Waste Assessment
Hurunui District Council

April 2020

Hurunui District Council
Waste Assessment

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Introduction

The Waste Minimisation Act 2008 (The Act) requires territorial authorities (TAs) to conduct a Waste assessment and review their Waste Management and Minimisation Plans (WMMP) at least every six years. TAs are required to conduct this assessment before reviewing their WMMP and to have regard to it when preparing their plan.

The purpose of a waste assessment is to provide the necessary background information on waste and diverted materials, to enable council to determine a set of priorities and activities. Section 51 of the Act sets out the requirements of a waste assessment.

Conducting a waste assessment is a legal process, but councils are permitted to undertake them in a way, to meet the needs of their area; this waste assessment comprises four sections.

1) Provision of information regarding current processes for managing waste and recycling in Hurunui. This includes tonnage data and flows, infrastructure and asset information and an insight into the services provided. A summary will be included in the WMMP.
2) A forecast of predicated future demand for waste and recycling infrastructure, services and programmes based on current activity and tonnages.
3) Details of the policies, plans and regulations guiding the provision of waste and recycling services in Hurunui and New Zealand.
4) The vision, goals, objectives and targets for the waste assessment, which will form part of the WMMP. This includes targets for managing and minimising waste.

The Council adopted its previous WMMP in May 2012. Due to service and contractual changes, it was revised in late 2014 to provide an ongoing approach to minimise and manage waste, whether received by Council or commercial waste companies.

Council aims to provide cost effective, efficient and safe waste and recycling services, to prevent environmental damage, whilst providing environmental, social, and economic benefits. This finding of this waste assessment will be incorporated into the WMMP in 2020 and help guide service provision for the coming six years, this will be managed internally by existing Council staff.

Waste management and recycling is a long-term commitment and any proposal and infrastructure development will incorporate a longer period than the WMMP six-year cycle.

Timeframe

This waste assessment was prepared in early 2020 using information accumulated between July 2011 and June 2019. It was deemed beneficial to use data from a longer timeframe to demonstrate how waste and recycling has changed and in particular how external and non-controllable factors have influenced this area of service provision.

Glossary	
Bokashi	Plant by-products inoculated and fermented with Effective Microorganisms for recycling kitchen waste into a soil conditioner
Commercial waste	Waste from commercial activities
Composting	Conversion of certain types of food and garden matter to compost for use as a fertiliser
Council	Hurunui District Council
Domestic waste	Waste from domestic activities in households
Disposal	The final deposit of waste into or onto land or waste incineration
Diverted waste	Something no longer required for its original purpose and, but for commercial or waste minimisation activities, would be disposed of
Green waste	Garden waste e.g. branches, cuttings and leaves
Hazardous waste	Liquid and solid wastes, requiring further treatment before conventional disposal methods are used; also called special waste
Household waste	Waste from a household, not derived from the construction, renovation or demolition of the property
Landfill	Disposal facility - defined in the Waste Minimisation Act 2008 - s7
NZWS	New Zealand Waste Strategy (2002)
Putrescible waste	Certain types of household food waste, green waste and some commercial and industrial wastes, which will decompose
Recovery	Extraction of materials or energy from waste or diverted material deemed suitable for further use or processing. Also includes conversion of waste or diverted material into compost
Recycling	Reprocessing used materials into new products to prevent the waste of potentially useful materials
Reduction	Decreasing waste by utilising products more efficiently
Residual disposal	Waste, which cannot be recycled, but requires disposal to landfill.
Re-use	Utilisation of waste or diverted material in its original form
Transfer station	Facilities provided by council for receiving of waste and recycling
Waste - as defined by the WMA	(a) Anything disposed of or discarded (b) Includes a type of waste that is defined by its composition or source (for example, organic waste, electronic waste, or construction and demolition waste) (c) Includes any component or element of diverted material, if the component or element is disposed of or discarded
Waste assessment	As defined by s51 of the Waste Minimisation Act 2008, a waste assessment must be completed when a WMMP is reviewed
Waste disposal levy	Per tonne levy charge on waste at the point of disposal
Waste hierarchy	Hierarchy of the 3Rs - reduce, reuse and recycle
Waste Management and Minimisation Plan	A waste management and minimisation plan as defined in s43 of the Waste Minimisation Act (WMMP)
Waste minimisation	Reduction of waste and re-use, recycling and recovery of waste and diverted material
WMA	Waste Minimisation Act (2008)

Section One - Current Processes for Managing Waste and Recycling in Hurunui

The Waste Situation

The Council provides the majority of the waste and diverted material services in Hurunui. This includes five transfer stations offering a comprehensive range of options for recycling and waste disposal and a dual kerbside refuse and recycling collection service in 18 townships and to rural areas along the serviced routes. These are operated under contract to council.

Transfer stations are located in Amberley, Cheviot, Culverden, Hanmer Springs and Waiau and provides the opportunity for source segregation of recycling by the public, funded through general rates, user pays gate fees and cost recovery via recycling sales. Where possible, recycling is accepted for free to encourage diversion from landfill.

Waste Data

The ability to obtain data from private operators is limited, so this waste assessment focuses on waste and recycling from council services i.e. kerbside refuse and recycling collections, transfer stations, clearance of illegal dumping, public spaces recycling and litterbin collections. For accuracy, only verified tonnages are reported.

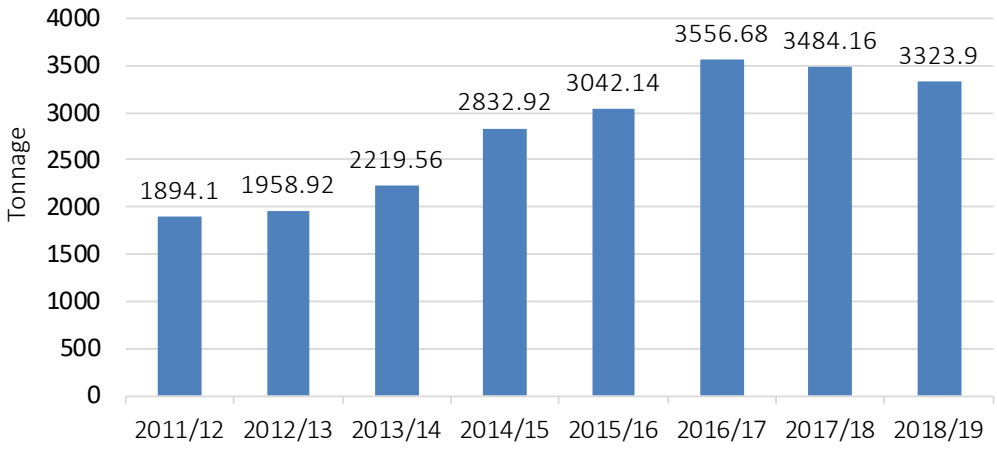
Disposal

Waste from Hurunui is disposed of into Kate Valley landfill in Waipara, a regional landfill, consented to receive household, industrial, construction, commercial and special waste and owned by the Canterbury Councils and Waste Management NZ Ltd.

Kate Valley provides sufficient capacity for future demand, so alternative disposal options do not require consideration at this time. The Council doesn't operate any landfills, but manages five closed sites in Hanmer Springs, Cheviot, Waiau, Culverden, Waikari and Waipara.

The information reported in this section is tonnage to landfill from July 2011 to June 2019. Reported from weighbridge records provided by the landfill operator, covers waste from kerbside collections, transfer stations and public space litterbins.

Figure 1: Waste to Landfill from 2011 - 2019



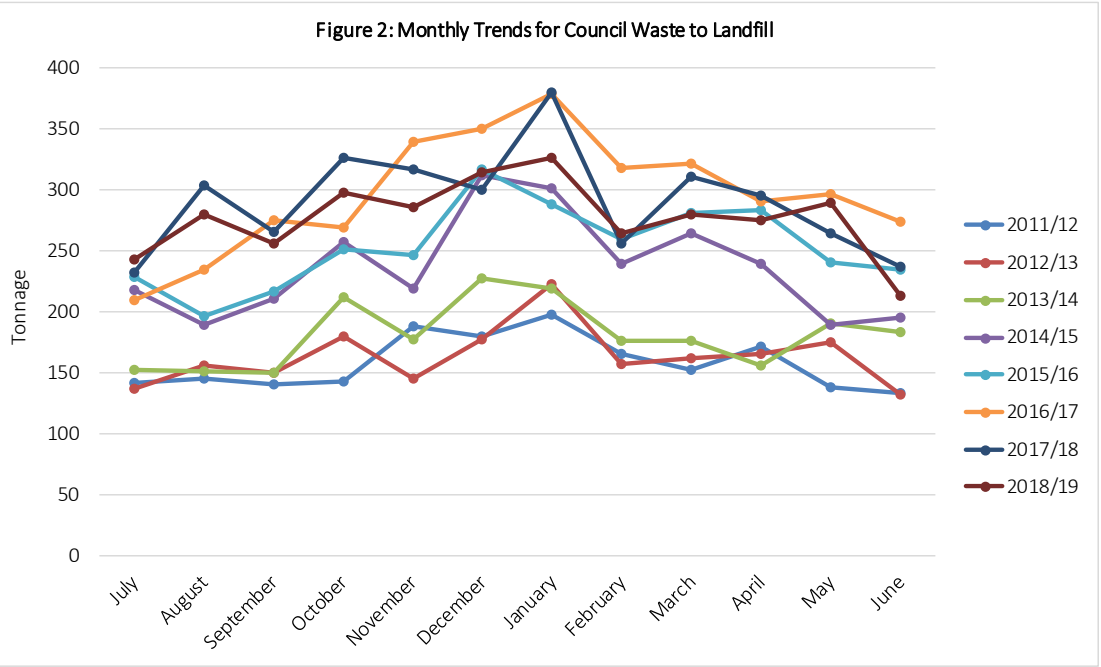
There was an upward trend of waste to landfill between 2014 and 2017, due to the following reasons:

- Opening of a new transfer station in Amberley (2014), able to receive commercial waste.
- The impact of and recovery from the November 2016 Waiau / Kaikōura earthquake.
- People relocating to the district following the Christchurch earthquakes.

Since 2016 / 17 waste to landfill has decreased, as an increased range of options for recycling are introduced and people become increasingly aware of the importance of waste diversion. This could also be attributed to reasons outside of council control such as changing packaging products to lighter materials, increased consumer choice and a decrease in printed media.

Waste to landfill from Hurunui fluctuates through the year, most noticeably during holidays. Monthly fluctuations between 2011 and 2019 are in graph 2.

