this Strategy, and to help design future waste services and education programs.

What you told us

We learned in August 2022, before the start of the food and garden bin service, the majority of residents were either satisfied or very satisfied with waste and resource recovery services:



You told us your ranking of overall priorities for current and future waste and resource recovery services:

HIGHEST PRIORITY	Regular scheduled collection from my property
▼	Easy for me to use/organise
▼	Low cost to me
LOWEST PRIORITY	Send less to landfill/lower environmental impacts

The majority of residents, homeowners and businesses completing the survey said that they ‘know enough’ about a number of waste topics. On the other hand, a common theme emerged during face-to-face engagement: the need for more education and information, as it was felt the recycling system was confusing.

You asked for more information about the Detox Your Home program, home composting, and further tips on hard to recycle items and how to reduce waste.

A copy of the Community Engagement Report - Future of waste can be found on Council’s Have your Say website.

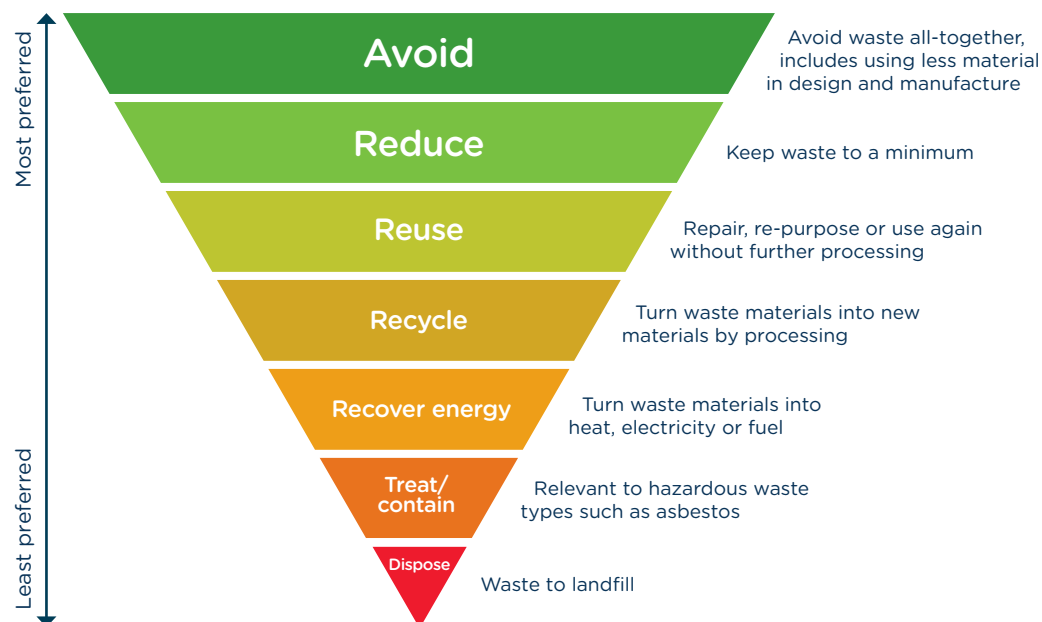
Drivers of change

Guiding principles of waste management

The two main guiding principles in waste management influencing policy and decision making are:

