Waste Management and Minimisation Plan 2019

Selwyn DISTRICT COUNCIL

Quality Assurance & Plan Status

1. Plan Version and Control		
Date	**Version Number**	**Checked by**
2011	Version 1.0	Dave Hock
2019	Version 2.0	Andrew Boyd

2. Overall Responsibility for the Co-ordination of all Matters in this Plan		
Date	**Name**	**Designation**
2019	Andrew Boyd	Solid Waste Manager

3. Prepared By		
Date	**Name**	**Designation**
2019	Andrew Boyd	Solid Waste Manager
2019	Jess Hawker	Solid Waste Support Officer

4. Input From			
Date	**Name**	**Designation**	**Input**
2019	Murray Washington	Asset Manager	Review

5. Council Adoption	
Date	**Record of Decision:**
August 2019	Adopted by Council

6. Public Consultation	
Date	**Form Of:**
May 2019	Selwyn District Council website Your Say
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7. Plan Update and Review	
Date	**Record Of:**
2019	Full rewrite following completion of the Waste Assessment 2017 in accordance with the Waste Minimisation Act 2008

Selwyn District Council
Waste Management and Minimisation Plan

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Foreword

As the number of people living in our district continues to grow, we're experiencing increasing volumes of all types of waste.

This trend is likely to continue as Selwyn grows at double the national rate – which means we're sending an increasing amount of waste to landfill. It's the Selwyn District Council's responsibility to manage our waste and to help protect the natural environment, our home.

Clear improvements have been made in the diversion of kerbside recyclables and organics from landfill. We've increased diversion rates, mostly because of the Council supplying 240 litre recycling wheelie bins to households, as well as the strong uptake of the organics bin service.

The community can be proud of its efforts in managing waste, however we can all continue to improve.

This Waste Management and Minimisation Plan will build on this good work, by setting a clear way forward in managing and minimising solid waste in our district for the next six years.

Key actions within our waste management plan will be to further address commercial and construction waste, promote greater uptake of the kerbside organics service in areas where it is available, increase education in waste reduction and improve access to facilities. We will embrace emerging alternative waste technologies and initiatives, promote ownership of the waste that we all generate, and seek more community engagement on waste management decisions.

We will work with other Councils, Central Government, local rūnanga, businesses and industry to put our plan into practice. This will ensure we're in the best position to serve the needs of the community, provide a sustainable service and keep costs down.

We hope that you will continue to work with us to protect our district's future.

Mō tātou, ā, mō kā uri ā muri ake nei –
For us and our children after us.

Sam Broughton
Mayor of Selwyn District

Executive Summary

The Waste Management and Minimisation Plan is Selwyn District Council's (the Council) proposed strategy for the management of Solid Waste in Selwyn for the next six years.

This WMMP covers all activities and facilities relating to solid waste in the district, including diverted material and hazardous waste. The Council will not necessarily have direct involvement with all activities and facilities, however the Waste Minimisation Act gives Council the responsibility to consider those other than its own.

The Council adopts the New Zealand Waste Strategy (NZWS) 2010 goals for the purposes of this Waste Management and Minimisation Plan:

- Reducing the harmful effects of waste; and
- Improving the efficiency of resource use.

This WMMP will provide the Council with a blueprint for achieving its waste management and minimisation aims in a structured way. It also provides information on how the Council intends to fund the activities of the WMMP over the next six years.

In summary, the key issues (and opportunities) identified are:

- Significant growth in population, and the associated increase in volumes of all waste streams which are projected to continue for the foreseeable future.
- Growing volumes of commercial and construction waste in the district.
- Significant quantities of divertible material, particularly organics still within many household residual waste bins.
- Improving access to services for those properties that are further away from Pines RRP and/or not on collection routes.
- Improving the district's performance in the upper tiers of the waste hierarchy.
- Legislative changes in China affecting the ability to export recyclables, forcing a rethink about recycle processing on a global scale.

Specific actions have been identified in the Action Plan (Part B) to help address these issues and challenges. The 2018-2028 Long-Term Plan states:

"The management of solid waste is a 'significant activity' under the terms of the Local Government Act 2002. The Council has a statutory obligation to promote effective and efficient waste management and to achieve this it takes a leadership role in managing waste activities. By managing this activity, the Council is in the best position to serve the needs of the community, provide a sustainable service and keep costs down."

In summary the key actions proposed in the WMMP are to:

- Reduce waste by focusing on the upper tiers of the Waste Hierarchy.
- Promote the kerbside organics service in areas where it is available.
- Reduce contamination levels in kerbside recycling.
- Establish a reuse shop and salvage yard.
- Increase education around waste reduction and develop a more comprehensive strategy for education, including the creation of an education facility at the Recovery Park.
- Trial farm waste days – improving waste and recycling options for farmers
- Embrace emerging alternative waste technologies and initiatives.
- Facilitate increased community engagement and ownership of waste generated.
- Direct some focus on influencing generation of material that becomes waste.
- Improve access to existing services.
- Assess closed landfills and work to ensure compliance with consent conditions;
- Work with other Councils, Central Government and Industry to address New Zealand recycling issues.
- Review the Waste Management and Minimisation Bylaw to ensure it is still effective and appropriate.

Considerable opportunities still exist to further minimise waste in the district over the coming years.

Part A – Strategy

Part A - Strategy

1 Introduction

This section sets out the purpose of this Waste Management and Minimisation Plan (WMMP), shows an overview of the district, describes the solid waste service, and provides background to the WMMP.

1.1 Purpose of the Plan

In 2008, the New Zealand government passed the Waste Minimisation Act (WMA). Under the WMA, every Territorial Authority (TA) must adopt a Waste Management and Minimisation Plan (WMMP)

In accordance with Section 50 of the WMA, a TA must complete a Waste Assessment (WA) and must review its operative WMMP every six years. As a result of the assessment and the review, this document presents Selwyn District Council's (The Council's) proposed new WMMP.

This WMMP will provide the Council with a blueprint for achieving its waste management and minimisation aims in a structured way. The WMMP will provide direction for the developments of the Long Term Plan (LTP).

1.2 Scope of the Plan

This plan follows the scope set out in the WMA, Section 43, which states that:

The WMMP must provide for the following:

- *(a) objectives and policies for achieving effective and efficient waste management and minimisation within the territorial authority's district:*
- *(b) methods for achieving effective and efficient waste management and minimisation within the territorial authority's district, including –*
  - *i. collection, recovery, recycling, treatment, and disposal services for the district to meet its current and future waste management and minimisation needs (whether provided by the territorial authority or otherwise); and*
  - *ii. any waste management and minimisation facilities provided, or to be provided, by the territorial authority; and*
  - *iii. any waste management and minimisation activities, including educational or public awareness activities, provided, or to be provided, by the territorial authority:*
- *(c) how implementing the plan is to be funded:*
- *(d) if the territorial authority wishes to make grants or advances of money in accordance with section 47, the framework for doing so.*

The plan covers all activities and facilities relating to solid waste in the district, including diverted material and hazardous waste. Council will not necessarily have direct involvement with all activities and facilities however the Waste Minimisation Act gives Council the responsibility to consider those other than its own.

This plan excludes the management of biosolids and liquid wastes as these are addressed in the Council's 5 Waters Activity Management Plan 2018, Volume 3.

The terms used in this WMMP are those given in the WMA. A glossary is provided in Appendix A.

The waste assessment as prescribed in the WMA (Section 51) plays a key role in determining the content of a WMMP. A TA must have regards to the waste assessment in the preparation of the WMMP (WMA, Section 44). The following sections provide a brief overview of the current waste situation in the district, with the existing services provided for waste management and minimisation, information regarding waste and diverted material quantities and the forecast future demand on the services.

More details of the current waste situation including existing services and infrastructure, statistics, quantities, composition, sources and destinations of waste as well as an overview of non-Council provided services in the district can be found in the 2017 Waste Assessment (Appendix B).

1.3 Current Status of Plan

This WMMP is currently in draft.

1.4 Timeframe for Review of Plan

Every 6 years from date of adoption. This means the next review will fall in 2025.

1.5 Summary of Previous Plan Review

After completing a thorough Waste Assessment in 2017, in accordance with the WMA (2008), the 2011 WMMP was reviewed with regard to:

- The vision, goals, objectives, targets and preferred options of the recently completed 2017 Waste Assessment
- The Council's Significance and Engagement Policy 2014
- The Ministry for the Environment's 2015 guide: *Waste Assessments and Waste Management and Minimisation Planning – a guide for territorial authorities.*

The 2011 WMMP was reviewed to determine:

- if it is still fit for purpose and should be retained as is, or
- requires amendment, or
- requires revoking and replacement with a newly written WMMP.

It was concluded that:

- The Canterbury Earthquakes of 2010/11 have accelerated growth in Selwyn District, bringing about increased volumes and significant growth in different waste streams (e.g. construction and commercial)
- The 2011 WMMP was the first WMMP under the WMA (2008) legislation – a number of items could be updated to reflect changes locally, nationally and internationally
- Council is required to consult on the new WMMP regardless of whether an entirely new WMMP is written or not. It is not logical to consult on a document written in 2011.

During the Council Meeting on 8 August 2018 Council endorsed the writing of a new WMMP, consulting and adopting that, and revoking the existing WMMP.

2 The Waste Situation

The below sections outline the waste situation in Selwyn District and are a summary from the data within the Waste Assessment.

More detailed information can be found in within the 2017 Waste Assessment in Appendix B.

2.1 Summary of Current Volumes

The Council provides the majority of collection services to households in the District, which enables it to collate reliable data about quantities for household waste and diverted material streams. Residual waste and organics data is obtained from measurements at the Pines Resource Recovery Park weighbridges. The quantities of recyclables from kerbside recycling collection are provided monthly to the Council by EcoCentral Ltd who are responsible for sorting and sale of the material. Cleanfill data is captured within our weighbridge software package. It is understood that the bulk of waste from businesses is disposed of at Pines RRP, however a reasonable proportion of business waste and recyclables is thought to be disposed of at facilities in Christchurch. The District's proximity to Christchurch means that some public waste will be disposed of there instead of at Pines RRP.

Table 2A-1 shows the total quantities of residual waste disposed to landfill and quantities of diverted material. As shown in the table, the Council has managed to increase the proportion of the total waste stream diverted from landfill from 24% in 2006/07 to 39% in 2015/16.