Figure 2: Monthly Trends for Council Waste to Landfill



Waste Sources

Urban households and businesses are serviced by a weekly kerbside refuse collection operated by council under contract with Waste Control NZ. Properties in these areas are charged a targeted rate and people purchase council refuse bags from a choice of council and non-council outlets. There is no maximum number of bags that can be collected weekly and council permits the collection of bags from rural areas along the serviced routes.

For the rest of the district, householders and businesses can deliver refuse to the transfer stations, where they are charged by volume, weight or by bag. Private contractors also offer collection services in Hurunui using wheelie bins, drums and skips as required.

Waste Control NZ are contracted to empty 194 litterbins, from which they dispose of the waste through the closest transfer station to the point of origin. Bins at key tourism locations and on main routes through the district experience high demand, which puts pressure on servicing levels and costs. This is funded from the general rate.

Although disposed of through council's transfer stations, some waste is not generated in Hurunui. Some commercial operators from an adjacent district opt to bring waste to Amberley and this is included in this waste assessment and is not discounted due to source.

A breakdown by transfer station or kerbside collection is in table 1. This includes waste collected after the 2016 earthquake, when bins were provided to assist with the clean up.

Table 1: Kate Valley Tonnage – By Transfer Station and Kerbside Collections

Source / Year	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Amberley	373.04	456.57	486.6	987.32	1146.8	1515.6	1412.63	1275.12
Cheviot[1]	243.88	216.6	230	224.90	235.18	232.92	257.38	265.90
Culverden	55.58	63.02	67.92	84.84	75.54	99.42	131.56	114.54
Hanmer Springs[2]	552.52	545.71	586.64	508.8	558.86	586.06	638.90	647.74
Waiau	40.08	48.02	46.4	72.06	66.26	94.3	105.69	86.6
Kerbside	629	629	802	955	959.5	975.5	938	934
Earthquake	N/A	N/A	N/A	N/A	N/A	52.88	N/A	N/A
Total	1894.1	1958.92	2219.56	2832.92	3042.14	3556.68	3484.16	3323.90

Per Capita Waste to Landfill

Waste per capita is a commonly used indicator for waste generation for comparative purposes. However, it is not directly equivalent to the amount of waste an individual throws away each year, as it includes waste produced from domestic and commercial sources. Per capita rate for waste to landfill is low when compared to other districts due to being a rural district, with very low levels of industrial activity.

The type of collection provided in Hurunui has an effect on per capita quantity of waste to landfill. Councils providing wheelie bins or rates-funded bag collections generally have higher per capita collection rates than those on user-pays bags. Other influences include:

- The size and population affluence levels.
- The extent and nature of resource recovery activities and services.
- The level and types of economic activity - industrial, construction and demolition.
- The relationship between landfill costs and the value of recovered materials.
- Seasonal fluctuations in population in particular tourism.

[1] Includes kerbside waste
[2] Includes some kerbside collected waste

Comparing Hurunui's per capita rate for waste to the national average allows benchmarking; although waste disposed of via sites outside the district are excluded. Per capita waste peaked in 2016/17 due to the earthquake, but has steadily decreased since, shown in Table 2.

Table 2: Hurunui per Capita Waste versus other Canterbury Councils

Area	Year	Tonnes per capita per annum
Hurunui District	15/16	0.254
Hurunui District	16/17	0.284
Hurunui District	17/18	0.278
Hurunui District	18/19	0.256
Waimakariri District	15/16	0.294
Selwyn District	15/16	0.343
Ashburton District	15/16	0.366
Canterbury average	15/16	0.385

Waste Composition

This section contains information about the composition of Hurunui's waste disposed of to landfill. Waste composition audits provide information about the make-up of a waste stream and can help identify materials that contributing large or disproportionate parts to determine where to target when forming waste management and minimisation strategies.

Waste analysis of six containers of waste to landfill from the transfer stations were completed in late 2019 / early 2020, the purpose to determine the composition of the waste, to identify further opportunities for diversion. Waste was recorded by percentage i.e. source and material type; the results are in table 3.

Table 3: Waste to Landfill by Source and Type

Description	Bin 1 %	Bin 2 %	Bin 3 %	Bin 4 %	Bin 5 %	Bin 6 %
Domestic Refuse Sacks	70	70	40	15	50	40
Other Domestic Waste	25	20	40	55	40	50
Construction Waste	-	-	-	25	-	-
Cleanfill	-	-	-	-	-	-
Green Waste	5	10	20	5	10	10
Material Type	**%**	**%**	**%**	**%**	**%**	**%**
Paper	20	20	15	20	15	20
Plastics	50	50	35	20	35	35
Putrescible Waste	25	25	30	5	20	20
Metals	-	-	-	-	-	-
Glass	-	-	-	-	-	-
Textiles	5	5	10	20	20	5
Nappies	-	-	-	-	-	-
Cleanfill	-	-	5	10	-	5
Timber	-	-	5	25	10	15
Potentially Hazardous	-	-	-	-	-	-

The analysis shows council is succeeding in diverting metals, glass, hazardous waste, complying cleanfill and green waste from landfill. Green waste in landfill assists with methane generation for energy recovery, so low quantities is not deemed a concern.

There is scope for improved separation before waste is disposed of via the transfer stations, but this requires ongoing education and community engagement, the introduction of further methods of diversion e.g. bins for unloading and processing outlets to receive such material.

Independent observations are also completed at the landfill to ensure only complying waste is sent for disposal, details of these are in table 4.

Table 4: Landfill Audits by Waste Type

Material Type and Observation		Comment
Garden Waste	Part of mixed loads, which cannot be separated or is green waste, which is not suitable for shredding	Observation
Textiles	Broad range of low quality textiles. Cross-contamination from other waste is an issue	Observation
Cleanfill	Small amounts present in mixed loads from building sites e.g. skips, which would not be safe to recover. Some had protruding steel, a prohibited item in cleanfill	Observation
Timber	Could be shredded with green waste, but would require de-nailing and careful separation to ensure treated and painted timber was not included. Likely to be cost prohibitive	Observation
Paper	In plastic bags or boxes - part of domestic waste, some maybe confidential and people may not want to recycle it. Some was wet and unsuitable for recycling	Observation
Plastic	Significant soft plastic – bags, wrapping and bale wrap	Observation
Cardboard	In mixed loads, some disintegrating, wet or contaminated	Observation
Glass	The council is succeeding in diverting glass	Achievement
Metals	The council is succeeding in diverting glass	Achievement
E - Waste	No electrical items were observed	Achievement
Hazardous Waste	No hazardous waste was observed	Achievement
Tyres	No tyres were observed. These are prohibited from the landfill	Achievement

Volumes of Food Waste in Kerbside Refuse Collections

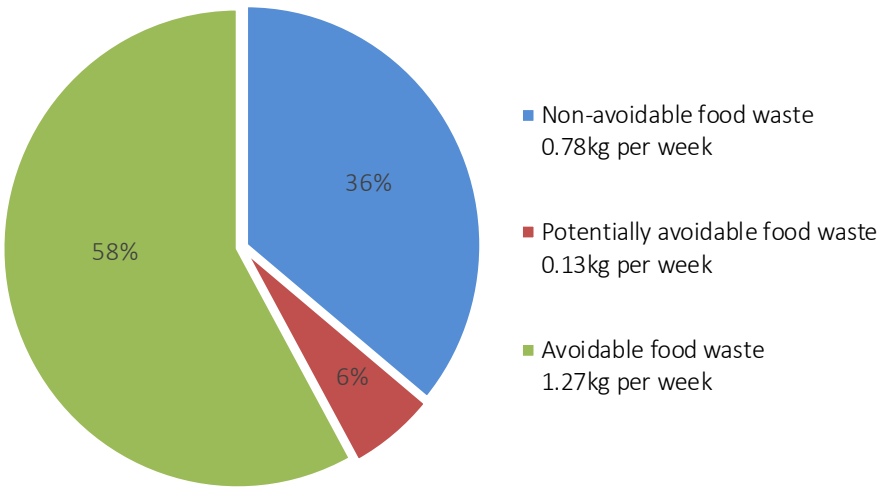
Although a food waste collection service is not provided, to ascertain the volumes of food waste received disposed of via the refuse collection service, a composition audit was undertaken, using refuse bags from 120 random households in Amberley, Culverden, Waikari and Hanmer Springs.

Food was divided into 16 groups e.g. bakery, fresh vegetables, dairy, processed fruit, etc. and then a specific food type within each e.g. white bread, carrots etc. and weighed according to

which of the following applied. The percentage breakdown is in graph 3 and broken down into the following classifications.

- Avoidable food waste i.e. could have been eaten.
- Potentially avoidable food waste i.e. some eat and others do not, e.g. apple peel.
- Non-avoidable food waste i.e. non-edible e.g. banana skins, tea bags and eggshells.

Figure 3: Classification of Food Waste via the Refuse Collections



The audit does not represent all food waste, but allows results to be extrapolated to represent the district; these are provided in table 5.

To deter sending food waste to landfill, community engagement promoting the Love Food Hate Waste campaign and the selling of bokashi composting kits is undertaken.

Table 5: Volumes of Food Waste in Kerbside Refuse Collections

	Weekly	Annually
Average set out of kerbside domestic refuse per household	6.14 kg	319 kg
Average set out of food waste in kerbside domestic refuse per household	2.19 kg	114 kg
Average set out of food waste in kerbside domestic refuse in Hurunui	10 tonnes	531 tonnes

Recycling Services and Diverted Materials

This section contains information about known sources of diverted materials generated and recycled or recovered in Hurunui. Under the Waste Management Act 2008, diverted material refers to "anything that is no longer required for its original purpose and, but for commercial or other waste minimisation activities, would be disposed of or discarded".

The Council provides the following recycling services funded via user pays recycling bags, transfer station gate fees, a general or a targeted rate.

- Urban kerbside recycling collection service for residential and commercial properties.
- Rural kerbside recycling collection service for rural properties on route or from designated council drop off locations.
- Transfer station recycling facilities.
- Public place recycling bins.
- Support for events recycling.
- Hazardous waste recycling services.

Kerbside and Transfer Station Recycling Processed via EcoCentral

Council provides a weekly dual refuse and recycling collection service under contract by Waste Control NZ using the truck and trailer below. Urban properties are rated $100 per year (2019/20) and required to use council's clear, (45 litre) recycling bags, which can be purchased from council and commercial outlets for a charge, which is reviewed annually.

Kerbside refuse and recycling collection vehicle and trailer

Rural properties may purchase recycling bags and use the collection service, by placing them at one of 15 official pickup points; there is no restriction on the numbers collected.