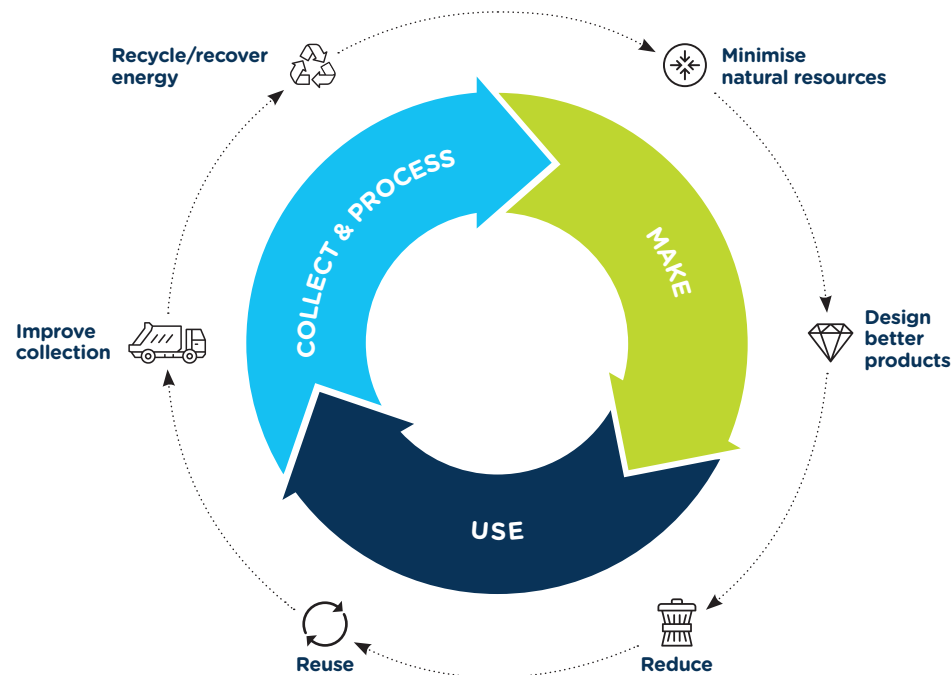
Waste management hierarchy

The key framework underpinning waste management principles in Australia, it ranks the preferred order for managing waste, from the most to least preferred option



Circular economy in waste management

In the circular economy model we avoid waste through good design, and continually reuse, repair, recycle and reprocess materials to keep our resources 'in the loop'. It promotes more efficient business models, enables economic growth, fosters innovation, creates new markets and industries, reduces the depletion of natural resources and reduces our impact on the environment.



Waste legislation and policy

New legislation and policy is driving reform of the waste and resource recovery sector Australia-wide, including in Knox.



The direction of this Strategy aligns with national and state approaches and targets, reflecting and enhancing the vision as set out in the Knox Community Plan and Knox Council Plan¹.

While the Knox Council Plan is Councils key strategic plan, it is supported by a range of other Council strategies and plans bringing the community vision and key directions to life.



National



National Waste Policy

Outlines five principles underpinning waste management, recycling and resource recovery in moving towards a circular economy.

1. Avoid waste
2. Improve resource recovery
3. Increase use of recycled material and build demand and markets for recycled products
4. Better manage material flows to benefit human health, the environment and the economy
5. Improve information to support innovation, guide investment and enable informed consumer decisions.

National waste export regulations

The *Recycling and Waste Reduction Act 2020* regulates the export of plastic, glass and tyre waste from Australia, including mixed and unsorted paper and cardboard from 1 July 2024.

Product stewardship

Product stewardship schemes support environmentally sound management of the design, manufacture, sale, recovery and disposal of products. The schemes can be mandatory (recycling used oil), co-regulatory (TVs, computers, plastics, packaging) or industry-led (mobile phones, tyres, batteries). The Minister sets a priority list of possible schemes annually; the current list includes photovoltaic systems, clothing textiles, mattresses and end-of-life tyres.

National Food Waste Strategy

Aims to halve Australia's food waste by 2030 by providing a framework for actions in policy support, business improvements, market development and behaviour change.

National Plastics Plan

The National Plastics Plan 2021 outlines actions to reduce Australia's plastics problem by reducing plastic waste, increasing recycling rates, finding alternatives to the plastics we don't need and reducing the amount of plastics impacting on the environment.



State



Environmental Protection Act 2017

The above Act and subordinate legislation focus on preventing waste and pollution impacts. They include significant reforms to waste management and strengthen compliance and enforcement powers.

Circular Economy (Waste Reduction and Recycling) Act 2021

Provides the foundation for Victoria's transition to a circular economy by establishing a legislative framework to implement the circular economy policy – Recycling Victoria: A new economy*.

Recycling Victoria: A new economy

A 10-year policy and action plan which sets ambitious targets to reduce waste, with key actions to:

- transition Council kerbside waste services by standardising bin services, materials accepted, and align bin lid colours to the Australian Standard
- introduce a container deposit scheme by 2023
- increase the levy on waste disposed to landfill
- regulate waste as an essential service, including establishing a new waste authority
- provide investment to drive research, expand the local recycling industry and create more products from recyclable materials. Drive markets to actively purchase and use products containing recycled materials
- support communities and councils to reduce waste
- support businesses to transition to a circular economy by providing funding
- plan for recycling infrastructure over the long term
- encourage appropriate waste to energy investment
- support safe and effective high-risk and hazardous waste management.