Table 2A-1: Total Quantities of Residual Waste and Diverted Material

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Total to landfill (tonnes)	12,506	14,240	17,169	18,453	19,203	18,646
Total diverted material (tonnes)	7,677	9,174	9,602	11,720	12,892	13,633
% of waste stream diverted from landfill	**38%**	**39%**	**36%**	**39%**	**40%**	**42%**

The waste quantities per capita are calculated as an average over the whole District for the purposes of the current LTP performance measure. An additional performance measure for 'kerbside waste per capita' only has been added to the 2018-2028 LTP to provide an alternative measure of performance.

The significant increase in quantities per capita from 2013/14 to 2014/15 relates to the post-earthquake housing and commercial construction in the District. Construction waste began being recorded as a separate weighbridge category from March 2015. In the 2015/16 year 2,946 tonnes of construction waste was received at Pines RRP. Note that the kerbside waste per capita in Figure 2A-1 below shows a small decrease in the same period.

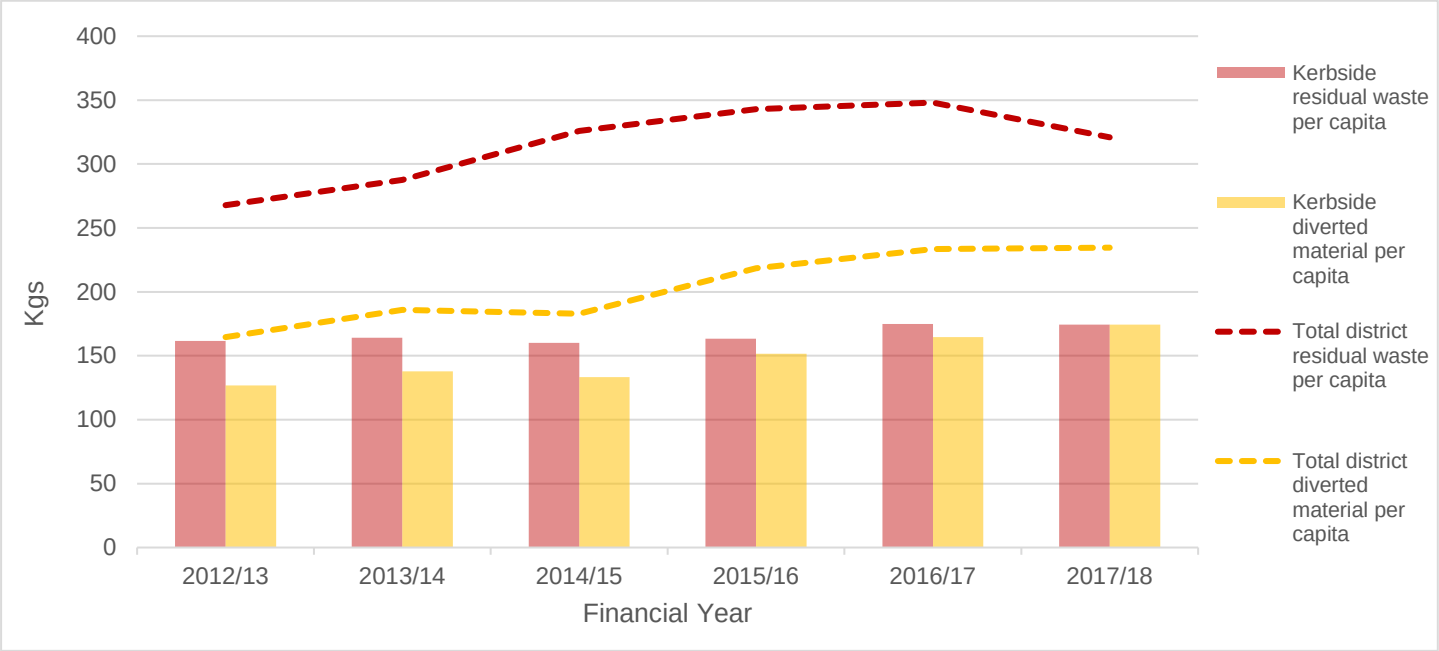
Table 2A-2 shows the kerbside residual waste volumes per capita have remained steady. This demonstrates that the increase in total waste per capita is skewed by commercial and construction waste, as opposed to an increase in the amount of household residual waste generated by residents. In addition the increase in diverted material between 2014/15 and 2015/16 is believed to be related to encouragement by Council customer service staff towards smaller residual waste bins and strong uptake of the organic bin option, as well as pricing disincentives for the larger residual waste bin.

Table 2A-2: Kerbside Quantities per Capita

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Residual Waste	162 kg	164 kg	160 kg	163 kg	175 kg	174 kg
Diverted Material	127 kg	138 kg	133 kg	152 kg	165 kg	174 kg
% of Material Diverted	44%	46%	45%	48%	48%	50%
Estimated Resident Population	46,700	49,500	52,700	53,830	55,172	58,117

Separating kerbside waste and diverted material quantities from total District waste quantities shows a clear improvement in diversion rates - from 26% in 2006/07 to 50% in 2017/18. This increase is mostly a result the roll out of 240 litre recycling wheelie bins to households, and a move away from crates, and the strong uptake of the organics bin service.

Figure 2A-1: Per Capita Comparison of Total Waste Vs Kerbside Waste Quantities



2.2 Overview of Existing Services and Infrastructure

The Council provides the majority of waste and diverted material services and facilities in the District.

Collection Services

Four main streams of materials form the bulk of waste collected within the District:

- Council Kerbside collection of residual waste from households and businesses.
- Council Kerbside collection of diverted material (recycling and organics) from households and businesses.
- Private provider collection of residual waste from households and businesses.
- Private provider collection of recycling from households and businesses.

Disposal and Diversion Infrastructure

Six main avenues exist for the disposal or diversion of waste materials from the District:

- Council's Pines Resource Recovery Park near Rolleston.
- Christchurch based transfer stations or recovery parks (a mixture of Christchurch City Council and private company transfer stations).
- Cleanfills (Council or privately owned).
- Recycling processing plants: EcoCentral Ltd in Christchurch for Council kerbside recyclables and private company Material Recovery Facilities (for commercial recycling collections such as cardboard from businesses).
- Organics processing – Council's plant at Pines Resource Recovery Park and other private compost operations.
- Alternative disposal such as farm waste pits or burning.

Other Items and Council Supported Initiatives

Council supports a number of initiatives aimed at waste minimisation. These include education related initiatives as well as support for activities such as product stewardship and waste minimisation at events. Some examples include Council's involvement with and funding of:

- The Enviroschools programme in the District.
- Waste minimisation classroom sessions through, until October 2018, the Wastebusters Canterbury Trust (now ceased).
- The Responsible Business Awards via the Lincoln Envirotown Trust.
- Subsidised drop-off of recyclables at the Pines Resource Recovery Park.
- Waste Free Parenting and Food Lovers Masterclass Workshops.
- Funding and equipment for waste minimisation at events.
- Promotion of Keep New Zealand Beautiful Clean-up Week in the District.
- Regional joint staff initiatives.
- Council regularly communicate waste related messages to residents through a variety of media (newspapers, flyers, direct mail and social media).
- Solid waste staff present at community group meetings and schools regularly.

2.3 Summary of District Specific Issues

Table 2A-3 below summarises the District specific issues as identified in the Waste Assessment 2017 and potential mechanisms to address them.

Table 2A-3: Potential Mechanisms to Address Emerging Issues

	Issues / Opportunities	Mechanisms to Address
Kerbside Collection	Rapidly expanding population, keeping up with servicing households.	Investigate and embrace new or emerging technologies associated with collection services Use regulatory tools such as the Waste Bylaw to for example alter refuse collection start times.
	Household residual waste bins containing significant volumes of recyclable or compostable material.	Pursue methods to increase the diversion of recyclable or recoverable (organic) materials from kerbside residual waste.
	A significant opportunity exists to improve organic waste diversion from households.	Confirm and proceed with preferred organics processing method, then: Promote the kerbside organic collection and home composting and emphasise the financial benefits of waste diversion; Specifically market to those households with access to the organic service, but who have not taken up the option.
	Disposal of non-acceptable waste in the refuse collection. Contamination in the recycling and organics bins.	Education via advertisements, bin tags, and direct letters to residents with contaminated bins. Bylaw that addresses acceptance criteria.
	Refuse bags and wheelie bins that are put out too late for kerbside collection may not be picked up. Missed or packed bins and subsequent potential for 'argument' with residents / Council / Contractor. The use of unofficial bags/wheelie bins.	Consideration of RFID tagging bins to improve database accuracy, therefore claim accuracy, and also address any issues associated with unofficial bins. Bylaw that addresses collection times and approved waste containers.
	Providing household waste services to properties not on current kerbside collection routes.	Proactively reviewing properties not currently receiving kerbside service – is extension feasible? Increased number and distribution of kerbside drop-off points. Provision of recycling and refuse drop-off facilities to accept material from houses not on kerbside routes.
	Inadequate spacing between wheelie bins at kerbside does not allow the collection truck's lifting arm to empty bin. Overweight bins.	Targeted leaflets for drivers to put in letter boxes (e.g. bin in road gutter, not on kerbside), bin tags, and direct letters to residents with heavy bins. Bylaw that addresses kerbside bin spacing.
	Sufficient kerbside space is required to accommodate wheelie bins and bags to be left at the kerbside for collection. Adequate provision is required for collection trucks to turn. Collection trucks do not collect waste in private rights-of-way. Building Act / code limitations – apply only to waste under certain circumstances.	Good communication currently exists between the Solid Waste Manager and the Development Engineer. This ensures that consideration is given to kerbside collection vehicles during the consent process – particularly in subdivisions where stages mean that some streets end abruptly. The following has been proposed for District Plan Review considerations: requirement for adequate allowance in road and sub divisional design for kerbside waste collections and on-property storage developments; and provisions for solid waste storage at medium and high density residential developments.
	Risk of injury attributed to manually handling refuse bags.	Monitor contractor's accident records and safe work procedures. Look to reduce bag usage by pricing mechanisms – positive with 80 litre residual waste bin pricing, negative with bag pricing (propose increase in bag prices in 2019/20). Extend collection route wherever economical practical.