Materials accepted via the kerbside recycling collection are plastics (types 1, 2 and 5), food and drink cans, newspapers, magazines and cardboard. Glass bottles are collected from households in Hanmer Springs only, providing a council issued recycling box is used. Contamination levels in Hanmer Springs are often high being a tourist destination.

Recycling bags are brought back to Amberley, split (as shown in the photographs on the following page), the contents combined with transfer station recycling and following light compaction are transported by Waste Control NZ to EcoCentral in Christchurch for sorting, and marketing.

Challenges presented by reduced commodity prices, smaller volumes, space limitations and limited infrastructure are overcome by working with EcoCentral.

Transporting transfer station and kerbside recycling together reduces trip numbers and the number of containers required for storage, thus achieving environmental and economic efficiencies, a principal objective of the WMMP.


Recycling bags (split and un-split) at Amberley and being delivered to EcoCentral

Recycling is assessed according to eight classifications on arrival at EcoCentral, the results since 2015/16 are in table 6. Using clear bags and pre-sorting at Amberley ensures contamination is low.

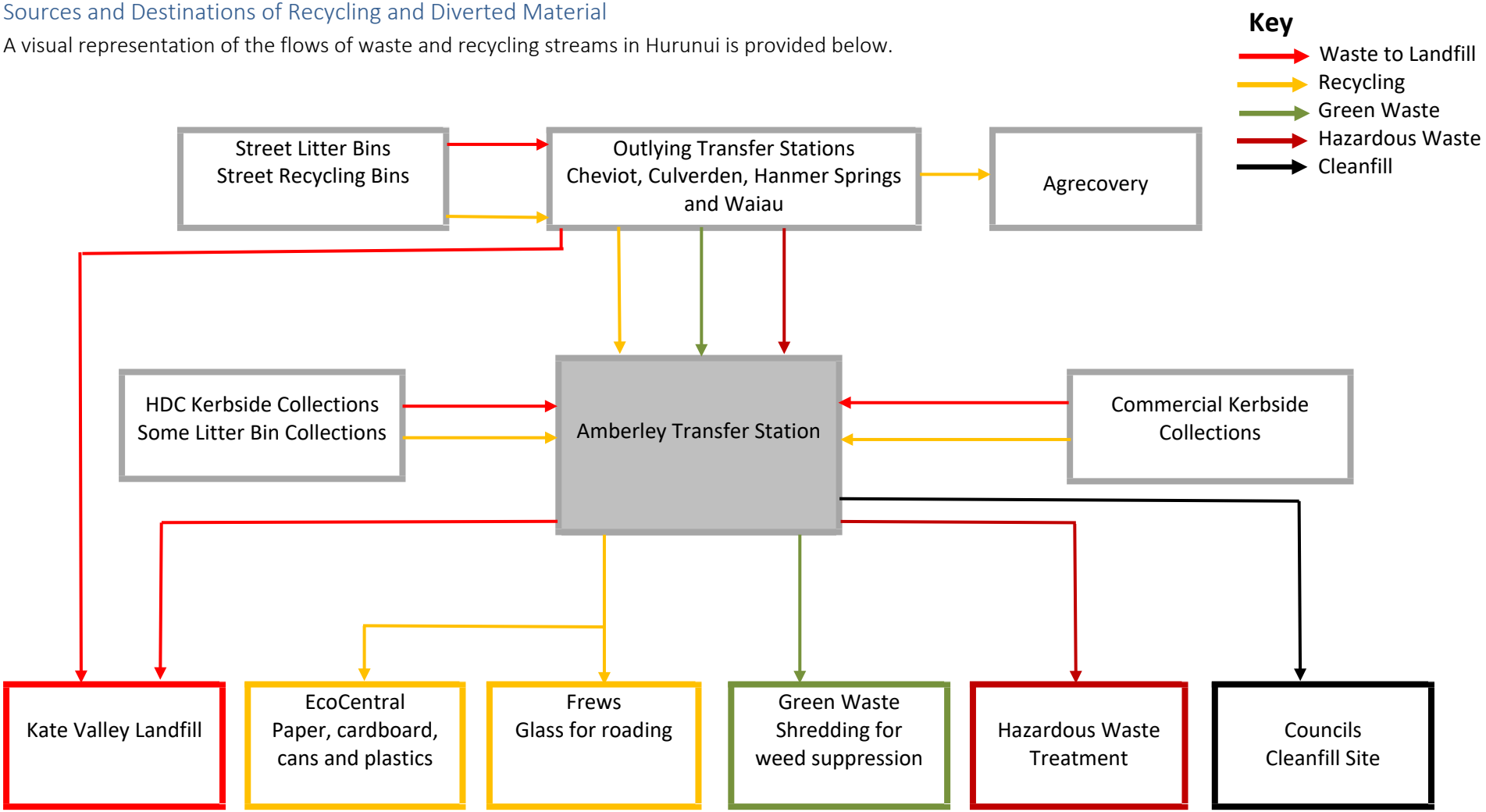
The average monthly contamination levels are in table 6. Contamination peaked in 2016 due to the earthquake, but has since decreased.

Table 6: Kerbside and Transfer Station Recycling and Average Monthly Contamination

Material Type	15/16	16/17	17/18	18/19
Paper and card	496.95	464.35	462.96	400.53
HDPE	14.18	13.033	9.94	11.89
PET	17.027	20.489	14.91	24.66
SB (shopping bags)	12.91	11.396	10.85	13.80
Mixed Plastic 1 - 7	48.486	47.16	43.23	37.76
Ferrous Cans	25.00	22.91	25.59	22.26
Non Ferrous Cans	8.165	8.062	6.24	10.04
Glass	10.262	18.8	5.4	9.71
Contamination Rate	15/16	16/17	17/18	18/19
Average Rate - monthly	1.37%	3.09%	2.73%	1.40%

Sources and Destinations of Recycling and Diverted Material

A visual representation of the flows of waste and recycling streams in Hurunui is provided below.



Transfer Stations

Five transfer stations are owned by council and each is subject to a specific consent relating to the activities taking place on site. These are open to public and businesses for the receipt of waste and diverted materials, but commercial waste contractors are permitted at Amberley only, as this is the only site with weighbridge facilities.

Four transfer stations are operated by Waste Control NZ under contract to council, whilst Hanmer Springs is managed by council. Table 7 summarises the materials diverted at each.

Table 7: Transfer Station Recycling

Material Type	Amberley	Cheviot	Culverden	Hanmer Springs	Waiau
Glass bottles	✓	✓	✓	✓	✓
Plastic types 1, 2 and 5	✓	✓	✓	✓	✓
Food and drink cans	✓	✓	✓	✓	✓
Paper and cardboard	✓	✓	✓	✓	✓
Metal and whiteware	✓	✓	✓	✓	✓
Clothing	✓				
Green waste	✓	✓		✓	
Cleanfill	✓	Small volumes can be placed in with glass bottles			
E-waste	✓	✓	✓	✓	✓
Car and small batteries	✓	✓	✓	✓	✓
Lighting tubes and bulbs	✓	✓	✓	✓	✓
Engine oil	✓	✓	✓		
Cooking oil	✓				
Gas bottles	✓	✓	✓	✓	✓
Paint	✓	✓	✓	✓	✓
Tyres	✓	✓	✓	✓	✓
Household chemicals	✓				
Child car seats	✓	✓	✓	✓	✓
Ag plastic containers		✓	✓		✓

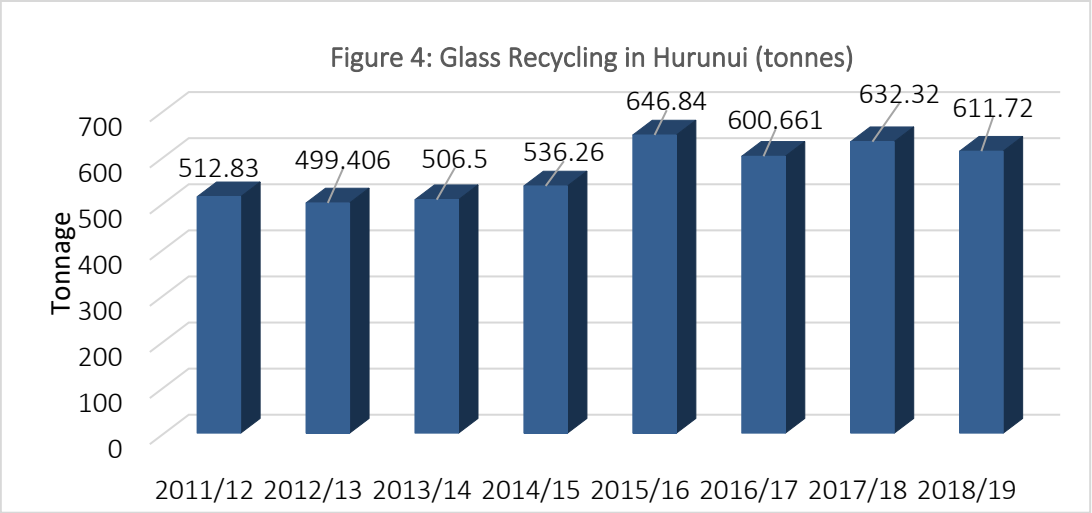
Recycling is weighed when leaving Amberley transfer station and on arrival in Christchurch. Where viable, recycling is backloaded using empty trucks returning from Kate Valley to achieve transport savings and reduce council's carbon footprint. To date, glass, scrap metal, dismantled e-waste, car batteries and chemicals are transported this way. The yearly number of truck movements saved in six years are shown in table 8.

Table 8: Transporting Backloading Numbers

Year / Truck movements	13/14	14/15	15/16	16/17	17/18	18/19
	79	80	86	76	118	113

Glass Recycling

Glass bottles are recycled via at all transfer stations, through the Hanmer Springs household collections and public recycling bins. Since 2009, Container Waste Ltd has backloaded glass from Amberley to Christchurch on behalf of council for crushing and use in road construction. Graph 5 shows the volumes recycled since 2011.



Green Waste Recycling

Green waste is accepted at Amberley, Hanmer Springs and Cheviot transfer stations, from where it is transported by Waste Control to a council site near Amberley for shredding. Once shredded, this material is backloaded to transfer stations and used for weed suppression. An option for the future, which will be explored through the WMMP is to sell this shredded product. The types of green waste accepted are:

- Tree and shrub trimmings up to 100mm thickness and any length.
- Leaves (providing they can be containerised on site for storage).
- Green vegetative material, i.e. perennials, vegetable plants, annuals, rose cuttings etc.