Statewide waste and resource recovery infrastructure plans

A 30-year roadmap to guide planning and investment decisions, and to influence land use planning, transport and broader environmental policy.

Single-use plastics ban

Bans the sale, supply, distribution or provision of single-use plastic items including drinking straws, stirrers, cutlery, plates, cotton buds, and food ware and cups made from expanded polystyrene. Further items will be banned from 1 January 2026.

Electronic waste (e-waste) to landfill ban

In 2019 the Victorian Government banned e-waste (any device with a plug, battery or power cord) from landfill.

* Referred to in this Strategy as Recycling Victoria policy



Local



Knox Community Plan

Developed with and for our community and stakeholders, the Community Plan 2021-2031 sets out our 10-year community vision.

Knox: where we connect with our people and our environment, ensuring they are safe, supported and have every opportunity to thrive.

It explains how we can achieve this vision through highlighting key directions, aspirations and how the community can make a difference.



Opportunity and innovation

Knox strives to be a city of opportunity, embracing innovation and change, and providing local learning and employment opportunities for all. It's a place where people and business can thrive.



Neighbourhoods, housing and infrastructure

Building on what's great about our city, Knox's housing and infrastructure will meet the changing needs of our community.



Natural environment and sustainability

Knox's natural environment is protected and enhanced to ensure sustainability for future generations.



Connection, resilience and well-being

Knox is a place to call home. Our community is strong, healthy and we support and respect each other.



Civic engagement and integrity

Knox Council is a trusted and respected leader in our community, acting appropriately and ensuring all voices are heard.



The key direction 'Natural environment and sustainability' describes a future aspiration for waste where the community hope is that Knox can become a centre of excellence for energy and materials conservation, creating a circular economy. This means moving away from a cycle of 'make, use, dispose' in favour of reusing and recycling as much as possible. By doing this we can conserve the energy needed to produce goods, reduce waste to landfill and significantly reduce our carbon emissions and the impact on our climate.

Knox Council Plan

This Plan outlines the part Council will play to achieve the community vision. For 'natural environment and sustainability' Council will contribute to success and plan our city in a way that preserves and enhances our natural environment, identify ways to reduce waste and work with our community to respond to the impacts of climate change.

Our shared responsibilities

We all have a shared responsibility when managing waste: from the choices we make which generate waste in the first place, through to how we dispose of our waste.

The solution to avoiding, reducing, reusing and minimising waste must involve all levels of government,

business, industry and community. Although it is a complex and complicated challenge, we all have a role to play and a shared responsibility, and success will only be achieved if we work together.

Our roles, responsibilities and influence are outlined below:



National government

- Set National Waste Policy
- Administer product stewardship legislation and schemes



Local government

- Plan and deliver waste and recycling collection, processing/ disposal services to households and limited businesses/community groups
- Advocate to state and federal governments on strategy and policies on behalf of the local community, including involvement in advisory and working groups
- Participate in collaborative or joint procurement opportunities
- Engage and educate the local community on waste avoidance, reuse and recycling



Waste and resource recovery industry

- Invest and operate infrastructure and technology associated with waste and resource recovery
- Collect, sort, reprocess, recover, and trade resources, and dispose of waste
- Advocate through industry bodies



Businesses

- Make decisions about using resources, products or services and manage waste generated by their operations
- Advocate through business groups and networks



State government

- Strategic policy direction
- Create legislation and regulate waste management
- Plan statewide infrastructure requirements
- Support investment in the waste and resource recovery sector



Community

- Purchase products and make decisions about how and when to use, maintain and dispose of materials

Challenges and opportunities

The waste and resource recovery sector continues to face many complex challenges. Challenges that can provide opportunities to fundamentally change how we have been operating.

Internationally

Globally the sector, including in Australia, has been heavily impacted by restrictions on the import of recyclable material under China's National Sword Policy in 2018. It has affected the commodity prices of recyclables, and local-level changes to how recycling is processed are driving cost increases. Prior to 2018 it was common for councils to receive an income from recycling.

Alternatives to landfill

The one remaining landfill in Melbourne's southeast will have reached capacity within five years, with no further landfills planned. Other landfills are located a long distance from Knox, either on the opposite side of Melbourne or in regional Victoria. Council need to investigate options on how to best manage waste currently going to landfill, which includes finding alternatives.