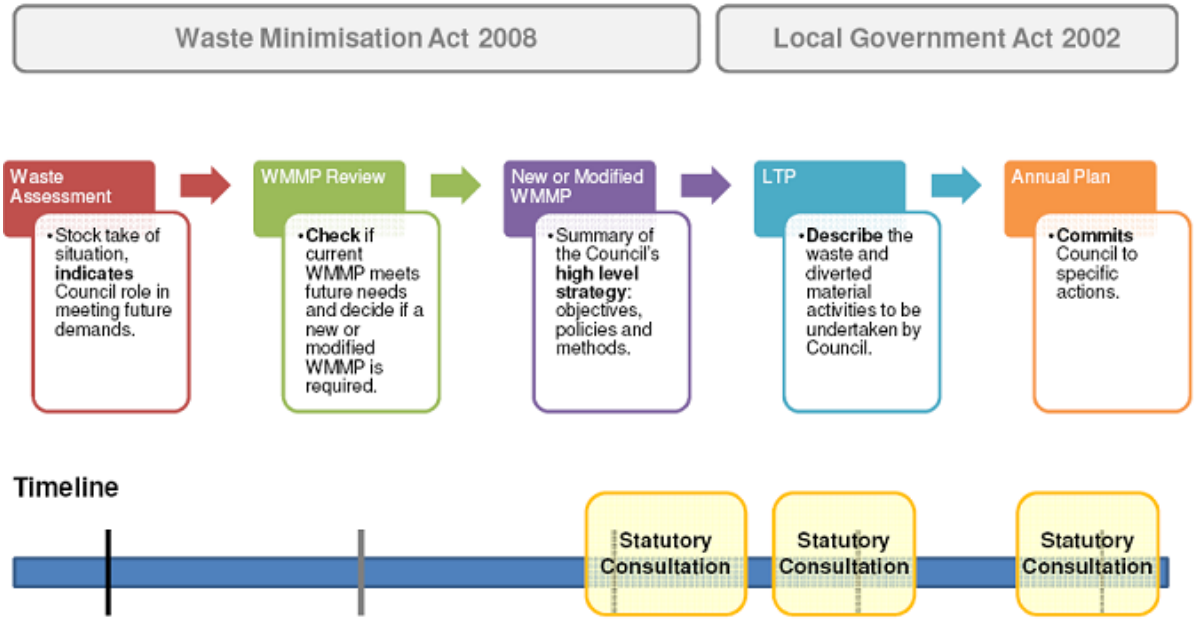
	Issues / Opportunities	Mechanisms to Address
Kerbside Collection	End of Contract ownership of wheelie bins and the creation of a level playing field for the next tender.	Negotiate with contractor prior to EOC and purchase bins at depreciated value, Or make new bins a requirement of the next tender so everyone is on a level playing field. This may also address the potential 80 litre bin issue if we were to move to a fortnightly service and require larger bins.
	Ban on importing post-consumer recyclables to China.	Increase price of recycling bin to cover increasing processing costs. Work collaboratively with other Councils and industry associations to find solutions. Education around contamination issues to ensure clean recycling and better quality products being disposed of in the recycling.
Public Litter Bins	Disjointed public litter bin management.	Review management of litter bins and fly tipping within Council.
	Provision of additional public recycling bins, but limiting contamination levels.	Audit existing residual waste litter bins to identify further diversion opportunities. Monitor public place recycling in other Districts, learn from their experiences. Add public recycling bins in carefully selected locations so as to not jeopardise entire recycling load.
Pines Resource Recovery Park	Possible development of land near the Pines RRP, and subsequent reverse sensitivity issues impacting on Pines RRP operation.	Monitor planning and consenting applications that may adversely affect the operation of the RRP and make submissions as appropriate. Strictly manage processes onsite at Pines RRP to reduce likelihood of activities causing nuisance beyond boundary.
	Increase in disposal costs resulting from emissions related legislation and Waste levy increases.	Continue to monitor potential changes. Make budget allowances for likely future increases in these charges as indications suggest upcoming change.
	Improving knowledge of composition data; and cross boundary material / waste flows to allow more informed management.	Bylaw provisions to license waste operators and require licensees to report upon quantity composition and destination of waste collected and transported. Improve Council knowledge of commercial, construction and public waste composition received at Pines RRP by conducting a SWAP analysis.
	Health and Safety issues associated windblown debris at Pines RRP.	Currently investigating a very large wind diffusing fence to reduce prevailing strong easterly. Poplars have been planted around entire operational area. When these trees have matured, they will reduce wind speed from all directions.
	Compactor throughput and capacity.	Increase the residual waste compactor capacity throughput (increase operational hours or upgrade compactor at Pines RRP) when most appropriate.
	Disposal facilities (non-kerbside) for those properties that are more significant distances from Pines RRP.	Provide ‘Pop-up’ Resource Recovery Park / Transfer Station facility periodically to Ellesmere and Malvern communities. Consider increasing the opening and staff operational hours at the Pines RRP.
	Address apparent lack of awareness of Pines RRP facility existence.	Advertising the facility through a range of mechanisms / media.
	Burning and burying of farm waste in the District.	Investigate providing a structure and utilities for a farm waste / recycling receiving and processing area. Tender for an organisation to run the facility and provide a user pays collection service.

	Issues / Opportunities	Mechanisms to Address
Pines Resource Recovery Park	Increase diversion of waste by tackling upper tiers of waste hierarchy.	Investigate the feasibility of a reuse shop and salvage yard, implement if appropriate. Investigate the feasibility of an Environmental Education Centre, implement if appropriate. Investigate the feasibility of microenterprise units on site to repurpose and upcycle waste, implement if appropriate. Investigate the feasibility of a waste sorting line, implement if appropriate. Investigate the feasibility of a landscape supplies yard to assist with sale of compost generated and trailer hire to improve convenience, implement if appropriate. Continue to subsidise recovery of some material streams to encourage uptake of service – for example E-waste and Car Seat Recycling. Continue to lend support to and encourage national initiatives, including Product Stewardship schemes (for example AgRecovery). Work with 3rd parties to facilitate pyrolysis or alternative processing techniques to reduce waste to landfill.
	Construction waste is a significant and increasing component of the waste stream.	Continue to record construction related waste separately at weighbridge. Investigate feasibility of sorting construction waste at Pines RRP, implement if appropriate.
	Protecting our environment from hazardous wastes.	Investigate hazardous waste disposal education. Continue to accept hazardous waste at Pines RRP. Continue to support local sections of national haz waste collection programs.
	Alternative residual waste processing options such as Gasification or Waste to Energy.	Work collaboratively with other Councils. Continue to keep an open mind to considering alternative technologies.
Cleanfills & Closed Landfills	Potential Financial or Environmental liability associated with old closed landfill sites (those known and unknown).	Investigate current status, existence of other unknown landfills, liability and potential remediation costs.
	Requests to allow access to cleanfill sites when unattended.	Maintain appropriate controls around access to cleanfill disposal sites.
	Ensuring cleanfill material is uncontaminated (by rubbish, vegetation, and by potentially non visual contamination such as heavy metals, asbestos etc.).	Continue to manage incoming cleanfill and restricted access to pits. Investigate methods for better documentation of loads (where from etc.). Investigate practical methods for determining presence of non-visual contamination.
Council Supported Initiatives	Increase diversion of waste by considering new initiatives or improving / expanding on existing relationships.	Continue to support Education related programs such as Enviroschools, Waste Busters, Lincoln Envirotown Responsible Business Assessments and other activities (e.g. Waste Free Parenting classes) or organisations that fit within the Education Strategy. Develop a more comprehensive strategy for education.
	Non-recyclable or low value packaging.	Use Council resources and influence to directly target manufacturers within the district and suppliers to Council to address products or services that generate waste. Participate in and support regional and national initiatives to tackle waste at source.

3 Policies, Plans and Regulation

Local, regional and national plans and policies affect the Council's provision of waste and diverted material services. Primarily, they are requirements under the WMA and the Local Government Act 2002. Figure 3A-1 illustrates the statutory planning requirements that the Council is required to follow.

Figure 3A-1: Planning Sequence



3.1 Summary of Guiding Policies, Plans and Legislation that Affect the WMMP

More detailed information on items in this section can be found in the Waste Assessment, Appendix B.

Waste Management and Minimisation legislation is provided primarily by the following three Acts:

- The Waste Minimisation Act 2008
- The Local Government Act 2002
- The Resource Management Act 1991

Other legislation, strategies or reports with relevance to Waste Management activities include:

- The Health Act 1956
- The Litter Act 1979
- The Climate Change Response Act 2002
- The Health and Safety at Work Act 2015 (shortly to incorporate Hazardous Substances and New Organisms Act 1996)
- The Freedom Camping Act 2011
- The New Zealand Waste Strategy 2010

3.2 Statutory Requirements

Section 44 of the WMA states:

In preparing, amending, or revoking a waste management and minimisation plan, a territorial authority must-

(a) consider the following methods of waste management and minimisation (which are listed in descending order of importance):
  (i). reduction;
  (ii). reuse;
  (iii). recycling;
  (iv). recovery;
  (v). treatment;
  (vi). disposal; and

(b) ensure that the collection, transport, and disposal of waste does not, or is not likely to, cause a nuisance; and

(c) have regard to the New Zealand Waste Strategy, or any government policy on waste management and minimisation that replaces the strategy; and

(d) have regards to the most recent assessment undertaken by the territorial authority under section 51; and

(e) use the special consultative procedure set out in section 83 of the Local Government Act 2002 and, in doing so, the most recent assessment undertaken by the territorial authority under section 51 must be notified with the statement of proposal.

3.3 Other Relevant Documents

The Council and Environment Canterbury have a number of strategic documents that are integral to waste management, including:

- Canterbury Hazardous Waste Management Strategy 2006
- Canterbury Land and Water Regional Plan
- Canterbury Regional Policy Statement
- Proposed Canterbury Air Regional Plan
- Selwyn District Council District Plan
- Selwyn District Council Long Term Plan 2018-28
- Selwyn District Council Solid Waste Activity Management Plan 2018
- Selwyn District Council Waste Minimisation Bylaw 2012

4 Vision, Goals, Objectives and Targets

4.1 Vision

Selwyn District embraces the philosophy behind the Waste Hierarchy in every way that is economically and practically achievable, in order to maintain or improve the condition of air, land, water and the general environment for current and future generations.

4.2 Goals, Objectives and Targets

Goals

Selwyn District adopts the New Zealand Waste Strategy (NZWS) 2010 goals for the purposes of this Waste Management and Minimisation Plan:

- Reducing the harmful effects of waste; and
- Improving the efficiency of resource use

Objectives

The following objectives have been established in order to achieve our goals:

- Achieve agreed levels of service for customers.
- Ensure the operational, financial, social, and environmental sustainability of the service.
- Reduce Council's exposure to risk, should there be a failure of the assets.
- Comply with all legislation.
- Safeguard human, animal and environmental health by promoting and encouraging safe and hygienic storage, handling, collection and disposal for all waste streams.
- Provide a cost effective, convenient, and comprehensive range of services to the community.
- Promote, engage in and fund activities aligned with the upper tiers of the Waste Hierarchy in order to reduce waste generation and waste volumes sent to landfill. Encourage and facilitate the development and uptake of services for rural areas in order to reduce waste to farm pits, or the burning of waste.
- Arrange local initiatives, or support and participate in community, regional, national, or industry led initiatives that reduce the harmful effects of waste, or minimise waste.
- Assist with enforcement action associated with illegal waste activity.
- To embrace changes in technology that improves any meaningful aspect of waste related activity.
- Improve Council and Community's level of knowledge and understanding of waste streams in the district, and their associated key issues. Provide guidance for waste related issues.
- Facilitate increased community engagement and ownership of waste generated. Foster innovation around the way that waste can be better managed. Leverage waste recovery activities to achieve positive social and environmental outcomes.