Due to the small and contaminated volumes received at Culverden and Waiau, it is no longer viable to store and transport green waste. The tonnage since January 2011 is in table 9.

Table 9: Transfer Station Green Waste Volumes

Green Waste (tonnes)	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Amberley	14.2	50.5	36.65	40.1	29.87	42.38	112.2	103.04
Cheviot	8	8	4				4.42	7.52
Culverden and Waiau	6	0	0				0	N/A
Hanmer Springs	14.2	54	30.5	18	18	20	34	39.15
Total Tonnage	81.01	112.5	71.14	58.10	47.87	62.38	150.62	149.71

There are no consented commercial composting operations in Hurunui and if green waste was composted it would need to be transported to Living Earth in Christchurch increasing transport costs. It would also incur a per tonne gate fee.

Recycling Sales

Some materials are sold by council to Metal Corp, the income received is used to purchase transfer station infrastructure. The tonnages to date are in table 10.

Table 10: Recycling Sale Tonnages and Materials Recycled for No Cost

	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Metal, whiteware, gas bottles	34.47	42.06	17.18	89.376	123.04	138.13	154.65	128.85
E-waste[3]	11.3	19.88	17.456	0.83	3.116	0.883	2.654	0.565
Car batteries	1.04	1.36	1.029	3.054	2.014	3.177	4.32	1.78
Income	N/A	N/A	N/A	$9,908	$8,772	$10,743	$24,961	$12,998
Tonnages Recycled for Zero Cost								
Paint	N/A	N/A	N/A	N/A	N/A	1	1.5	2
Engine oil	N/A	N/A	N/A	N/A	N/A	2.85	2.61	4.84
Agrecovery	3.5	2.28	2.5	4.063	2.814	2.188	5.06	2.581
Textiles	N/A	N/A	N/A	N/A	N/A	4.295	5.52	11.985
MFE Pickups	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.687

To recycle scrap metal and whiteware, there is no charge at Amberley, but there is a charge at the other four transfer stations to cover the cost of cartage to Amberley, from where it is backloaded by Container Waste to Christchurch. Metals recovery is at a good level and although markets have slumped, it continues to be actively recovered.

Gas bottles are accepted at all transfer stations and managed by the contractor; these are treated and combined with metal for transportation. Electronic waste from all sites is dismantled at Amberley, enabling the cost to the customer to be maintained at a low level.

Hazardous Waste

Hazardous waste comprises liquid and solid wastes that, in general, require further treatment before conventional disposal methods can be used. Household hazardous waste is a priority for council as any product with flammable, explosive, corrosive, toxic or oxidising properties can put people and the environment at risk of harm if discarded of inappropriately.

Council provides drop off facilities at each transfer station for hazardous waste, which meets the specified criteria. Sites have appropriate drop-off containers depending on material type; a service funded via a combination of user pays and general rates.

[3] 12/13 and 13/14 includes e-waste from TV Takeback campaign

Engine oil is accepted for no charge at Amberley, Cheviot and Culverden transfer stations, stored in bunded containers and collected for recycling for use in industrial applications via an accredited product stewardship scheme. The tonnage recycled is in table 11.

Table 11: Quantities of Engine Oil Recycled

	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Engine Oil	3.705	3.515	4.133	2.615	2.5175	2.85	2.6125	4.845

All transfer stations accept paint and paint-like products. Paint in suitable condition is available free to the public for re-use; this is well supported with 1.5 tonnes taken in 17/18 and 2 tonnes in 18/19, saving council approximately $4,000 per year in recycling costs.

Hanmer Springs paint recycling container and Amberley paint bin signage.

The companies in table 12 collect hazardous waste from the transfer stations. Although the number of companies able to receive and process hazardous waste is low, they are able to offer private collections for larger volumes from properties in Hurunui.

Table 12: Processors of Hazardous Waste from Hurunui

Hazardous Waste Type	Processor
Gas bottles	Metal Corp
Fire extinguishers	Fire Watch
Pool and spa chemicals	Chemwaste Industries
Car batteries	Metal Corp
Household batteries	E-Cycle
Lighting tubes and compact bulbs	Interwaste
E-waste	Metal Corp
Toner cartridges	Croxley Recycling
Engine oil	Fulton Hogan

Other Transfer Station Recycling and Diversion

The remaining transfer station diversion (tyres and textiles) is in table 13.

Table 13: Other Transfer Station Diversion

	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Textiles - tonnes	N/A	N/A	N/A	N/A	N/A	4.295	5.52	11.985
Tyres - number	186	159	206	503	411	327	429	430

Waste Infrastructure

Hurunui is well represented by transfer stations, which provide efficient options for waste disposal and recycling. Each facility consists of a waste and whiteware, special containers for hazardous and flammable wastes, where applicable a green waste area and some form of out of hours recycling drop off.

Cheviot, Culverden and Waiau transfer stations also each have a container for receiving empty agricultural chemical containers on behalf of Agrecovery.

Transfer station infrastructure is owned by the Council and Waste Control NZ. The reimbursement received from the landfill levy and material sales has been used to fund some of the infrastructure owned by council in table 14.

Table 14: Transfer Station Infrastructure

Purpose	Equipment Owned by Hurunui Council	Equipment Owned by Others
Re-use	Engine oil containers x 3 Paint containers x 6 Signage	Agrecovery container x 3 Textile recycling bins x 2 Car seat storage cages x 2
Recycle	Dry recycling bins x 7 Open top bins x 9 Recycling bins x 15 Recycling bin trailers x 2 Hazardous waste containers x 2 Gas bottle cages x 5 and battery bins x 5 Storage shipping containers x 2 Event recycling bins x 30 Forklift	Recycling trailers x 2 Open top hook bins x 2 Scrap metal bin x 1 Glass hook bin x 1 E-waste container x 1 Cooking oil drum x 1 Storage container x 1
Disposal	Compactors x 2 Compactor hook bins x 3 Public weighbridge x 1 Weighbridge reader x 2 Under bin weighbridge x 2 Loader x 1 Litter bins x 194	Compactors x 5 Compactor hook bins x 10 Trucks x 3 Litter bin vehicle x 1 Loader x 1 Litter bin trailer x 1
Facilities	Transfer stations x 5 Cleanfill site – Amberley Green waste storage site – Balcairn Closed landfills x 6	Not applicable

Public Space Recycling Bins

Residents, businesses and visitors to the district are able to recycle 24/7 using drop-off containers provided in Hanmer Springs, Waiau, Culverden, Cheviot, Amberley, Gore Bay and Waikari. Due to high levels of contamination, some accept glass bottles only.

Hanmer Springs and Waikari Recycling Bins

Cleanfill Disposal

Cleanfill has been accepted at Amberley transfer station since 2018 and charged at a per tonne rate. It is transported in hook lift containers to the cleanfill site, a redundant gravel pit owned by council. Close monitoring ensures cleanfill meets the consent requirements. For security, accountability and health, and safety, only council's waste contractor delivers to the cleanfill site.

Materials accepted are cured asphalt, bricks, ceramics, concrete, glass, road sub-base, tiles and clean soil, rock, gravel, sand and clay; to date, 359 tonnes has been diverted.

Closed Landfills

Councils closed landfill sites at Cheviot, Culverden, Hanmer Springs, Waiau, Waipara and Waikari were operational prior to Kate Valley opening. Each has a Closed Landfill Management Plan and groundwater monitoring occurs in accordance with these.

Resilience of Hurunui's Waste and Recycling Services

The resilience of councils waste and recycling service is a consideration for both waste and civil defence emergency planning. This relates to the councils ability to cope with larger than normal and unexpected quantities of waste generated from disaster scenarios (e.g. the 2016 earthquake); and the ability to continue to provide communities with safe and sanitary waste collection, processing and disposal services. At a high level, disaster waste management and response includes the following three steps:

1) Reduction and readiness (pre-disaster) – key planning step to understand the capacity of existing infrastructure, potential weaknesses (e.g. points in the transport network, such as the Hanmer Springs river bridge, that could be compromised) and materials/wastes that could become an issue
2) Response (post-disaster) – implementation phase, which would include quantification of risks and waste volumes, and planning for temporary and permanent waste management
3) Recovery – longer-term implementation, providing for waste disposal and recovery of resources as activities return to normal.

Other Council Supported Initiatives and Programmes

Council supports a number of initiatives aimed at encouraging waste minimisation through reduction and diversion within the community. These include education related activities and support for other initiatives e.g. product stewardship schemes to achieve results and enable council to fulfil its responsibilities under the WMA 2008 and the NZWS 2010.

Schools and Preschools

Council provides a well-received and free education programme for schools and pre-schools, which offers the following.

- Council's Education Officer is available to promote waste minimisation and recycling in schools and pre-schools. Interactive sessions on a range of subjects are provided including composting, Love Food, Hate Waste, re-use, recycling and the impact of waste local and globally; this is funded from the general rates.
- Tours of Amberley transfer station are available for a behind the scenes insight into how waste and recycling is managed and have proven popular.
- Council has produced a waste and recycling resource pack for teachers, educators and students. The pack is specific to Hurunui and contains information regarding how waste and recycling is managed locally, examples of the problems rubbish creates and demonstrates why it is important to follow the waste hierarchy. Activities and a comprehensive resource section including where to find further information is included.

Working with Omihi School promoting composting and hosting a visit to Amberley transfer station

Community Engagement and Behavioural Change

Council uses a range of engagement, education, community development, and behaviour change approaches to work with the community to reduce waste to landfill through re-thinking waste as a resource, or divertible material, rather than for disposal. These include:

- Communicating waste and recycling related messages to residents through the local press, community and school newsletters and noticeboards, flyers, direct mail outs, social media, council website and displays in council libraries.
- Running interactive sessions at community group meetings including Time Bank and Women's Institute on topics such as Love Food Hate Waste, composting, litter free lunches and how to up-cycle. Transfer station tours are offered to these groups.
- Recycling bins are available for hire to encourage diversion at events. These have been used at town shows, Hurunui Races, Amberley Car Show and private events at Amberley Tin Shed. Support and guidance is available to support organisers and their use has resulted in a significant decrease in waste to landfill.
- Attending events including town shows, Cheviot Spring Festival and the Christmas Fete helps convey reduce, re-use and recycle messages to a wider audience.

Council's Education Officer attending a community event

Businesses

Much of council's engagement with stakeholders focuses on the domestic waste stream and working with the local community. There is potential to expand this approach to include businesses and other groups and to look to foster connections between private waste producers or private waste diverters and this will be outlined through the WMMP.