Advanced waste processing technologies generate heat, electricity and other fuels from waste. The waste management hierarchy preferences the use of this technology over landfilling, and the Victorian Government supports these technologies and recognises the role they have in diverting waste from landfill through the Victorian Waste to Energy Framework.

Council is working with other councils in Melbourne's southeast region, seeking long-term solutions for waste currently sent to landfill. This includes taking part in a process to set up an advanced waste processing facility to service the region.

While acknowledging the importance of finding alternatives to landfill, Council will continue to prioritise avoiding and reducing waste, increasing reuse and recovering our resources as much as possible so that only true waste is discarded.

Advanced waste processing

allows heat, electricity and other fuels to be generated from waste. Waste to energy is the most common form of this technology, with many facilities already using it safely and reliably for many years in the UK, Europe, Asia and North America.



Implementing kerbside reforms in Knox

Across Victoria local councils are tasked with delivering a number of Recycling Victoria policy initiatives around kerbside collections.

Knox Council has one of the most challenging and costly reforms to implement, with a food and garden bin service, changing over all three bin lids, and introducing a new separate glass service.

In Knox, bin lids do not match the Australian Standard colours for the respective waste services.

Changing the bin lid colours will be staged over time. This will require a substantial education and behaviour change program in an effort to maintain sustained communications with residents, avoid confusion and help limit contamination.

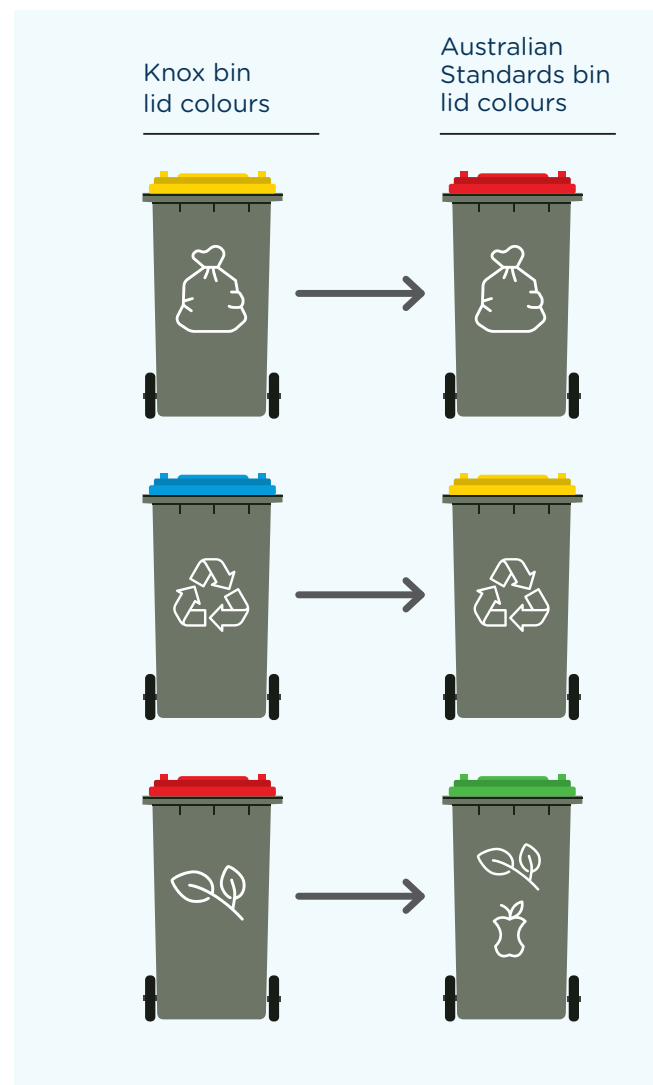
Council will also be involved in educating the community on changes delivered by the state, including the Container Deposit Scheme and single-use plastics ban.

Container Deposit Scheme (CDS)

a scheme set to start in Victoria in November 2023, refunding 10 cents for every eligible drink container returned to a refund collection point. The returned containers are recycled into new products.

Contamination

material placed into the incorrect bin for collection.



Contamination of resource streams

Contamination presents problems such as the difficulty or inability to properly sort other contents of the bin or load, potential for damage to machinery or harm to operators, and impacts quality of the end product. Some processing contracts, including recycling and food and garden, charge a higher rate if contamination is above an agreed percentage.

Correct separation of material into bins at home is crucial to the quality of the end product and reduction of extra costs to Council.