Targets

- Reduce the use of residual waste bags by 10% per annum through the promotion of wheelie bin alternatives, pricing incentives / disincentives and benefits of wheelie bins over bags.
- Actively and regularly promote the appropriate disposal of hazardous wastes to all sectors of community
- 2% decrease on kerbside residual waste per capita by 2021 over the 2019/20 year.
- No increase to the total district residual waste per capita by 2021 over the 2019/20 year.
- Divert 15% of annual construction waste material received at Pines RRP from landfill by 2021.
- Develop a comprehensive approach and strategy to waste education aligned with the education plans within the Reconnect Project.
- Develop a more thorough understanding of farm waste in the District and investigate options for and possible partnerships or methods to facilitate the development of services to farming areas so as to more appropriately dispose of waste by 2021.
- Operate at least twice per annum community pop up Resource Recovery Parks for Ellesmere and Malvern areas – with an increased range of materials accepted.

- Install recycling drop-off facilities at two locations by 2021.
- Provide a reuse shop option at Pines RRP by 2022.
- Reduce average annual kerbside recycling contamination levels to below 2% from July 2020.

4.3 Council's Intended Role

As stated in the Long Term Plan, "*The management of solid waste is a 'significant activity' under the terms of the Local Government Act 2002. The Council has a statutory obligation to promote effective and efficient waste management and to achieve this it takes a leadership role in managing waste activities. By managing the activity, the Council is in the best position to serve the needs of the community, provide a sustainable service and keep costs down.*"

Under the Health Act, the Council has a responsibility to provide for collection and disposal of refuse and other offensive matter.

By maintaining a proactive leadership role, the Council protects the community's interests and fulfils Council's legal responsibilities.

The role of the Council includes:

- **Governance:**
  Mechanisms for how the Council implements the preferred options;
- **Regulator:**
  The Council using a legal mechanism to facilitate or promote waste management and waste minimisation e.g. bylaws and District Plan rules;
- **Community Leader:**
  The Council providing information and promoting awareness and involvement in waste management and waste minimisation activities;
- **Advocate:**
  The Council promoting actions to address waste reduction and waste management issues which are outside the Council's direct control e.g. lobby Environment Canterbury and the Government for appropriate legislation, standards and guidelines; and
- **Financier:**
  The Council investing in initiatives which facilitate waste management and minimisation activities e.g. grants and subsidies, developing a waste minimisation industry cluster.

4.4 Protecting Public Health

The Council, together with providers from the private sector, currently supply a range of waste and diverted material services to the District that ensure that public health is adequately protected. The existing Council-provided solid waste services will continue.

The Health Act 1956 requires the Council to ensure solid waste collection is available for residents and that the closed landfills are managed in a way that reduces any potential environmental impacts. The Council's LTP provides for the provision of waste management and minimisation services and these contribute to a healthy environment.

The methodology used to assess future options has been based on ensuring minimal harmful effect to public health and promoting effective waste management and minimisation.

The preferred option of phasing out refuse bag collections will allow further progress in this area. Also the intended expansion and extension of services to more remote areas (such as community waste days, or collection route extensions and increased drop-off points) will reduce burning and burying of waste.

5 Proposed Methods for Achieving Effective and Efficient Waste Management and Minimisation

5.1 Summary of Key Waste and Diverted Material Streams and how they are currently managed

Key waste and diverted material streams that Council can directly influence are:

Table 5A-1: Key Issues that can be Directly Influenced by Council

Waste or diverted material stream	Managed by
Kerbside residual waste volumes	Council staff via contractor
Kerbside organic waste volumes and diversion	
Kerbside recycling volumes and contamination rates	
Construction waste diversion	Potential future options
Reusable item separation for resale	
Education information and guides on the public website	Council staff
Public talks	
Print and social media advertising on waste and contamination issues	
Labels on kerbside bins and on public litter bins	
Pricing structure on residual waste disposal (kerbside residual waste and Pines RRP tonnage fees) to encourage diversion	
Contamination feedback system	
Safe and appropriate disposal of hazardous waste	

5.2 Options for the Future

Growth expected for the District over the next twenty years will increase the demand for waste management and minimisation services. This demand can be met by increasing capacity within existing services and infrastructure or by adding new services and infrastructure.

All options have been considered against a range of criteria including the positive and negative effects with regards to achieving the NZWS 2010 goals:

Goal 1: Reducing the harmful effects of waste; and
Goal 2: Improving the efficiency of resource use.

All options were assessed in the 2017 Waste Assessment and overall preferred options have been summarised in Table 5A-2 below.

Table 5A-2: Preferred Options for the Future

Service	Options to Meet the Forecast Demand	Assessment Criteria						Overall Assessment: 'Preferred' Option to Investigate Further?
		Reducing Harmful Effect of Waste (NZWS Goal 1)	Improving Efficiency of Resource Use (NZWS Goal 2)	Affordability	Accessibility / Convenience	Ease of Implementation	Degree of Future Impact on Waste to Landfill	
Kerbside Collection Services	Status quo: Continue extending kerbside collection services to cater for increasing population	✓ Removes residual waste for safe and appropriate disposal. ✓ Wheelie bins provide a convenient, comparatively clean and safe method of collecting kerbside waste. ✓ Increasing the quantities of diverted material reduces quantities of waste to landfill. ✓ Refuse bags provide a way of servicing off-route properties that otherwise may burn or bury waste. ✗ The use of refuse bags and recycling crates has health and safety, animal strike and windblown litter issues.	✓ The user pays charging system and the waste bin size options encourage waste minimisation. ✓ Increases quantities of diverted materials for recycling. ✗ The convenience of the larger refuse wheelie bins may be a disincentive to waste minimisation for some. ✗ Staying with the status quo does not actually 'improve efficiency of resource use'.	Moderate ✗ Landfill costs are projected to increase. As this occurs, more recycling options become viable. Limiting ourselves to the status quo closes off those future opportunities.	High ✓ Kerbside bins are the highest rated service in the resident's survey. This gives Council confidence that the service is convenient and accessible for the bulk of the District. ✗ Does not address those off-route properties not receiving a kerbside service.	High	Low	Yes Logical to continue with this, but to do so in conjunction with other options presented.
	Proactively reviewing properties not currently receiving kerbside service –is extension feasible?	✓ Wheelie bins provide a convenient, comparatively clean and safe method of collecting kerbside waste. ✓ Increasing the quantities of diverted material reduces quantities of waste to landfill. ✓ Reduces the use of farm pits or burning of waste. ✓ Reduces the use of waste bags, reducing the likelihood of manual handling injuries for public and contractor, as well as reduces vermin issues associated with animals and torn bags. ✓ Reducing the use of recycling crates by providing wheelie bins to more properties will reduce windblown litter.	✓ Increases quantities of diverted materials for recycling. ✗ Increased 'dead running' of truck as a result of low density of properties in these areas. Results in increased emissions.	Moderate ✓ Expected that the higher costs associated with collecting from a lower density collection route would be spread over the total household base, and therefore the cost per house would be relatively small.	High • This is a relatively frequent item raised by individuals to the Councillors.	Low ✗ Quantifying the effect on truck numbers, route and day changes required, as well as understanding the level of uptake will be a significant piece of work.	Low • May actually result in more waste to landfill, as a result of decreased reliance of burning or farm pits. But this is a positive outcome.	Yes (medium priority)

Service	Options to Meet the Forecast Demand	Assessment Criteria						Overall Assessment: 'Preferred' Option to Investigate Further?
		Reducing Harmful Effect of Waste (NZWS Goal 1)	Improving Efficiency of Resource Use (NZWS Goal 2)	Affordability	Accessibility / Convenience	Ease of Implementation	Degree of Future Impact on Waste to Landfill	
Kerbside Collection Services	Increased number and distribution of kerbside drop-off points	✓ Increases the quantities of diverted material reduces quantities of waste to landfill	✓ Makes use of existing collection method, with very little additional vehicle running	High ✓ Very little expense required to implement.	Moderate ✓ Improves accessibility and convenience for off-route residents.	High	Low	Yes
	Provision of recycling and refuse drop-off facilities to accept material from houses not on kerbside routes	✓ Increases the quantities of diverted material reduces quantities of waste to landfill. ✓ May reduce incidence of residents burying waste in farm pits, or burning it. ✓ Will provide a facility for freedom campers and tourists to use – reducing litter issues.	✓ Encourages waste minimisation.	Moderate	Moderate ✓ Increases accessibility and convenience for off-route residents.	Moderate • Requires identifying and gaining lease or ownership of suitable land, site works, capex etc.	Low • May actually result in more waste to landfill, as a result of decreased reliance of burning or farm pits. But this is a positive outcome.	Yes Still a viable option to address those properties unable to access kerbside services.
	Phase out residual waste bag option (move to wheelie bins only)	✓ Will reduce the risk of injuries to collectors. ✓ Will reduce incidents of animals tearing open bags – and subsequent animal health effects as well as litter from torn bags. ✗ Not providing a bag option to off-route properties may increase the use of less desirable alternatives for disposal of waste (e.g. burning) because of the inconvenience associated with taking a wheelie bin to a collection point compared with a bag.	✓ May result in some decrease in the use of single use plastic refuse bags.	High ✓ The smallest residual waste bin option is only marginally higher to a bag cost if put out weekly. ✗ Very low volume waste producers, or holiday homes may be financially worse off by the removal of the bag option.	Moderate ✓ Convenient for those with direct kerbside collection. ✗ May present issues for those who have to transport their waste to a collection point (note: other options presented do address this issue).	Moderate ✗ Some opposition expected.	Low	Yes (medium priority) Only on the proviso that off-route properties are provided with an easy to use alternative (e.g. a conveniently located recycling / refuse drop off station).