To date, the following has been undertaken.

- Working with businesses on the Refill NZ project, to promote refilling of re-usable drink bottles rather than purchasing single use plastic bottles.
- Offering businesses support to help increase their recycling and diversion from landfill.

External Organisations and Initiatives

Where viable, council supports regional and national campaigns promoting recycling and waste diversion, examples include the following.

- Working on joint campaigns with the other councils on the Canterbury Waste Joint Committee including TV Takeback, e-waste recycling, battery recycling and the One Planet E-book.
- Running the SeatSmart recycling programme diverting unwanted children's car seats for recycling, from February to June 2019, 90 were diverted via the project.

Mayor Marie Black dropping a car seat off for recycling at Amberley

- Encouraging the composting of food and animal waste though selling bokashi composting kits and promoting these on councils website and at town shows.
- Supporting the national Love Food, Hate Waste Campaign through promoting the benefits in schools and at community events.
- Providing a site for two clothing bins at Amberley transfer station.
- Supporting Amberley Lions by permitting transfer stations to be drop off points for aluminium wine bottle lids, which the Lions sell to donate the income to KanTabs.

Rural and Farming Community

Being a rural community, council is keen to support and provide options for the safe disposal of farm waste to discourage the use of farm pits, buying and burning.

The Agrecovery recycling programme is supported through running drop offs for empty HDPE plastic chemical containers at three transfer stations, publicising the agrichemical collections locally on their behalf and promoting the programme at the town shows. To date, the following volumes have been collected.

Table 15: Agrecovery Recycling Tonnages

	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Agrecovery	3.5	2.28	2.5	4.063	2.814	2.188	5.06	2.581

The Plasback recycling scheme provides local farmers with an 'on farm collection' solution for used bale wrap, HDPE 100 and 200 litre drums, polypropylene bags and vineyard net.

An increase in those using the scheme locally has been reported and there has been a noticeable decrease in quantities of bale wrap disposed of via the transfer stations.

Containers received and stored at Culverden transfer station for Agrecovery

Event Days

Hazardous waste drop off events funded by the Waste Levy were held in Cheviot, Culverden, Waikari, Hanmer Springs, Hawarden and Amberley in 2018. These were well supported and the tonnages by material type, which were received, are in the table 16.

Table 16: Hazardous Waste received via the Drop-off Days.

	Amberley	Cheviot	Culverden	Hanmer & Hawarden	Waikari	Total Kgs
Engine oil	339.3	471.3	115.5	7.5	31.2	964.8
Waste fuel	28.2	6.7	1.3	0	0	36.2
Aerosol cans	0	37.4	0	0	17.7	55.1
Paint and Stains	665.4	414.7	317.6	578.9	434.8	2,411.4
Solvents	6	12.7	5.6	40.5	476.7	541.5
Oxidisers	0	32	7.8	0	0	39.8
Car Batteries	470	48	0	214.7	30	762.7
Garden Chemicals	827.9	439.7	61	159.2	106.8	1594.6

Household Chemicals	199.7	45.6	8.5	52.5	0	306.3
Intractable Wastes	44.7	10	33.5	44.9	41	174.1
Light Bulbs and Tubes	5.6	1.8	12	3.1	0	22.5
Total - Kg	2586.8	1,519.9	562.8	1101.3	1,138.2	6,909kg

Private and Commercial Providers (Non-Council)

Waste and recycling is also collected by private commercial companies in Hurunui, a summary of companies and the services offered are in the table 17.

Table 17: Private and Commercial Waste Providers

Company Name	Company Size	Services Provided in Hurunui
Container Waste Ltd	Medium	Commercial and residential skips, hook bins
EnviroWaste Services Ltd	Large	Commercial and residential skips, hook bins Commercial recycling collection Hazardous waste collection
Waste Management Ltd	Large	Commercial and residential skips
Skip 2 U	Small	Commercial and residential skips
MT Bins	Small	Commercial and residential wheelie bins Commercial glass and cardboard recycling
Laffey Bins	Small	Commercial and residential wheelie bins and drums
Rangiora Rubbish Removals	Small	Commercial and residential skips
T.I.A. Disposal	Small	Commercial and residential skips Commercial and residential wheelie bins Commercial glass and cardboard recycling
Plasback	Medium	Agricultural on farm plastic collections
Scrap metal – multiple providers	Various	Commercial and residential skips Scrap metal collections

Waste weight data is collected from private sector waste and recycling management service providers using Amberley transfer station. Knowledge of data of waste or recyclables collected within the district, but taken out of the district for processing or disposal is limited.

Customer Satisfaction

The main mechanisms through which council monitors customer satisfaction of waste and recycling services are the following:

- Public complaints and compliments through the service request system.
- Public enquiries.

- Feedback directly from elected members, community boards, township committees, and the public in general.
- Regular contact and reporting from the contractor.

Waste and recycling services are highly rated by the community, with complaint levels being low in relation to refuse and recycling collections, transfer stations, public space recycling and litter bins. Positive feedback is also regularly received.

Section 2 – Forecast of Future Demand and Growth

A waste assessment is required to contain a forecast of future volumes and demands for collection, recycling, recovery, treatment and disposal services, whether provided by council or otherwise. There are a number of factors, influencing the demand for waste services, these are:

- Population growth, household size, income and composition.
- Consumption habits.
- Commercial growth.
- Attitude towards the environment and recycling.
- Changes in waste management systems.
- Presence of user pays charging systems for waste.
- Technological shifts and product supply changes.
- Increased product packaging.

Key Factors Influencing Demand for Services

Population Growth and Spread

The population of the district in the Long Term Plan (2018-28) is ranked 53rd in size out of the 68 territorial authorities in New Zealand. Hurunui has a population older than the national average and this may affect the average disposable income and impact on waste volumes and recycling types.

There are four predominant areas of expected growth over the next 10 years, Amberley and Leithfield, each with a predicated growth rate of 8% and Hanmer Springs at 10% and it is in these three townships that the most significant variances in volumes presently occur, particularly with Hanmer Springs being a tourist destination. Amuri area is predicated to have 11% growth over the next 10 years, but this encompasses more than one township. Table 18 provides population growth projections by area to 2046.

Table 18: Population Growth Projections in Hurunui through to 2046

Area	Actual 2013	2021	2026	2031	2036	2041	2046	Est growth 2020 - 2030
Hanmer Springs	837	935	985	1035	1059	1083	1107	10%
Culverden	426	450	450	450	450	450	450	0%

Waiau	261	270	270	270	270	270	270	0%
Amuri	1647	1920	2040	2150	2253	2356	2459	11%
Parnassus	939	955	960	955	955	955	955	0%
Cheviot	369	380	380	380	380	380	380	0%
Hurunui	2640	2710	2710	2710	2710	2710	2710	0%
Amberley	1575	1760	1870	1922	1975	2030	2086	8%
Leithfield	2835	3210	3390	3481	3575	3671	3745	8%
Total	**11,529**	**12,590**	**13,055**	**13,353**	**13,627**	**13,905**	**14,162**	**6%**

Total waste in the district is increasing due to population growth and, to a lesser extent, economic growth, as Hurunui is predominately rural, despite a proportion of the population working in Christchurch. As population increases, so will demand for services, therefore capacity and infrastructure improvements to transfer stations will be required to accommodate this.

Consumer Behaviour and Consumption Habits

One of the most significant influences on waste generation is consumer behaviour. The Council will need to continue to invest in community-based marketing and waste education to promote waste minimisation and recycling, plus be flexible and adapt to technology changes to help engage with its community in the drive to change attitudes.

Consumption trends are influenced by the marketing of consumer goods; for example people opting to purchase items with reduced volumes or recyclable packaging and opting for online media sources resulting in a decrease in newsprint production.

Legislative Influences

The waste levy administered under the Waste Management Act 2008, has the ability to impact on the waste sector. Presently $10 per tonne levy on waste disposed of to landfill does not provide enough of an economic incentive to reduce waste, however should the Government opt to increase this charge or widen the criteria to include all landfills, it is probable that those products or services minimising waste to landfill will become more popular.

Level of Service Expectations, Community Expectations and Customer Needs

Expectations regarding service levels continue to increase and to introduce new schemes or expand existing ones is dependant on community co-operation. Whether waste is generated at home or work, people need convincing of the cost effective merits of diverting material from landfill and it is probable many will not want to incur rate increases to achieve this.

Should demand for council supported initiatives increase, this may necessitate a review of the initiatives supported by Council, and of the funding allocated to ensure alignment with the Council's WMMP goals and strategies.

Gross Domestic Product (GDP)

Landfill waste quantities increase in conjunction with the GDP, due to additional manufacturing, importing of goods and provision of services. To reduce this correlation, waste needs reducing at source or the use of only those products, which are recyclable.

Future Demands and Quantities

The following section details the forecast future demands on council's waste management and recycling services and infrastructure resulting from predicted population growth, commercial growth and level of service expectations. When estimating the future volumes of waste and diverted materials, the following assumptions are applied.

- Waste and recycling quantities continue to grow in line with population growth, but providing markets exist at an affordable rate and there is community support, council will endeavour to increase recycling and decrease waste to landfill.
- Kerbside collection services are provided to all townships and rural residents using drop off points.
- User pays charging systems for waste and for some forms of recycling will continue to apply.

Demand on Collection Services

The current kerbside collection system has the capacity to cope with increased residential and commercial customers in the district. The economic sustainability of any increase in service levels would be dependent on, but not limited to the number of new properties, travel distances, collection days and capacity within existing collection vehicles.

The current contract runs for five years from July 2019 and assumes the on-going use of council pre-paid refuse and recycling bags. Should the community indicate they prefer the introduction of wheelie bins, this will be subject to community and council approval and any review would include, but not be limited to, cost, impact on recycling, bin size and type, impact on ratepayer by demographics, impact on rates, health and safety and environmental factors.

Under the current collection system, some opt to engage the services of private local contractors who are able to offer a wheelie bin or drum as an alternative method of collection.

Demand on Disposal and Diversion Infrastructure

Amberley Transfer Station

Amberley transfer station currently has the capacity to deal with current levels of demand from the local community, however as waste and recycling throughput and customer numbers increase, consideration will need to be given to increasing the opening hours (subject to consent approval), expanding the pit area, adding a second weighbridge and installing a compactor dedicated to recycling.

Should council decide to increase the level of recycling segregation required to be undertaken by the public, the site has adequate space to accept, store and transfer public drop-off recyclables and to accommodate increasing quantities of materials during peak periods and with future population growth.