Financial considerations

Costs associated with waste collection, processing and disposal are increasing.

A levy is charged on all rubbish sent to landfill in order to encourage diversion and recycling, and create strong financial incentives. It is paid in addition to the gate fee, and has increased from \$65.90/tonne in 2019/20 to \$129.27/tonne in 2023/24. It is expected the levy will continue to increase.

Implementing the changes and providing the education required for the Recycling Victoria policy reforms are an extra cost to Council.

Council is committed to maintain financial line of sight over commitments in the strategy and actions in the implementation plan. To balance increasing costs and deliver a best value, efficient, regular and easy to use waste service to meet the needs and priorities of the community, and work towards national and state waste reduction targets.

Multi-unit developments

New developments of six or more dwellings submit a Waste Management Plan to Council for review during the planning application stage.

The Plan outlines waste management considerations for the proposed

development. Where Council cannot service the development, a private waste contractor is engaged.

Typically, in multi-unit developments more waste ends up in landfill, less is recovered and contamination is higher.

Climate change

Council declared a Climate Emergency in 2022, acknowledging the significant threat climate change poses to our environment and community. A 10-year Climate Response Plan has been adopted, identifying actions to reduce greenhouse gas emissions. Emissions from waste management activities including processing, transportation and methane generation from decomposing waste all contribute towards greenhouse gases. As a community we can reduce impact on our climate by:

- adopting the principles of a circular economy by reducing waste, maximising resource recovery and efficiency
- using the food and garden bin service, diverting organic material away from landfill and instead turn it into compost. This process significantly reduces methane emissions, and the compost is used in farms, viticulture and gardens.



Our strategy direction

We are committed to achieving the community vision for waste and resource recovery in Knox outlined in both the Community Plan and Council Plan.

This Strategy further expands on our commitments, at the same time aligning with national and state waste policy directions, legislation and targets. It articulates a vision for waste and resource management to *lead and support our community to move towards a circular economy by avoiding waste, and maximising resource recovery.*

It identifies four main goals, describes aims, sets measurable targets, outlines Council's commitments and indicates what actions the community can take.

A detailed and separate Implementation Plan further expands on each Council commitment identified in this Strategy.

The separate plan allows for flexibility due to factors including changes and challenges in the sector, shifting regulatory requirements, technological

improvements, local challenges, community priorities, and funding opportunities while still working towards our goals, aims and targets.

Each year we will check progress for each of the goals and targets against the Implementation Plan, review and refine the tasks if necessary and report on our progress to the community.

A mid-term review of the Strategy will be completed by December 2027. This review will focus on any changes to legislation or policy not reflected in the strategy.



Goal 1 – Avoid waste



Our aim: Avoid waste where possible and reduce how much waste we generate

To avoid waste altogether is the preferable choice when managing waste. If we cannot avoid it, the next option is to reduce how much we generate. These two approaches are the highest ranked in the waste management hierarchy.

Although it sounds relatively simple, achieving this goal will require substantial effort, a conscious shift in thinking, a significant change in behaviour, and long-term commitments by all levels of government, manufacturers, businesses and the community. Each of us has a role to play and a responsibility to help achieve this goal.

Creating less waste will reduce our reliance on supporting waste infrastructure such as landfills, transfer stations, recycling plants and recovery operations. It reduces our impact on the environment in both the long and short term, and avoids costs associated with the creation, purchase, processing, transportation and disposal of materials.



Our target

Cut total waste generation per capita in Knox by 15% between 2020 and 2030



What Council will do

Promote and support the use of reusable products including nappies, sanitary items and incontinence products

Support the National Plastics Plan 2021 and phase out problematic and unnecessary single-use plastics in Council offices and buildings

Support local businesses, community groups and organisations to avoid and reduce waste

Advocate to national and state governments for a focus on improved waste outcomes for Knox residents

What you can do

Buy only what you need

Avoid disposable and single-use items; instead, purchase reusable products

Repair items where possible

Choose products with less packaging

Share, swap, sell and buy second-hand items



Targets adopted from Recycling Victoria policy



Goal 2 – Recover more from our waste



Our aim: Maximise resource recovery and minimise waste to landfill

Resources and energy embedded in products are lost when we decide they are no longer needed and sent to landfill.