Service	Options to Meet the Forecast Demand	Assessment Criteria						Overall Assessment: 'Preferred' Option to Investigate Further?
		Reducing Harmful Effect of Waste (NZWS Goal 1)	Improving Efficiency of Resource Use (NZWS Goal 2)	Affordability	Accessibility / Convenience	Ease of Implementation	Degree of Future Impact on Waste to Landfill	
Kerbside Collection Services	Fortnightly kerbside residual waste collection (instead of current weekly)	✓ Expect a reduction in waste to landfill. ✓ Reduced collection vehicle emissions. ✗ Fortnightly collection may create odour issues with putrescible waste and disposable nappies. ✗ Restrictions in refuse container capacity may result in contamination of recycling and organics waste.	✓ Kerbside collection trucks travel shorter distances. ✓ Encourages waste minimisation by restricted refuse container capacity. ✗ 80L refuse bins will be too small for fortnightly service and would have to be replaced with 140L (or larger) bins (high cost to purchase and reissue these bins).	Moderate ✓ Expected reduction in annual residual waste collection cost. ✗ 80L refuse bins will be too small for fortnightly service and would have to be replaced with 140L (or larger) bins (high cost to purchase and reissue these bins).	Moderate	Low ✗ A significant amount of work would be required to implement this.	Moderate	Yes (review longer term)
	Promotion of organics service in serviced areas	✓ Will receive greater quantities of organic waste and reduce waste to landfill.	✓ Increases beneficial use of organic waste. ✓ Improved collection density, therefore improved efficiency of collection trucks. ✗ Some small reduction in the potential for landfill gas extraction at Kate Valley Landfill.	High	High	High	High	Yes A logical step that is relatively 'untapped' so far.
	Supply of home kitchen food waste caddies and biodegradable liners	✓ Will receive greater quantities of organic waste and reduce waste to landfill – and resultant methane generation.	✓ Increases beneficial use of organic waste.	Unknown ✓ Cost reduction potential from food waste reduction in landfill disposal fees.	High	Moderate	Moderate	Yes, but not initially (medium term)

Service	Options to Meet the Forecast Demand	Assessment Criteria						Overall Assessment: 'Preferred' Option to Investigate Further?
		Reducing Harmful Effect of Waste (NZWS Goal 1)	Improving Efficiency of Resource Use (NZWS Goal 2)	Affordability	Accessibility / Convenience	Ease of Implementation	Degree of Future Impact on Waste to Landfill	
Kerbside Collection Services	Installation of RFID tags on wheelie bins (and potential future charging options)	✓ Future charging options (pay per lift or pay per weight) encourage waste minimisation behaviour, thereby minimising harmful effects of waste. ✗ If pay per lift implemented there is potential for increased contamination of the divertible streams as they will likely have higher capacity bins and a lower cost of collection.	✓ Future potential charging options (pay per lift or pay per weight) encourage less frequent bin presentation at kerbside – reducing truck emissions and wear and tear. ✓ Reduced staff time and resources involved in investigating and resolving issues, because RFID tags would provide more certainty around bin allocation and missed collections.	Moderate ✓ Allows for improved accuracy of database. This allows reliable and accurate charging for bins in service. ✓ Future charging options such as pay per empty, or pay by weight would financially reward residents producing less waste (and vice versa). ✗ Capex quite significant.	High ✓ All bins would be tagged.	Moderate • Capex Budget required. • Council approval likely to be required proceed with this system (due to potential for public concern).	High ✓ Future charging options could result in significant behaviour change.	Yes (medium priority) Prudent to future proof by continuing to add RFID tags on new bins. Further research required before considering changes to pay per lift type options
	Investigate future kerbside contract ownership structure/model of wheelie bins	N/A	N/A	Moderate • Council will end up paying either to own the bins at the end of current contract, or will pay indirectly through a new (the next) contract. This is so as to level the playing field in future tenders.	N/A	Moderate ✗ If new contract was to specify all new bins (to level playing field), then this is a significant task.	N/A	Yes (low priority)
	Develop a strategy to increase the diversion of recyclable or recoverable (organic) materials from kerbside residual waste	✓ Reduces waste to landfill.	✓ Increases beneficial use of organic waste ✓ Increases quantities of diverted materials for recycling. ✗ Some small reduction in the potential for landfill gas extraction at Kate Valley Landfill.	High	High	High	High	Yes (high priority)

Service	Options to Meet the Forecast Demand	Assessment Criteria						Overall Assessment: 'Preferred' Option to Investigate Further?
		Reducing Harmful Effect of Waste (NZWS Goal 1)	Improving Efficiency of Resource Use (NZWS Goal 2)	Affordability	Accessibility / Convenience	Ease of Implementation	Degree of Future Impact on Waste to Landfill	
Collection from High Country Villages	Status Quo: Increase the number or size of refuse / recycling bins or frequency of collection to accommodate demand or growth	✓ Removes residual waste for safe disposal. ✓ Removes divertible material for recycling.	✗ Staying with the status quo does not actually 'improve efficiency of resource use', and may potentially increase resource use (fuel) as a result of distances to High Country Villages.	High	Moderate	High	Low	Yes Logical to continue with this, but to do so in conjunction with other options presented
Public Litter Bins	Status Quo: Increase the number of refuse / recycling bins to accommodate demand or growth	✓ Removes residual waste for safe disposal. ✓ Removes divertible materials for recycling.	✗ Staying with the status quo does not actually 'improve efficiency of resource use'.	High	High	High	Low	Yes (low priority) Logical to continue with this, but to do so in conjunction with other options presented
	Audit existing residual waste litter bins to identify further diversion opportunities (i.e. adding a recycling bin)	✓ Increases diversion of material from landfill.	✓ Increases quantities of diverted materials for recycling.	High	High	High	Low	Yes (long term priority)
	Review management of litter bins and fly tipping within Council	✓ Would provide greater oversight of litter bins and fly-tipping in the district, allowing better management. ✓ Would avoid "grey area" management challenges such as bus stop bins.	✓ May allow for consolidation of service providers. ✓ Allow more efficient oversight of District litter – and therefore potentially a strategy to better management. ✗ Would require increased staff time of whichever department litter bins were allocated to.	High	N/A	High Staff time and contract management is the only requirement.	N/A	Yes (low priority but worth investigating)
All Collection Services	Investigate and embrace new or emerging technologies associated with collection services	✓ New technologies may improve quality of diverted materials (sensors recognising contamination, sensors that can communicate with residents)	✓ New technologies may improve efficiency of collections	Unknown	Unknown	Unknown	Unknown	Yes Keep informed of advances in this area

Service	Options to Meet the Forecast Demand	Assessment Criteria						Overall Assessment: 'Preferred' Option to Investigate Further?
		Reducing Harmful Effect of Waste (NZWS Goal 1)	Improving Efficiency of Resource Use (NZWS Goal 2)	Affordability	Accessibility / Convenience	Ease of Implementation	Degree of Future Impact on Waste to Landfill	
All Collection Services	Use any potential budget surpluses generated to assist with other waste related activities. Or specifically increase some collection service components in order to generate surplus for use for other waste related activities	✓ Increases funds available for activities that achieve NZWS Goal 1. ✗ Artificially high costs may exacerbate fly tipping.	✓ A small increase spread across a large number of properties generates a reasonable revenue stream that could potentially be used in activities that promote resource use efficiency.	High	N/A	High	Dependent	Yes (low priority) Only if suitable projects were suited to this type of funding, and it was deemed the most appropriate way to fund a project
	Use regulatory tools such as the Waste Bylaw to for example alter refuse collection start times	N/A	✓ Longer collection hours reduces the number of trucks required – enables more bins collected per truck in service.	High	High • Some potential increased inconvenience for residents associated with putting bins out earlier.	Moderate • Bylaw review required. • Consultation required.	N/A	Yes (low priority) If demand / growth required it. Consider at next bylaw review. Has been raised by collection contractor.
Pines Resource Recovery Park	Status quo	✓ Maintains current performance in this regard, but doesn't improve. ✗ Longer-term the volumes will outstrip the throughput capacity of the facility if changes are not made.	✗ Does not improve performance in this regard.	Moderate Landfill costs will increase, as will landfill levy charges. Not improving diversion options will ultimately cost the community more to dispose of waste.	Moderate Concern regarding travel distance for households in outlying areas (addressed in other options)	High	Low	Medium Medium to longer term changes are needed to cope with volumes.
	Increase the compactor capacity throughput (upgrade compactor)	N/A	✓ Upgraded compactor capacity at the end of its useful life allows maximum use of existing facility at Pines RRP and improved operational efficiency	High However only worthwhile doing when at capacity limit or nearing compactor end of life.	N/A	High	N/A	Yes (long term) Recent refurbishments have extended the life of the asset. Throughput capacity currently fine and can be increased by extending staff hours before looking at larger capacity compactor. Would look to re-assess max capacity.

Service	Options to Meet the Forecast Demand	Assessment Criteria						Overall Assessment: 'Preferred' Option to Investigate Further?
		Reducing Harmful Effect of Waste (NZWS Goal 1)	Improving Efficiency of Resource Use (NZWS Goal 2)	Affordability	Accessibility / Convenience	Ease of Implementation	Degree of Future Impact on Waste to Landfill	
Pines Resource Recovery Park	Improve Council knowledge of commercial, construction and public waste composition received at Pines RRP	✓ Improving Council's knowledge of the composition of these waste streams enables decisions to be made in order to divert additional waste from landfill	✓ Enables the recovery of additional resources from the waste stream. These can be reused, recovered or recycled	High	N/A	Moderate Impact on operations at Pines RRP whilst SWAP studies are taking place.	None directly	Yes (high priority)
	Investigate the feasibility of a waste sorting line, implement if appropriate as part of the Reconnect Project	✓ Enables the recovery of additional resources from the waste stream – greater diversion = less harmful effects on the environment.	✓ Enables the recovery of additional resources from the waste stream. These can be reused, recovered or recycled.	High Envisage that waste sorting is achievable for less than the cost of compacting and sending waste to landfill.	High Most waste in the district currently goes to Pines RRP, and most growth is in the Rolleston / Lincoln / West Melton areas. This is the most logical place for the waste sort line.	Moderate Requires feasibility study, and trials / budget.	High	Yes (high priority)
	Work with 3rd parties to facilitate pyrolysis or similar processing techniques to reduce waste to landfill	✓ Assists with the recovery of materials and energy from waste streams. ✓ Potentially a better alternative to other methods of handling some materials (e.g. tyre stock piles, or export to countries with low health and environmental standards).	✓ Assists with the recovery of resources that would otherwise be landfilled.	High Expect 3rd party to fund themselves.	High Good location – proximity to Christchurch material volumes and South Island road and rail network.	Moderate A number of uncertainties exist at present.	High	Yes (low priority) Maintain open mind to opportunities.
	Address apparent lack of awareness of Pines RRP facility existence	✓ May reduce fly tipping, burying or burning of waste.	✓ May result in shorter travel distances for those traveling to Christchurch for waste disposal.	High	Moderate	High	Low	Yes (high priority)