However, additional infrastructure (hook bins, retaining walls, sealed areas and concrete pads) will be required to accommodate such change, but overcoming volatile commodity markets and meeting material quality requirements would be a hurdle which council would need to overcome. The Council will continue to encourage and push for intervention and direction at a national level to support councils and recycling processors.

The Outlying Transfer Stations

The Culverden, Hanmer Springs and Waiau transfer stations have the capacity to deal with current and future demands from the local communities that utilise these sites and since the last WMMP, the throughput capacity and range of materials diverted received via these sites has increased.

The Waiau transfer station was built in 2017/18 and was funded by the Waste Minimisation Fund following the earthquake; no further works are required at this site. The improvements below are required at Culverden and Hanmer Springs.

Table 19: Infrastructure Improvements Required

Culverden Transfer Station	Hanmer Springs Transfer Station
• New retaining wall • New compactor concrete pad • New glass bin concrete pad • Safety barriers and steps • Sealing of the transfer station • Cameras for safety and security	• Public weighbridge • Green waste drop off bay • Sealing of the transfer station • Additional hook bin for storage of recycling

Cheviot transfer station has no capacity to manage waste or recycling should volumes increase above existing levels or accept a wider range of materials for recycling; it's recommended the Cheviot transfer station relocates to adjacent council owned land and be rebuilt to provide the space, infrastructure and safety features required for now and future growth. Without relocating or undertaking the aforementioned site improvements, future expansion of recycling options or further diversion at this location will not be possible.

Residual Waste and Cleanfill

Kate Valley has a 35-year consent period and a reported capacity that reaches beyond the consent period, therefore the Council has no issue with landfill capacity over the period covered by this waste assessment or the WMMP.

There are no concerns regarding the disposal of cleanfill, as significant space is available, at the existing site for the life of the WMMP. However, council may look to consider drop off facilities for cleanfill at the outlying transfer stations.

Waste and Diverted Material Projections

The potential impact of service demand, population and infrastructure growth on waste and recycling volumes is difficult to quantify, as in Hurunui, there are already relatively high levels of kerbside and transfer station diversion.

For the purposes of this waste assessment, the increase in volumes have been estimated by material type and the influencing factors are provided in the table 20.

Table 20: Waste and Recycling Projections

Waste or Recycling Source Projected Yearly Increase	Influencing Factors
Transfer Station Waste 20 tonnes estimated yearly increase	• Population growth or decline • Visitor numbers e.g. Hanmer Springs – waste increases over Christmas and New Year • Media influence • Commercial development and activity • Consumer behaviour
Kerbside Waste 12 tonnes estimated yearly increase	• Time of year - some opt to burn waste in winter, • Cost of bags may affect volumes collected • Visitors to Hurunui • Consumer behaviour
Glass 25 tonnes estimated yearly increase	• Visitors to Hurunui e.g. Hanmer Springs • Seasonal increases – Christmas and New Year • Consumer behaviour
Transfer Station (dry recycling) 15 tonnes estimated yearly increase	• Will increase providing a zero gate fee to incentivise people to sort recycling • Commercial development and activity
Green Waste – due to influencing factors not possible to estimate.	• Restricted or prohibited fire season • Weather impacts on the volumes received
Cleanfill 30 tonnes estimated yearly increase	• New subdivisions and building activity
Scrap Metal 10 tonnes estimated yearly increase	• Commercial development and activity • Population growth or decline
Hazardous Waste 1 tonne estimated yearly increase	• Organised hazardous waste drop off events • Publicity and awareness raising • Increased range accepted
E-waste – 1 tonne	• Publicity and awareness raising

	• Consumer behaviour
Agricultural Waste 1-2 tonnes estimated yearly increase	• Publicity and awareness raising • Organised drop–off events with Agrecovery • Consumer behaviour

Gap Analysis

A wide range of factors may affect future demand for waste services. It is likely that future changes in demand for waste services will be in line with increasing population, changing household demographics, increasing customer expectations, Government requirements (e.g. the introduction of further product stewardship schemes) and commercial growth.

While steady growth is predicted for waste and population, no dramatic shifts are expected. If new waste management approaches are introduced, or the recycling commodity prices increase, it is possible greater amounts of material that would have gone to landfill can be recovered or recycled.

While council has a role in influencing waste minimisation outcomes, the biggest changes that will lead to increased waste diversion and waste minimisation are likely to come about through education and within the industry because of economic and policy drivers. The following 'gaps' have been identified in the way council currently provides waste and recycling services and captures data; these are detailed in table 21.

Table 21: Gap Analysis

Gap	Gap Analysis
No Solid Waste Bylaw.	The implications of this could be the Council not having control over waste management operations and the data recorded; and an inability to prosecute illegal dumping
Potential to be leaders	Council has received significant local and national praise for its recycling quality and low levels of contamination
Meeting future waste disposal needs	Although not a concern during the life of the upcoming WMMP, in the future, council will need to consider options for waste disposal before the life of Kate Valley expires
Organic waste diversion	Presently organic waste is managed on individual properties, as there is no commercial operator to manage this waste. For organic waste to be diverted, a partnership with a private operator is needed
Changing recycling markets	The ability to offer services is determined by national and international markets and has financial implications for recovering certain materials. Council has limited capacity to stockpile recycling
Changing community expectations	There is an increasing demand for additional recycling and waste diversion schemes including from those relocated from areas where increased services are provided due to a larger rating base
Gaps in data collection	Council has good levels of data for waste and recycling from its contractors i.e. material type and tonnage are provided monthly. There is little information regarding amounts and waste types disposed of via unregulated sites e.g. farm pits

Section 3 - Legislative and Strategic Context

This section outlines the key legislation council must consider when planning for the future management of waste and developing its WMMP. It also includes legislation, which may apply, but to a lesser extent.

Waste Minimisation Act 2008

The purpose of the Waste Minimisation Act 2008 (WMA) is to:

- Encourage waste minimisation and a decrease in waste disposal.
- Protect the environment from harm and provide environmental, social, economic, and cultural benefits.

The WMA requires territorial authorities to promote effective and efficient waste management and minimisation. To achieve this, authorities are required by legislation to adopt a WMMP. The WMA does not prescribe specific waste management and minimisation targets or structure, but provides for minimum content requirements, allowing local flexibility in approach.

A formal review of existing waste and minimisation management plans must be undertaken every six years. Section 50 of the WMA also requires the preparation of a 'waste assessment' prior to reviewing its existing plan; this document meets this requirement

A key provision of Act was the imposition of $10-plus-GST levy per tonne of waste to landfill. Funds collected are partly distributed to councils (50 per cent, based on population), with the rest provided to a contestable Waste Minimisation Fund.

The Act also contains a mechanism for accreditation and monitoring of product stewardship schemes to minimise waste. This aims to encourage those producing or using a product to share responsibility for ensuring effective reduction, reuse, recycling or recovery and the management of environmental harm when it becomes waste.

The New Zealand Waste Strategy

Released in 2002, the New Zealand Waste Strategy (NZWS) is the Government's core policy document concerning waste management and minimisation in New Zealand. When revised in 2010, it contained two high level goals to a) reduce the harmful effects of waste and b) improve the efficiency of resource use.

Section 44 of the WMA requires councils to have regard to the NZWS when preparing their WMMP. The NZWS permits a flexible approach to ensure waste management and minimisation activities are appropriate for individual and local situations and provides direction to local government, businesses and communities on where to focus efforts to deliver environmental, social and economic benefits

The Local Government Act 2002

Until the introduction of the WMA, the Local Government Act (LGA) defined a council's waste management responsibilities. Although it no longer incorporates specific waste regulations, a council must continue to provide waste services in a manner, which considers the purpose of local government i.e.

- Enables democratic local decision-making and action by, and on behalf of, communities.
- Promotes the social, economic, environmental and cultural well-being of communities, in the present and for the future.

The LGA contains several relevant provisions to consider when preparing WMMPs. This includes consultation, the creation and review of waste bylaw provisions, and the introduction of section 17a in 2014, which requires councils to review *"the cost-effectiveness of current arrangements for meeting the needs of communities within its district or region for good quality local infrastructure, local public services, and performance of regulatory functions"* at least every six years.

The LGA includes requirements for summary information about council's WMMP to be included in the Long Term Plan (LTP).

The Resource Management Act 1991

The Resource Management Act (RMA) promotes sustainable management of natural and physical resources through provision of guidelines and regulations.

The RMA does not specifically define 'waste', but addresses waste and recycling via controls on the environmental effects of such activities and facilities through national, regional and local policy, standards, plans and consent procedures. It exercises significant influence over such facilities in terms of potential impacts of these on the environment.

The Litter Act 1979

The Litter Act provides councils with powers to issue infringement notices for those who litter. Amended in 2006, powers were strengthen increasing the original $100 to a maximum of $400. The act provides council a method for regulating litter and illegal dumping, although enforcement is difficult, with few successful prosecutions.

The Hazardous Substances and New Organisms Act 2006

The Hazardous Substances and New Organisms Act (HSNO) provides standards for the disposal of substances, which pose a significant risk to the environment and/or human health, from manufacture to disposal.

For waste management, this act relates to the handling and disposal of hazardous substances and provides requirements for storage, staff training and certification; these are covered in operational and health and safety plans for waste and recycling services in Hurunui.

Rules involving hazardous substances and workplace health and safety have transferred to the new Health and Safety at Work Act, with responsibilities for setting and enforcing those rules being with WorkSafe New Zealand rather than the Environmental Protection Agency (EPA). The EPA continues to be responsible for environmental health related aspects, rather than human health.

The Health and Safety at Work Act 2015

The Health and Safety at Work Act (HSWA) provides health and safety responsibilities for managing hazards and risks to employees at work, including working with hazardous substances and the collection and management of waste; WorkSafe New Zealand is the regulator.

The HSWA refers to a PCBU - 'person conducting a business or undertaking'. A PCBU can be an individual or an organisation, which carries the primary duty of care and must ensure, as far as is reasonably practicable, the health and safety of workers, and those potentially at risk from the work undertaken.

As council is classified a PCBU, it must oversee / regulate the health and safety of workers i.e. employees and contractors, and their subcontractors or workers. The council also carries responsibility for the health and safety of those whose work activities it influences or directs.

Climate Change Response Act 2002

The Climate Change Response Act 2002 is the principal act, which provides the basis for a New Zealand Greenhouse Gas Emission Trading Scheme (ETS). The act requires landfill owners to purchase emission trading units to cover methane arising from the landfill.

Kate Valley landfill has a gas capture system, so the potential impact on the district of the ETS is reduced, compared to those operating lower grade landfills.