Over the last 10 years in Knox, we have consistently generated the same amount of rubbish and diverted about half of the material collected in our kerbside bins away from landfill. The diverted material is either recycled, mulched or composted. National and state waste policies and targets aim to considerably increase the amount of material diverted from landfill; in order to achieve this in Knox, big changes are needed.

The Recycling Victoria policy aims to consistently change Council kerbside waste collection services across Victoria.

Knox is committed to working with the Victorian Government to deliver on these changes while understanding the needs of our community.

Council remains committed to investigating and implementing options to reduce, reuse and recover material as a priority. Once explored, there will still be waste to be managed which has historically been sent to landfill, the least preferred option in the waste management hierarchy.

Limited landfill space in Melbourne's southeast indicates we must secure

a viable long-term option to sensibly manage this stream going forward.

This includes pursuing proven technologies such as advanced waste processing, or waste to energy, which is used successfully and safely overseas.

This technology will help achieve the targets set out in the Recycling Victoria policy and adopted by Knox.



Our target

Divert 80% of waste collected in kerbside bins from landfill by 2030: interim target of 72% by 2025



By 2030, reduce the volume of organic material going to landfill to 50% of 2020 levels: interim target of 20% reduction by 2025



Every household in Knox has access to a separate food and organics recovery service by 2030



Every household in Knox has access to either new glass bin or service by 2027 (option still to be determined)



What Council will do

Transition Knox kerbside services to align with household recycling reforms in the Recycling Victoria policy



Identify opportunities to maximise the recovery of resources

Build capacity to increase the use of recycled content in goods purchased by Council

Work with other councils and government agencies on purchasing and resource recovery initiatives

Secure long-term options for residual waste collected throughout Knox as an alternative to landfill



 Commitment from Council Plan 2021-2025

What you can do

Separate waste correctly – place items in the correct kerbside bin for collection, and drop off other items for recycling/recovery at participating locations (including through the container deposit scheme, batteries, Detox Your Home, printer toners and cartridges). Check our website if you are not sure

Compost at home – Council provides subsidised compost bins and worm farms

Goal 3 – Engage and empower our community



Our aim: Engage and empower our community to make informed decisions about waste and resource recovery.

Our community is more aware than ever of the challenges and shifts in the waste and resource recovery sector. With this renewed interest, it is vital for Council to deliver engaging and accessible community engagement and behaviour change programs. We need to do this in a variety of formats including face-to-face, online and print format, and tailor and target our communications towards key audiences, making it accessible for everyone including residents who use English as a second language.

Council will provide our community with easily accessible and up-to-date waste information and data. To make accurate decisions about avoiding and reducing waste, and properly redirect waste resources to the correct location for materials recovery.

The success of this Strategy relies on everyone making conscious purchasing decisions, and changing our behaviours by seeking to avoid and reduce waste whenever possible, while striving to minimise how much waste we send to landfill.



Our target

Increase the number of recycling bins with no contamination from bin inspection program to 80% by 2030: interim target of 72% by 2025

Increase the number of food and garden bins with no contamination from bin inspection program by 25% from 2023 levels; interim increase of 10% by 2025

What Council will do

Provide our community with easily accessible information and data on waste and resource recovery services

Educate our community, local businesses and staff on waste avoidance, waste reduction and resource recovery with easily accessible and engaging programs

What you can do

Seek to find ways to avoid and reduce generating waste

Keep informed on avoiding and reducing waste where possible, and redirect material properly for resource recovery

Be a local champion – educate and influence friends and family on how to avoid and reduce waste

Support businesses and community groups actively seeking to avoid and reduce waste

Goal 4 – Care for our environment



Our aim: Keep our local environment clean and manage our closed landfills.

The community told us through the Knox Council Plan that caring for the environment, our bushland and nature reserves are the most important aspects of Knox. Including better maintenance of public spaces, and better care for the environment including addressing climate change.

The presence of litter and dumped rubbish impacts on the overall amenity, use and enjoyment of our public spaces.

Litter is a highly visible form of pollution and can be almost any material in small quantities disposed of incorrectly. Dumped rubbish is essentially litter in either a larger size or large quantity of items.

Litter and dumped rubbish can enter and clog waterways, pollute our natural environment, impact ecosystems, attract vermin, cause hazards and pose risks to health. Ultimately it costs the community

money, and utilises resources to clean up and dispose of litter and dumped waste properly.