Service	Options to Meet the Forecast Demand	Assessment Criteria						Overall Assessment: 'Preferred' Option to Investigate Further?
		Reducing Harmful Effect of Waste (NZWS Goal 1)	Improving Efficiency of Resource Use (NZWS Goal 2)	Affordability	Accessibility / Convenience	Ease of Implementation	Degree of Future Impact on Waste to Landfill	
Pines Resource Recovery Park	Investigate the feasibility of a landscape supplies yard to assist with sale of compost generated and trailer hire to improve convenience, implement if appropriate as part of the Reconnect Project	✓ Provides more reasons to visit the RRP facility – spin off effect for recycling, future reuse shop etc.	✓ Located at the RRP provides synergies with resident vehicle movements.	High Expect 3rd party to fund for the most part.	High Most waste in the district currently goes to Pines RRP, and most growth is in the Rolleston / Lincoln / West Melton areas. Seen as a good fit for the site and a drawcard to encourage activity in other areas of waste minimisation.	Moderate	N/A	Yes (low priority). 3rd party to do the investigation work associated with this part of the facility.
	Provide a structure and utilities for a farm waste / recycling receiving and processing area as part of the Reconnect Project	✓ Assists with the diversion of waste and recyclables from farm pits and the burning of farm waste. ✓ Enables the recovery of additional materials.	✓ Located at Pines RRP enables efficient processing and diversion of waste, as well as recyclables, collected by existing RRP providers.	High It is envisaged that the initial capital outlay for structure would be funded by budget surplus or WMF Levy Fund application.	High Located at Pines RRP enables efficient processing and diversion of waste, as well as recyclables, collected by existing RRP providers.	Moderate	Moderate	Yes (medium priority)
	Investigate Gasification or other alternative waste disposal technology	✓ Assists with diversion of material from landfill.	✓ More focus on the "Recovery" area of the Waste Hierarchy which is a more efficient use of resource than Landfill. ✓ If Gasification plant was located at the Pines RRP, it could reduce the amount of "double handling" and transport to Kate Valley Regional Landfill for disposal.	Moderate Capital cost would likely be funded by a third party. Disposal cost per tonne could be potentially the same or less than current cost to landfill.	High Good location – proximity to Christchurch material volumes and South Island road and rail network.	Unknown at present.	High	Yes (low priority) Maintain open mind to opportunities.

Service	Options to Meet the Forecast Demand	Assessment Criteria						Overall Assessment: 'Preferred' Option to Investigate Further?
		Reducing Harmful Effect of Waste (NZWS Goal 1)	Improving Efficiency of Resource Use (NZWS Goal 2)	Affordability	Accessibility / Convenience	Ease of Implementation	Degree of Future Impact on Waste to Landfill	
Pines Resource Recovery Park	Investigate the feasibility of a reuse shop and salvage yard, implement if appropriate as part of the Reconnect Project	✓ Reduces waste to landfill, associated negative effects including those associated with the transport of waste to landfill. ✗ Risk associated with accepting items – hazards such as needles, cleanliness, electrical safety, manual handling of heavy items.	✓ In the Waste Hierarchy material reuse is a better option than recycling. ✓ Potentially valuable resources can be reused instead of being landfilled. ✗ Requires close supervision to prevent receipt of unsuitable goods. ✗ Materials (concrete and construction) required to construct a facility for reuse.	High It is envisaged that the initial capital outlay for structure would be funded by budget surplus or WMF Levy Fund application. Would generate a modest income that is expected to cover staff wages and potentially provide a surplus to contribute towards other recovery related activity onsite. Would provide a source of low cost items for the community to purchase.	High Pines RRP is closest to the largest population centres in the District, and therefore customer base.	Low	Moderate	Yes (high priority) A key missing part of the RRP facility at present.
	Investigate the feasibility of an Environmental Education Centre, implement if appropriate as part of the Reconnect Project	✓ Educate residents, children and community groups about waste related (and broader environmental) issues. ✓ Ability to influence the "Reduce" part of the Waste Hierarchy	✓ Promotes efficiency of resource use messages and behaviour. ✓ Educates public regarding best practice recycling behaviours – reduces contamination of recoverable streams. ✗ Materials (concrete and construction) required to construct a facility for environmental education.	High Fund educator through local Waste Minimisation Levy Funding. Funding already exists for some waste education programmes in the District.	High Pines RRP is closest to the largest population centres in the District.	Low Considerable amount of work required to design and construct a suitable facility, as well as develop a plan around how to run activity there.	Moderate Long term change in thinking and behaviour.	Yes (medium term)
	Investigate the feasibility of microenterprise units on site to repurpose and upcycle waste, implement if appropriate as part of the Reconnect Project	✓ Impacts the "Reuse" part of the Waste Hierarchy, hereby reducing waste to landfill and the associated harmful effects.	✓ Impacts the "Reuse" part of the Waste Hierarchy. ✗ Materials (concrete and construction) required to construct a facility for microenterprise activities.	Moderate Unlikely to generate much revenue, but also unlikely to require much ongoing cost support, after the initial capital cost of construction.	High Pines RRP is closest to the largest population centres in the District.	Low Considerable amount of work required to design and construct a suitable facility, as well as to develop a plan around how to run this operation.	Moderate Long term change in thinking and behaviour.	Yes (medium term)

Service	Options to Meet the Forecast Demand	Assessment Criteria						Overall Assessment: 'Preferred' Option to Investigate Further?
		Reducing Harmful Effect of Waste (NZWS Goal 1)	Improving Efficiency of Resource Use (NZWS Goal 2)	Affordability	Accessibility / Convenience	Ease of Implementation	Degree of Future Impact on Waste to Landfill	
Other Disposal and Diversion Services	Provide 'Pop-up' Resource Recovery Park / Transfer Station facility periodically to Ellesmere and Malvern communities	✓ Likely to reduce burning and disposal into farm pits in these areas.	✓ Temporary facilities don't require the infrastructure associated with a permanent facility. ✓ Existing trained staff can be utilised to operate a pop up facility for a day.	Moderate	Moderate Not as accessible as a permanent facility (in terms of opening hours), but the number of days offered per year could be increased if demand was sufficient.	High Proven basic level offering already takes place. Consents are now in place to expand materials accepted at these pop-up days.	Low	Yes (high priority) These pop-up RRPs offer improved accessibility to the outlying areas of the District which is valued in the community.
	Use regulatory tools to capture tonnage and composition data from private collectors	✓ Provides better oversight of waste situation enabling directed efforts to minimise waste.	✓ Provides better oversight of waste situation enabling directed efforts to minimise waste.	High	N/A	High	N/A	Yes Easy to implement.
Education	Continue to support education related programmes such as Enviroschools, Lincoln Envirotown Responsible Business Assessments and other activities (e.g. Waste Free Parenting classes) or organisations that fit within the Education Strategy	✓ Educating residents, students and businesses encourages awareness of waste related issues, and thinking about possible solutions. This has a flow on effect in terms of behaviours in other areas of the community (e.g. taking the message home).	✓ Educating residents, students and businesses encourages awareness of waste related issues, and thinking about possible solutions. This has a flow on effect in terms of behaviours around purchasing decisions and using resources.	High	High The Education Strategy would involve a mixture of in-schools sessions, as well as at Pines RRP, web based, business assessments etc.	High	Moderate (hard to quantify)	Yes (medium priority). Continue as is currently until new Education Strategy is formed, then review existing arrangements.
	Develop a more comprehensive strategy for education	✓ Will help improve reduction of waste at source, thereby prevents any possible harmful effects. ✓ Educating residents, students and businesses encourages awareness of waste related issues, and thinking about possible solutions. This has a flow on effect in terms of behaviours when handling waste.	✓ Educating residents, students and businesses encourages awareness of waste related issues, and thinking about possible solutions. This has a flow on effect in terms of behaviours when handling waste.	Low (but also a qualitative item to try to measure the impact for)	High The education strategy would involve a mixture of in-school sessions as well as at Pines RRP, web based, business assessments etc.	High Requires critical thinking and considered input from a number of people.	Moderate (hard to quantify)	Yes (medium term)

Service	Options to Meet the Forecast Demand	Assessment Criteria						Overall Assessment: 'Preferred' Option to Investigate Further?
		Reducing Harmful Effect of Waste (NZWS Goal 1)	Improving Efficiency of Resource Use (NZWS Goal 2)	Affordability	Accessibility / Convenience	Ease of Implementation	Degree of Future Impact on Waste to Landfill	
Education	Hazardous waste disposal education	✓ Improve awareness of what is hazardous waste, and how / where to dispose of it safely. ✓ Hazardous waste has increased potential to cause significant environmental harm compared to regular household waste. Efforts to minimise incorrect disposal reduce the risk of harm.	✓ Directs public to utilise existing facility designed to receive hazardous waste, or to hazardous waste collection service providers for commercial volumes.	High	Moderate Some issues for outer reaches of the District. Possible potential for inclusion in pop-up RRP facilities.	High	Low	Yes (medium priority)
Support / Collaboration	Continue to subsidise recovery of some material streams to encourage uptake of service – for example E-waste and Car Seat Recycling Scheme	✓ Increases uptake of waste minimisation services, normalises societal behaviour and expectation. ✓ Some items such as E-waste have increased potential to cause environmental harm over general waste due to heavy metal contents.	✓ Makes use of existing facility at Pines RRP. ✓ Recovers some rare metals and other resources that can be used for future product manufacture.	High	Moderate Pines RRP limits some outlying residents. This may be alleviated by inclusion of these material streams at pop-up RRP sites.	High	Low Low volumes but potentially high environmental impact if disposed of incorrectly.	Yes (continue as currently)
	Continue to lend support to, participate in and encourage national initiatives, including Product Stewardship schemes (for example AgRecovery)	✓ Combined Council support can influence the success or otherwise of initiatives that reduce the harmful effects of waste.	✓ Often national initiatives such as AgRecovery recover resources for recycling as part of the programme.	High	Moderate Dependent on initiative or programme.	Moderate - High Dependant on initiative or programme.	Moderate Dependant on initiative or programme.	Yes (continue as currently)
	Continue to collaborate internally and with other Councils	✓ Collaboration with other Councils enables pooled resources and ideas to be shared when tackling the harmful effects of waste (CHER Group), for example illegal dumping.	✓ Collaboration with other Councils enables pooled resources and ideas to be shared.	High	N/A	High	N/A	Yes (continue as currently)

Service	Options to Meet the Forecast Demand	Assessment Criteria						Overall Assessment: 'Preferred' Option to Investigate Further?
		Reducing Harmful Effect of Waste (NZWS Goal 1)	Improving Efficiency of Resource Use (NZWS Goal 2)	Affordability	Accessibility / Convenience	Ease of Implementation	Degree of Future Impact on Waste to Landfill	
Other	Old closed landfills – investigate current status, existence of other unknown landfills, liability, potential remediation costs	✓ Improved knowledge of these will enable Council to minimise harm to the environment (by for example groundwater testing may detect and issue that could be remediated).	N/A	Moderate	N/A	Moderate	N/A	Yes (long-term priority)

5.3 Reconnect Hub

The Reconnect Hub is an exciting vision for the future development of the Pines Resource Recovery Park site over the next 4 to 5 years. The Reconnect Hub project transforms the Pines Resource Recovery Park into a true Recovery Park by incorporating an extensive range of approaches to tackle waste, in one location. Plans include the development of a tyre pyrolysis plant, a reuse shop and salvage yard, micro enterprise (waste repurposing/upcycling) units, a multi-purpose waste processing building, education rooms, a landscape supplies yard and a community garden.