The Long Term Plan

The LGA requires all councils to have a Long Term Plan (LTP). The current LTP covers 1 July 2018 to 30 June 2028 and is a comprehensive strategy for Hurunui's growth and development. Through this council commits to maximise recycling and minimise waste.

Product Stewardship

Product stewardship is a method of reducing waste and accelerating the transition to a circular economy through the responsible management of the environmental impact of a product.

Such programmes can have the potential to reduce council costs, as any party (producer, brand owner, importer, retailer or consumer) involved in the life of the product can accept financial responsibility for reducing the its environmental impact. The Council supports the following voluntary product stewardship schemes.

- Agrecovery Rural Recycling Programme - for container recycling, drum recovery and the collection of unwanted or expired chemicals.
- Plasback Rural Recycling Programme – on farm collections for recycling agricultural plastics including silage wrap and crop bags.
- Recovering Oil Saves the Environment - used oil recovery programme, which collects, transports, uses and disposed of used oil from council transfer stations.

Section 4 - The Councils Vision, Goals, Objectives and Targets

Vision

Hurunui Council has the following vision when providing waste minimisation and recycling services - *'To ensure ratepayers, residents, businesses and visitors to the district are provided with or have access to highly efficient, effective, reliable and safe waste management and waste minimisation services, which protect the environment from harm and are delivered in a cost effective and affordable manner'.*

Council's Goals

Although council has the desire to work towards an aspirational goal of zero waste, this is unachievable, therefore, a precautionary approach is taken, which aims to manage waste in an economic and environmentally efficient way. For the purposes of this waste assessment, council has committed to the following goals.

- To follow the waste hierarchy to guide council's decision making.
- Reduce the harmful impacts of waste on health and the environment in Hurunui.
- Working to improve the efficiency of resource use.
- To influence and encourage waste reduction and re-use through behavioural change.

To measure the progress of reducing waste to landfill, table 22 shows the 40% diversion rate which council is aiming to reach by mid-2026, which is the life of the upcoming WMMP.

Table 22: Tonnage required to achieve 40% Diversion by mid-2026

Year	Total Tonnage	Waste to Landfill	Total Recycling	Diversion Rate
2017/18	5166.99	3484.16	1682.83	32.57%
2018/19	5043.19	3323.9	1719.29	34.09%
2025/26	5825	3495	2330	40%

It is acknowledged it will become increasingly harder and more expensive to address the remaining waste streams, so there is a need to consider community expectations, including what people are prepared to pay for when aiming to reach the 40% diversion rate.

Council's Objectives

When undertaking this waste assessment and compiling the WMMP, council have followed the waste hierarchy to guide decision-making. As the area, council has maximum impact on is recycling, much of this waste assessment relates to this.

When planning and developing waste and recycling services, council will work to achieve the following objectives, each of which are specific, measurable, achievable, relevant and timely (S.M.A.R.T) and will form part of council's forthcoming WMMP.

- Through the provision of a range of reduction, reuse, recycling and recovery programmes strive to maximise diversion of waste in an efficient, reliable and safe manner.
- Provide cost effective and efficient waste and recycling services for the collection, storage, management or diversion of waste.
- Ensure the quantity of waste to landfill per property decreases and the volumes diverted for reduction, re-use, recycling and recovery increase.
- Reduce and eliminate the on-going risk to human / public health and mitigate environmental damage caused by waste generation, collection, storage and disposal
- Continually accumulate information to ensure well-informed policies and decisions regarding waste, recycling and minimisation can be made.
- Work in partnership with contractors, the Canterbury Joint Waste Committee, other councils, Environment Canterbury, the Ministry for the Environment and support product stewardship schemes to provide a choice of efficient and cost effective waste services.
- Increase the economic benefits created through the efficient use and / or sale of recyclable materials to generate income for transfer station improvements.
- Continually review and assess the performance and effectiveness of the waste and recycling services and facilities provided by council.
- Regularly engage with the community to ensure they are aware of options available and ensure ongoing education and engagement through a range of media forms.

Targets

Table 23 on page 34 provides details on council's targets including how to monitor and report the achieving of each. Each target provides a clear and measurable way to determine how well council is doing and are specific, measurable, achievable, relevant and timely.

Statement of Proposal - Protection of Public Health

The Health Act 1956 requires councils to ensure the provision of waste services protect public health. The range of services in Hurunui provided by council and the private sector will ensure public health is protected now and into the future.

The district has access to a safe and sanitary landfill, which meets national legislative requirements and council commits to ascertain the viability of expanding and/or improving services for waste minimisation and diversion. Proposals will be incorporated in the WMMP.

With regard to council provided waste and recycling services, public health issues can be addressed by setting appropriate performance standards for contracts, which include performance, monitoring and reporting criteria.

The Medical Officer of Health will be consulted with regard to this waste assessment and the response provided added to the final documentation.

Table 23: Assessment of Options or Issues

An assessment of the options and issues to be addressed for managing and minimising waste for the life of the upcoming WMMP are provided in table 23. Options cover education, regulation and service provision and are assessed by their alignment with the waste hierarchy; their funding source and how their effectiveness will be measured.

Kerbside Collections Preferred Options or Issue	Waste Hierarchy Tier Relevance	Approach	Public Health Benefit	Funding	Monitoring and Reporting
Continue to provide an efficient and cost effective weekly refuse and recycling collection to urban households and businesses	Recycle Recover Disposal	Service	Decreased burning, burying and illegal dumping of waste	Targeted rate User pays	Number of properties accessing the service Refuse and recycling bags sales
Evaluate whether wheelie bins are a viable and affordable option for Hurunui	Recycle Disposal	Service	Decreased burning, burying and illegal dumping of waste	Targeted rate	Cost to the ratepayer for service Environmental impact assessment of using wheelie bins for waste and / or recycling
Increase drop off locations for rural householders and those not on the collection route to use the kerbside pick-up service	Recycle Recover Disposal	Service	Decreased burning, burying and illegal dumping of waste	User pays	Increase in rural drop off points
Decrease volumes of kerbside collected material to landfill via increased education and engagement	Recycle Recover Disposal	Education	Decreased burning, burying and illegal dumping of waste	Levy income Waste budget	Decrease in waste collected Increase in recycling collected
Continue to ensure only complying wastes are disposed of to landfill i.e. banning liquids, hot ashes, batteries, hazardous and medical waste	Recycle Recover Disposal	Regulate Education	Decreased burning, burying and illegal dumping of waste	Waste budget	Number of non-complying stickers applied to bags at pick-up point
Selling bokashi composting kits to decrease the volume of organic material in the kerbside bags	Recover	Education	N/A	User pays Staff time	Number of composting kits sold Decrease of food waste in refuse bags

Transfer Stations Preferred Options or Issue	Waste Hierarchy Tier Relevance	Approach	Public Health Benefit	Funding	Monitoring and Reporting
Continue to maximise the volumes diverted for recycling, providing it is cost effective to do so	Recycling	Service Education	Decreased burning, burying and illegal dumping of recycling	User pays Waste budget	Tonnage recycled by material type Volumes recycled by transfer station Aim to achieve 40% recycling
Expand the range of materials accepted for recycling at all sites	Recover Recycling	Service	Decreased burning, burying and illegal dumping of recycling	User pays Waste budget Waste levy	Increase in range of products diverted for recycling
Evaluate the feasibility of increased separation of recycling by the public	Recycling	Service Education	N/A	Waste levy Waste budget	Use of new facilities Increase in volumes recycled
Increase capacity to receive waste and recycling at Amberley by extending the pit and installing a second weighbridge	Recycling Disposal	Service	N/A	Waste levy Waste budget	Customers numbers Increase in gate fees received
Review the Amberley transfer station opening times	Recycling Disposal	Service	Decreased burning, burying and illegal dumping	N/A	Outcome of a review Use of facility within extended hours
Continue to work with transport contractors to achieve efficiencies	Recycling Disposal	Service	Decrease in truck emissions	N/A	Monthly number of truck movements via backloading
Investigate the feasibility of selling shredded green waste at Amberley and Hanmer Springs transfer stations	Recover	Service	N/A	User pays	Tonnages sold by location Customer uptake and numbers
Build a new transfer station in Cheviot to provide upgraded facilities and increased space	Recycling Disposal	Service	Decreased burning, burying and illegal dumping	Waste levy Waste budget Grants	Customer numbers Gate fees received Tonnages recycled and disposed of

Upgrade facilities at the Culverden transfer station	Recycling Disposal	Service	Decreased burning, burying and illegal dumping	Waste levy Waste budget Grants	Customer numbers Gate fees received Tonnages recycled and disposed of
Upgrade facilities at the Hanmer Springs transfer station including installing a weighbridge for accurate charging	Recycling Disposal	Service	Decreased burning, burying and illegal dumping	Waste levy Waste budget Grants	Customer numbers and feedback Gate fees received
Evaluate the feasibility of offering cleanfill drop off facilities at other transfer stations	Disposal	Service	Decreased burying and illegal dumping	User pays	Volumes diverted Customer numbers
Provide on-site advice to customers to encourage recycling and reduce contamination rates	Recycle Recover Treatment Disposal	Education	N/A	Waste levy Waste budget Staff time	Customer feedback Contamination rates decreased Recycling volumes increase
Food and Green Waste Preferred Options or Issue	Waste Hierarchy Tier Relevance	Approach	Public Health Benefit	Funding	Monitoring and Reporting
Continue to selling bokashi-composting kits to reduce food waste	Recycling	Service	N/A	User pays Staff time	Number of composting kits sold
Continue to sell animal waste composting kits	Recycling	Service	N/A	User pays Staff time	Number of composting kits sold
Continue to support the national Love Food, Hate Waste Campaign	Recycling	Education	N/A	Staff time	Dependant on the activity
Evaluate options for a food waste drop off or collection service providing the waste received to a local farmer	Recycling	Service	N/A	User pays Staff time	Dependant on the activity
Evaluate the feasibility of selling reduced priced composting bins	Recycling	Service	N/A	User pays Staff time	Number of compost bins sold