Everyone has a role to play, and Council will take steps to reduce litter and illegally dumped rubbish in our public spaces, reserves and bushland areas to enhance the enjoyment of these spaces, and keep our natural environment clean.

Council operated three landfill sites in Knox, which closed a number of years ago. They provide some publicly accessible open spaces, important bushland and nature reserves for the community. While they provide important spaces for the community closed landfill sites require careful long term management to minimise impacts to the public and pollution to the surrounding environment.

Council continues to actively manage and monitor these sites in line with obligations under the *Environment Protection Act 2017*.



Our target

By 2030 reduce the reported number of dumped rubbish and litter complaints by 20%

Annually complete all required monitoring and reporting at closed landfill sites

What Council will do

Take steps to reduce litter and illegally dumped rubbish

Manage our closed landfill sites

What you can do

Use public place litter and recycling bins. If they are not available, take your rubbish home with you

Report instances of dumped rubbish to Council or EPA Victoria

If you are moving or have cleaned up around the house, book a hard waste collection (for all eligible items)



Monitoring our performance

We will monitor and evaluate performance against this Strategy using information from the following sources and targets:

#	TARGET	DATA SOURCE	BASELINE	2025 TARGET	2030 TARGET
1	Cut total waste generation per capita in Knox by 15% between 2020 and 2030	Rubbish, organics, recycling, and hard waste contractor	443 kg/person (2020 baseline)	421 kg/person	377 kg/person
2	Divert 80% of waste collected in kerbside bins from landfill by 2030; interim target of 72% by 2025	Waste, recycling and recovery contractor	45% diversion (2021/22 baseline)	72% diversion	80% diversion
	By 2030 reduce the volume of organic material going to landfill to 50% of 2020 levels; interim target of 20% reduction by 2025	Bin audit reports	54% organic material (2020 baseline)	34% organic material	27% organic material
	Every household in Knox has access to a separate food and organics recovery service by 2030	Rates data	0 (2021/22 baseline)		Every household with access
	Every household in Knox has access to either new glass bin or service by 2027 (option still to be determined)	TBD	0 (2021/22 baseline)		Every household with access
3	Increase the number of recycling bins with no contamination from bin inspection program to 80% by 2030; interim target of 72% by 2025	Bin inspection program data	59% (2021/22 baseline)	72%	80%
	Increase the number of food and garden bins with no contamination from bin inspection program by 25% from 2023 levels; interim increase of 10% by 2025	Bin inspection program data	To be established	2023 levels +10%	2023 levels +25%
4	By 2030 reduce the reported number of dumped rubbish and litter complaints by 20%	Complaints lodged in Councils customer reporting system database	1,682 complaints litter/dumped rubbish (2021/22 baseline)	10% reduction	20% reduction
	Annually complete all required monitoring and reporting at closed landfill sites	Annual environmental reports	100% complete	100% complete	100% complete

Strategy delivery

This draft Strategy will be released for public consultation and feedback. Changes to the draft will be made based on feedback received during the consultation period. Council will consider the final draft and once endorsed by Council, the Strategy will be implemented.

Strategy implementation

The Strategy includes goals, aims, targets and high-level commitments for both Council and the community to drive the future direction of waste and resource recovery across Knox to 2030.

The Implementation Plan further details the specific actions Council will undertake for each of the goals identified in the Strategy. This will allow for flexibility should there be changes and challenges in the sector, shifting regulatory requirements, technological improvements, local challenges, community priorities, and funding opportunities while still working towards our goals, aims and targets.

Strategy funding

Funding to implement the actions outlined in the Strategy and Implementation Plan is subject to the normal Council budget process. Funding will be included as part of the five-year long-term operational and capital works forecasting and planning, and incorporated into annual budget cycles.

The residential waste charge is a full cost recovery for waste services in Knox, and in future will include cost of implementing actions from the Strategy. Council is committed to the delivery of financial and environmentally sustainable waste services.

Council will continue to apply for funding opportunities to improve waste and resource recovery services, communications and infrastructure throughout Knox in line with the goals and key directions as set out in this Strategy.

Strategy progress reporting

Reporting on the implementation of the Strategy to the community, including status of action items, review of actions in the Implementation Plan and monitoring performance against targets, will occur annually.

A mid-term review of the Strategy will be completed by December 2027. This review will focus on any changes to legislation or policy not reflected in the strategy.