The first stages (2019/20) include the development of a tyre pyrolysis plant (by a third party), and the relocation (and consolidation) of the public recycling drop off area. This is followed in 2020/21 by the development of a reuse shop and salvage (building materials) yard.

Figure 5A-1: Draft Vision 'Reconnect' for redevelopment of the Pines RRP

6 Funding the Plan

The Council will in its provision of waste management and minimisation services:

- Maintain a user pays charging system to provide cost recovery as well as incentives and disincentives to promote the objectives of the Council's Waste Management and Minimisation Plan.
- Fund the services from targeted rates, user charges, the waste disposal levy or general rates. Types of actions and activities funded by levy money are outlined in Section 6.3 below.
- Ensure it understands the implications of climate change regulations on waste disposal costs.

A more detailed breakdown of funding methods are provided in the Waste Assessment, Appendix B.

6.1 Plan Implementation Funding

Funding methods for existing and proposed waste management and minimisation infrastructure are shown in the Action Planning Tables of this document (Part B, Section 3.1).

6.2 Grants and Advances of Monies

Section 47 of the WMA (2008) allows a territorial authority, if authorised to do so by its WMMP, to make grants or advances of money to any person, organisation, group or body of persons for the purpose of promoting or achieving waste minimisation, on any terms and conditions that it thinks fit in accordance with Section 47 of the WMA (2008).

Under this plan authorisation is provided to make such grants or advances of money.

6.3 Waste Minimisation Levy Expenditure

The Council has identified that the following activities and projects may be funded, in part or whole, by Waste Levy income:

- Waste education programmes and public outreach.
- Collaboration with other Councils including the Canterbury Joint Waste Committee and its waste minimisation and hazardous waste projects.
- Waste minimisation grants.
- Behavioural change initiatives; for example, to increase diversion or to minimise contamination levels.
- Reuse store at the Pines RRP.
- Other “Reconnect” project related items, actions, activities and capital costs.
- Hazardous waste services where these services contribute to the avoidance of hazardous waste or the reuse or recycling of hazardous waste (e.g. waste oil recovery programme, e-waste programme).
- Collection, processing, consolidation and marketing of recyclable material.
- Collection, processing and marketing of organic material.
- Research or feasibility studies into further diversion opportunities.
- Projects or activities (internally or externally led) that focus on the upper tiers on the Waste Hierarchy: Reduce, Reuse, Recycle, Recover.

7 Monitoring, Evaluation and Reporting Progress

7.1 Monitoring and Evaluation

Monitoring the District's waste helps Council track our progress towards our stated targets and KPIs and identify which waste streams require priority. Section 86 of the WMA 2008 require that Council keep and provide records on:

- Spending of levy money.
- Performance in achieving waste minimisation with the services, facilities, and activities provided or funded in accordance with its Waste Management and Minimisation Plan.
- Performance as measured against any performance standards set by the Minister under Section 49 of the WMA 2008.

The following tools can be used to support monitoring requirements:

- Monitoring progress on the service targets for Solid Waste Management in the 2018-28 Long Term Plan.
- Monthly recording of quantity and composition of waste and diverted materials through the Pines Resource Recovery Park.
- Solid waste audits and surveys.
- Annual Resident Satisfaction Survey.
- Public complaints, enquiries and direct feedback through the Asset Service Request system.
- Regular contact and reporting from relevant contractors.
- Feedback from elected Council members, community boards and township committees.
- Bylaw enforcement.
- Submissions on the Annual Plan and Long Term Plan.
- Consultation on the Waste Management and Minimisation Plan.
- Record data in alignment with the National Data Framework.

7.2 Reporting

Council will report the progress of implementation of this WMMP through:

- The Annual Report.
- Council and committee reports.
- Local community newspapers.
- Council newsletters.
- Council's website.
- Social media.
- Annual Waste Minimisation Levy expenditure report.
- Any future National Data Framework reporting requirements.

Part B – Action Plan

Part B – Action Plan

1 Introduction

As stated in the LTP, *"The management of solid waste is a 'significant activity' under the terms of the Local Government Act 2002. The Council has a statutory obligation to promote effective and efficient waste management and to achieve this it takes a leadership role in managing waste activities. By managing this activity, the Council is in the best position to serve the needs of the community, provide a sustainable service and keep costs down."*

Under the Health Act, the Council has a responsibility to provide for collection and disposal of refuse and other offensive matter.

By maintaining a leadership role, the Council protects the community's interests and fulfils Council's legal responsibilities.

This section describes how Council will achieve the Vision, Goals, Objectives and Targets of the WMMP over the 2018-28 LTP.

Progress on the Action Planning Tables will be reviewed on an annual basis utilising a simple traffic light colour coding system.

2 Funding Structure

The Council's options for funding the Action Plan are detailed in Part A, Section 6 of this WMMP. The Action Plan table shows which funding option(s) will be applied to each action / option.

Waste services provided by the Council will continue to be funded by:

- User charges
- Targeted rates
- General rates
- Sale of official council refuse bags
- Sale of recyclables at the Pines Resource Recovery Park
- Waste levy

Council will undertake the action plan subject to:

- Cost efficiency
- Affordability
- Environmental, social and cultural outcomes
- Council approval
- Council Annual Plan process

3 Action Plan

The Action Planning Table below shows how Council's proposed actions address our objectives, how they will be funded and the expected timeframe.

Table 3B-1: Action Plan

Objective	Proposed Action	Waste Hierarchy Tier Relevance	Proposed or Existing Action	Funding Mechanism	Timeframe	How Effectiveness is Measured and Reported
Achieve agreed levels of service to customers.	Continue to provide a cost effective, convenient and comprehensive range of services to the community.	All	Existing and Proposed	Targeted rates User pays Waste levy	Ongoing	Resident satisfaction survey results Pines RRP customer survey (proposed) Anecdotal feedback Number of substantiated complaints received
Ensure the operational, financial, social and environmental sustainability of the service.	Use any potential budget surpluses generated to assist with other waste related activities. Or specifically increase some collection service components in order to generate surplus for use for other waste related activities	All	Proposed	Budget surplus or specific targeted cost increases	Unknown	Dependent on the activity
	Address lack of awareness of Pines RRP facility for new residents	Recycle Recover Treatment Disposal	Proposed	Waste Budget	Short term (1-2 years)	Usage of the Pines RRP is increased as a percentage in the Annual Resident Surveys
	Review the Waste Management and Minimisation Bylaw to ensure it is still effective and appropriate	All	Proposed	Waste Budget	Short term (1-2 years)	Successful review and adoption of updated Waste Management and Minimisation Bylaw
Reduce Council's exposure to risk, should there be a failure of the assets.	Ensure contractor undertakes preventative servicing and maintenance of plant and buildings	N/A	Existing	Waste Budget	Ongoing	Occurrence of unbudgeted and / or unexpected building or plant failures
Comply with all legislation.	Review management of litter bins and fly tipping within Council	Recycle Disposal	Proposed	N/A Council staff time	Short term (1-2years)	Data measuring and analysis would take place Hot spot areas targeted
	Use regulatory tools to capture tonnage and composition data from private collectors	Disposal	Proposed	Environmental Services Budget	Short term (1-2 years)	Better oversight of weight and composition of residual waste collected by private contractors enabling more directed waste minimisation efforts Records are supplied Reporting would be consolidated so commercial confidence is kept
	Old closed landfills – investigate current status, existence of other unknown landfills, liability and potential remediation costs	N/A	Proposed	Waste Budget	Long term (5+ years)	A report is produced detailing information about old landfills. This report would potentially drive an action plan (capping program)

Objective	Proposed Action	Waste Hierarchy Tier Relevance	Proposed or Existing Action	Funding Mechanism	Timeframe	How Effectiveness is Measured and Reported
Safeguard human, animal and environmental health by promoting and encouraging safe and hygienic storage, handling, collection and disposal for all waste streams.	On site windrow composting of organic waste	Recovery	Proposed	Waste Budget	Short term (1-2 years)	Organic waste is processed in accordance with relevant consents and a saleable compost product is produced
	Hazardous waste disposal education	Treatment	Proposed	Budgeted item	Ongoing	Increased disposal of haz waste at Pines RRP
Provide a cost effective, convenient and comprehensive range of services to the community.	Continue to provide and extend kerbside collection services	Recycle Recover Disposal	Existing	Waste Budget	Ongoing	Number of houses accessing kerbside service Percentage of District with access to kerbside service
	Proactively reviewing properties not currently receiving kerbside service –is extension feasible?	Recycle Disposal	Proposed	N/A Internal and Contractor staff time	Short term (1-2 years)	Percentage of houses accessing kerbside service
	Phase out residual waste bags	Reduce Reuse	Proposed	Targeted refuse rates	Medium (3-5 years)	Monitoring bag orders/purchases for declining numbers
	Investigate future kerbside contract ownership structure/model of wheelie bins	N/A	Proposed	Waste Budget	Long term (5+ years)	Bins are owned by Council Creates a level playing field for future tenders
	Continue to provide the Pines RRP facility	Recycle Recover Treatment Disposal	Existing	Waste Budget User pays	Ongoing	Pines RRP usage and satisfaction rating
	Increase the opening and staff operational hours at Pines RRP	N/A	Proposed	User pays	Short term (1-2 years)	Usage of facility within those extended hours. Staff productivity within those extended hours
	Increase the residual waste compactor capacity throughput (upgrade compactor at Pines RRP)	Disposal	Proposed	User pays	Long term (5+ years)	New compactor installed with greater processing capacity per hour
	Continue to use levy funds to subsidise recovery of some material streams to encourage uptake of service – for example E-waste and Car Seat Recycling. Expand where appropriate	Recycle Treatment	Existing	Local TA Waste Levy	Ongoing	Volumes of each material stream received
Promote, engage in and fund activities aligned with the upper tiers of the Waste Hierarchy in order to reduce waste generation and waste volumes sent to landfill.	Investigate fortnightly kerbside residual waste collection (instead of current weekly)	Recover Recycle Disposal	Proposed	Targeted refuse rate (reduced cost)	Long term (5+ years)	Successful switch to fortnightly service Reduction in residual waste Minimal increase in contamination in kerbside organic and recycling Minimal increase in fly tipping
	Promotion of organics collection service in serviced areas	Recover	Proposed	Targeted refuse rates	Ongoing	Increased uptake of organic bin service at levels above average
	Investigate supply of home kitchen food waste caddies and biodegradable liners to make separating food waste more convenient and hygienic	Recover	Proposed	Local TA Waste Levy National Waste Levy Targeted rates	Medium (3-5 years)	Increased food waste % within organics collection