Continue to divert transfer station green waste for mulching by accepting suitable material for a decreased fee	Re-use Recover	Service	Decreased burning and illegal dumping	User pays	Volumes recycled by location
Hazardous and Special Waste Preferred Options or Issue	Waste Hierarchy Tier Relevance	Approach	Public Health Benefit	Funding	Monitoring and Reporting
Continue to provide facilities to receive hazardous waste at all transfer stations	Treatment Disposal	Service Regulate	Correct disposal of hazardous waste	User pays	Volumes received by product type Volumes received by location
Continue to offer paint for re-use at all transfer stations for no charge	Re-use	Service Education	Prevents disposal via storm water drains	N/A	Volumes re-used Customer uptake
Increase community education on the safe handling and management of hazardous waste	Treatment	Education	Increased knowledge regarding hazardous waste handling	Waste budget	Increase in volumes of hazardous wastes received by site
Agricultural Recycling Preferred Options or Issue	Waste Hierarchy Tier Relevance	Approach	Public Health Benefit	Funding	Monitoring and Reporting
Continue to offer Agrecovery recycling facilities at Cheviot, Culverden and Waiau transfer stations	Recycling	Service	Reduced burning and burying of farm waste	Funded at point of purchase	Volumes received via each drop-off Surveying behaviour change
Continue to promote the Plasback recycling programme.	Recycling	Education	Reduced burning and burying of farm waste	User pays	Uptake of the scheme Volumes collected
Continue to support Agrecovery's agrichemical collection programme	Treatment Disposal	Education Regulate	Reduced burning and burying of farm waste	Waste levy	Quantities collected Numbers participating
Public Space – Litter and Recycling Bins Preferred Options or Issue	Waste Hierarchy Tier Relevance	Approach	Public Health Benefit	Funding	Monitoring and Reporting
Consider installing further recycling drop off bins	Recycling	Service	Decrease in litter	Waste levy	Number of additional recycling bins

					Tonnage recycled
Ensure local campgrounds provide recycling guidance and if viable options for visitors	Recycling	Service Educate	Decrease in litter	Campground income	Recycling volumes and type by location
Audit residual litter bins to identify further diversion opportunities i.e. adding a recycling bin	Recycling	Service	Decrease in litter	Litter bin budget	Improved diversion of recycling from litter bins
Ensure when town refurbishments are planned, recycling facilities are considered	Recycling	Service	Decrease in litter	Rates	Number of additional recycling bins Tonnages recycled
Public Events Preferred Options or Issue	Waste Hierarchy Tier Relevance	Approach	Public Health Benefit	Funding	Monitoring and Reporting
Attendance at community events e.g. town shows to increase awareness	Re-use Recycling	Education	Increased knowledge of options	Staff time	Number of events attended Number of people engaged with
Encourage and support those running public events to provide recycling and food waste diversion options	Recycling	Service Education	N/A	Staff time	Number of events offering recycling facilities
Joint Campaigns / Product Stewardship Preferred Options or Issue	Waste Hierarchy Tier Relevance	Approach	Public Health Benefit	Funding	Monitoring and Reporting
Support product stewardship, national and regional waste minimisation and recycling programmes	Recycling	Education	N/A	User pays Staff time	Volumes collected in Hurunui by material type
Continue to participate in joint schemes across Canterbury e.g. Car Seat Recycling	Recovery	Education Service	Decrease in illegal dumping Improved awareness of safety issues re: expiry dates	User pays Staff time	Volumes received by material type

Continue to support and work with WasteMINZ to encourage waste minimisation and recycling	Reduce Re-use Recover Recycle	Education	N/A	Staff time	Dependant on scheme
Continue to support and work with the Canterbury Waste Joint Committee Working Party to encourage waste minimisation and recycling	Re-use Recover Recycle	Education Service	N/A	Staff time Committee funded	Dependant on scheme
Education and Engagement Preferred Options or Issue	**Waste Hierarchy Tier Relevance**	**Approach**	**Public Health Benefit**	**Funding**	**Monitoring and Reporting**
Continue to provide a waste minimisation education programme	Reduce Reuse Recycle Recover Treatment Disposal	Education	Increased awareness and knowledge of preventing harm or environmental damage from waste	Waste budget	Numbers reached – schools, community groups or individuals Feedback received
Provide waste and recycling information to new residents and businesses	Recycle Disposal	Education	Increased awareness of local options for waste and recycling	Waste budget	Numbers reached
Ongoing education via social media, councils website, community newsletters and the local press	Reduce Reuse Recycle Recover Treatment Disposal	Education	Increased awareness of local options for waste and recycling	Waste budget	Numbers engaged with via social media Number of hits on promoted webpages Number of publications

Develop a programme to engage with and support businesses to minimise waste and recycle	Reduce Recycle	Education	Increased awareness of local options for waste and recycling	Waste budget	Number and type of business worked with by area Decrease in waste generated by businesses worked with
Promote the use of re-usable nappies by working with the Waste Free Living Programme and Plunket	Re-use	Education	N/A	Staff time Waste levy	Numbers reached – individuals and groups Feedback on behaviour change
Promote responsible (green) purchasing choices	Reduce Recycle	Education	N/A	Staff time	Numbers reached Feedback on behaviour change

Hurunui District Council Waste Assessment

Medical Officer of Health Feedback

The Waste Minimisation Act 2008 requires that each Territorial Local Authority (TLA) must review its Waste Management and Minimisation Plan every 6 years. In doing so, it must make a waste assessment before conducting the review (s50 (2)). In making a waste assessment the TLA must consult the Medical Officer of Health (s51(5)(a)).

A waste assessment must contain, amongst other things (s1(f)(i)) a statement about the extent to which the proposals contained in it will ensure that public health is adequately protected:

The TLA must consider the following methods of waste management and minimisation including; reduction, reuse, recycling, recovery, treatment and disposal (s44).

The following feedback is provided on the Draft Waste Assessment prepared by the Hurunui District Council.

Executive Summary

The comments from the Medical Officer of Health are summarised under the following categories;

- Waste Data
- Recycling Services and Diverted Materials.
- Education, Events and Community Engagement Public Space Recycling Bins
- Rural and Farming Community
- Demand on Collection Services
- Gap Analysis

Given the sparsely populated character of much of the Hurunui District, there are a number of recommendations that acknowledge the large distances and large volumes of material that are generated through rural activities.

Public Health Issues

The main issues for public health with regard to waste management and waste minimisation are:

- Identification of the various types of wastes and collection/disposal methods
- Satisfactory collection and disposal of waste so that public health risks are controlled and mitigated
- Addressing the particular issues of hazardous waste, including medical wastes, asbestos waste and electronic waste (e-waste)
- Consideration of future population demands and consumption rates on the current system and mitigation strategies in place
- Regional co-ordination of waste management and waste minimisation
- Ensuring that a waste disposal service is available to all residents/ratepayers
- Legislative and cost barriers that inhibit mitigation of public health issues related to waste
- The health impacts of climate change and the contribution that effective waste management and waste minimisation can make to reduction in greenhouse gas emissions

1. Waste Data Collection and Analysis

It is encouraging to see from the waste analysis section that many hazardous materials are currently being diverted from landfill. The report highlights some gaps in data knowledge particularly for qualities of waste, recyclable and hazardous materials. The Medical Officer of Health recommends that Offensive Trade Licence requirements, could be used to provide further information to improve the waste data picture.

Council has the opportunity to review its Solid Waste Bylaw to make provision for better data management and waste monitoring.

- *Review the Council's Solid Waste Bylaw and Offensive Trades License requirements.*

2. Recycling Services and Diverted Materials

It is encouraging to see such a wide range of recycling services and diversion streams prevent these materials from going to landfill including but not limited to engine oil containers, paint containers, car seats, car batteries e-waste and agrichemical containers.

3. Public Space Recycling Bins

It is good to see public space recycling bins in Hanmer Springs, Waiau, Culverden, Cheviot, Amberley, Gore Bay and Waikari. This is a key component of facilitating recycling in a sparsely populated district to reduce the likelihood of fly-tipping of recyclable material. Council is commended for having this in place.

4. Education, Events and Community Engagement

Council is commended for having a thorough education programme with practical services to help improve waste management and minimisation. It is noted from the Waste Assessment that recycling bins are available for hire for events to encourage waste diversion. It is great to see proactive services like this that help integrate this into event planning and management.

It is also good to see education programmes and engagement with schools and preschools to help increasing awareness of waste management and minimisation. It is noted that Council plan to engage with businesses to work around waste management and minimisation within workplace settings; The Medical Officer of Health supports this plan to engage with businesses.

5. Rural and Farming Community

It is pleasing to see that Council have good engagement with the rural and farming community with good uptake of the AgRecovery programme and in addition the hazardous waste drop off events funded by the waste levy were held in 2018 in various townships across the district. Council are commended for initiating this proactive measure and continuing to make waste reduction and recycling accessible to the Hurunui community.

6. Demand on Collection Services

The Medical Officer of Health acknowledges that planning for future growth in waste demand can be difficult to predict and there are multifaceted variables that contribute to overall waste disposal. That being said some specific comments that are applicable are servicing periurban properties that may generate more waste than the average residential property but not as much as large more rural properties. Initiatives that have been implemented with success include mobile, multiple waste stream trucks to service these communities to allow for on-site collection of many waste products.

7. Gap Analysis

It is pleasing to see that Council have identified various areas where there is room for improvement. As per comments regarding 'Waste Data Collection Analysis' The Medical Officer of Health recommends the implementation of a Solid Waste Bylaw to support the practical implementation of the Waste Management Plan and Waste Assessment.

It is also noted that there are some additional waste streams that may become a problem in the future including end-of-life tyres. The Medical Officer of Health has made submission to the Ministry for the Environment in support of their development of a National Environmental Standard for end-of-life tyres. This would likely support Hurunui District Council to be able to integrate with Environment Canterbury to better manage this and the Medical Officer of Health acknowledges that this issue is present in many districts.

Gap	Gap Analysis
No Solid Waste Bylaw.	The implications of this could be the Council not having control over waste management operations and the data recorded; and an inability to prosecute illegal dumping
Potential to be leaders	Council has received significant local and national praise for its recycling quality and low levels of contamination
Meeting future waste disposal needs	Although not a concern during the life of the upcoming WMMP, in the future, council will need to consider options for waste disposal before the life of Kate Valley expires
Organic waste diversion	Presently organic waste is managed on individual properties, as there is no commercial operator to manage this waste. For organic waste to be diverted, a partnership with a private operator is needed
Changing recycling markets	The ability to offer services is determined by national and international markets and has financial implications for recovering certain materials. Council has limited capacity to stockpile recycling
Changing community expectations	There is an increasing demand for additional recycling and waste diversion schemes including from those relocated from areas where increased services are provided due to a larger rating base
Gaps in data collection	Council has good levels of data for waste and recycling from its contractors i.e. material type and tonnage are provided monthly. There is little information regarding amounts and waste types disposed of via unregulated sites e.g. farm pits

Dr Ramon Pink
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Community and Public Health