Objective	Proposed Action	Waste Hierarchy Tier Relevance	Proposed or Existing Action	Funding Mechanism	Timeframe	How Effectiveness is Measured and Reported
Promote, engage in and fund activities aligned with the upper tiers of the Waste Hierarchy in order to reduce waste generation and waste volumes sent to landfill.	Develop a strategy to increase the diversion of recyclable or recoverable (organic) materials from kerbside residual waste	Recycle Recover	Proposed	Waste Budget	Medium (3-5 years)	Lower percentage of organic / recyclable materials in the residual waste stream
	Audit existing residual waste litter bins to identify further diversion opportunities (i.e. adding a recycling bin)	Recycle Disposal	Proposed	Township litter bin budget Local TA Waste Levy	Long term (5+ years)	Improved diversion of recyclables from litter bins
	Investigate the feasibility of a waste sorting line, implement if appropriate	Reuse Recycle Recover	Proposed	Local TA Waste Levy	Medium (3-5 years)	If implemented, by the diversion of waste (measured by weight) via the sorting line
	Investigate the feasibility of a landscape supplies yard to assist with sale of compost generated and trailer hire to improve convenience, implement if appropriate	Recover (provides outlet for recovered material – increasing sustainability of the recovery option)	Proposed	3rd party User pays	Medium (3-5 years)	Whether a landscape supplies yard is implemented or not Sales of the compost produced
	Establish a reuse shop and salvage yard	Reuse Recycle	Proposed	Local TA Waste Levy National Waste Levy Budget surpluses Operation costs covered by income generated (in time)	Medium (3-5 years)	Volumes of material diverted through reuse shop and salvage yard – intention is to build in the ability to weigh all items as they are sold
	Investigate the feasibility of microenterprise units on site to repurpose and upcycle waste, establish if appropriate	Reuse Recycle	Proposed	**Capital:** Local TA Waste Levy National Waste Levy **Operation:** Volunteer run Funded by income from items sold	Medium (3-5 years)	No. of tenants Use of space Products made Volumes of Materials diverted (all outgoing products weighed before sale) Skills passed on Community feedback
	Investigate provision of a Multi-purpose waste building/structure for partial e-waste deconstruction, mattress recycling, farm waste processing, and other future but as yet unknown recoverable waste streams.	Reuse Recycle Disposal	Proposed	Budgeted item Local TA Waste Levy National Waste Levy User pays	Medium (3-5 years)	Volumes of material diverted through system
	Increase education around waste reduction through Council and external platforms	Reduce Reuse Recycle	Proposed	Budgeted item Local TA Waste Levy	Medium (3-5 years)	"Reach" statistics on Social Media A reduction of kerbside residual waste volumes

Objective	Proposed Action	Waste Hierarchy Tier Relevance	Proposed or Existing Action	Funding Mechanism	Timeframe	How Effectiveness is Measured and Reported
Promote, engage in and fund activities aligned with the upper tiers of the Waste Hierarchy in order to reduce waste generation and waste volumes sent to landfill.	Make funds and support available for initiatives to reduce waste to landfill (e.g. reusable coffee cup schemes)	Reduce Reuse	Proposed	Budgeted item Local TA Waste Levy	Medium (3-5 years)	Number of organisations in the district implementing waste reduction initiatives and appropriate measurement of their success
	Collaborate with other government bodies and councils to consider activities or initiatives that provide positive alternatives to landfill or other waste minimisation outcomes	Reduce Reuse Recycle Recover	Proposed	Local TA Waste Levy National Waste Levy	Medium (3-5 years)	Reduction of waste to landfill
Arrange local initiatives, or support and participate in community, regional, national or industry led initiatives that reduce the harmful effects of waste or minimise waste.	Provide 'Pop-up' Resource Recovery Park / Transfer Station facility periodically to Ellesmere and Malvern communities	Reuse Recycle Recover Disposal	Existing	Budgeted item User pays Sale of scrap metal	Current. But expansion of materials over short term 1-2 years	Numbers of vehicles attending Volumes of materials received Community feedback
	Work with other Councils, Central Government, local rūnanga and Industry to address New Zealand recycling issues	Reduce Reuse Recycle Recover	Existing	Dependent upon the initiative	Ongoing	Reduction in the amount of waste and recycling generated Securing long-term, high value and/or onshore solutions to recyclable materials
	Continue to lend support to and encourage national initiatives, including Product Stewardship schemes (for example AgRecovery)	Reduce Reuse Recycle Recover Treatment Disposal	Existing	Dependent upon the initiative	Ongoing	Dependent on case by case basis
	Work with businesses in the district to help minimise the waste generated by the products they sell and services that they provide	Reduce Reuse Recycle	Proposed	Local TA Waste Levy	Medium (3-5 years)	Dependent on case by case basis
	Continue to collaborate internally with other Councils	Reduce Reuse Recycle Recover Treatment Disposal	Existing	N/A	Ongoing	Dependent on case by case basis
Encourage and facilitate the development and uptake of services for rural areas in order to reduce waste to farm pits, or the burning of waste.	Provide a structure and utilities for a farm waste / recycling receiving and processing area (as part of proposed "Multi-purpose waste building")	Recycle Disposal	Proposed	Local TA Waste Levy National Waste Levy User pays	Medium (3-5 years)	Volumes of material diverted through system Survey of customers "what would you have done prior to this option (burnt, bury etc?)"
	Increased number and distribution of kerbside drop-off points	Recycle Disposal	Proposed	Local TA Waste Levy National Waste Levy Targeted rates	Short term (1-2 years)	Increase in the number of kerbside drop-off points

Objective	Proposed Action	Waste Hierarchy Tier Relevance	Proposed or Existing Action	Funding Mechanism	Timeframe	How Effectiveness is Measured and Reported
Encourage and facilitate the development and uptake of services for rural areas in order to reduce waste to farm pits, or the burning of waste.	Provision of recycling and refuse drop-off facilities to accept material from houses not on kerbside routes	Recycle Disposal	Proposed	Local TA Waste Levy National Waste Levy Targeted rates	Medium (3-5 years)	Installation of recycling and refuse facilities for remote/rural houses
	Trial farm waste days	Reuse Recycle Recover Disposal	Proposed	Local TA Waste Levy Other organisation contributions (e.g. ECan)	Short term (1-2 years)	Numbers of vehicles attending Volumes of materials received Community feedback
Assist with enforcement action associated with illegal waste activity.	Use regulatory tools such as the Waste Management and Minimisation Bylaw and the Litter Act when necessary	Disposal	Proposed	N/A Council staff time	Medium (3-5 years)	Enforcement action is taken as require Levels are monitored
To embrace changes in technology that improves any meaningful aspect of waste related activity.	Installation of RFID tags on wheelie bins (and potential future charging options)	Recover Recycle Disposal	Proposed	Local TA Waste Levy National Waste Levy	Medium (3-5 years)	Reduction in database and charging errors Reduced missed bin disputes Improved diversion (if alternative charging options are pursued)
	Investigate and embrace new or emerging technologies associated with collection services	All	Proposed	N/A Council staff time	Ongoing	Dependent on the technology
	Work with 3rd parties to facilitate pyrolysis or alternative processing techniques to generate more value and better environmental and social outcomes than landfill	Recover	Proposed	3rd party	Unknown	Whether an 'alternative processing' partnership is able to be struck
Improve Council and community's level of knowledge and understanding of waste streams in the district and their associated key issues. Provide guidance for waste related issues.	Improve Council knowledge of commercial, construction and public waste composition received at Pines RRP	Reuse Recycle Recover Disposal	Proposed	Local TA Waste Levy	Short term (1-2 years)	Council is more aware of the composition of the residual waste stream enabling better waste minimisation / diversion planning
Facilitate increased community engagement and ownership of waste generated. Foster innovation around the way that waste can be better managed. Leverage waste recovery activities to achieve positive social and environmental outcomes.	Investigate the feasibility of an Environmental Education Centre and onsite educator, implement if appropriate	Reduce Reuse Recycle Recover Treatment Disposal	Proposed	Capital: Local TA Waste Levy National Waste Levy Operation: Budgeted item	Medium (3-5 years)	Throughput of visitors Sessions run Feedback provided
	Continue to support Education related programs such as Enviroschools, Lincoln Envirotown Responsible Business Assessments and other activities (e.g. Waste Free parenting classes) or organisations that fit within the Education Strategy	Reduce Reuse Recycle Recover Treatment Disposal	Existing	Local TA Waste Levy Budgeted item	Ongoing	Number of students or members of the public reached Number of businesses reached

Objective	Proposed Action	Waste Hierarchy Tier Relevance	Proposed or Existing Action	Funding Mechanism	Timeframe	How Effectiveness is Measured and Reported
Facilitate increased community engagement and ownership of waste generated. Foster innovation around the way that waste can be better managed. Leverage waste recovery activities to achieve positive social and environmental outcomes.	Develop a more comprehensive strategy for education	Reduce Reuse Recycle Recover Treatment Disposal	Proposed	Budgeted item	Medium (3-5 years)	Audience reached Feedback sought from activities within different education streams
	Develop a plan for initiatives that reduce contamination in kerbside recycling	Recycle	Existing (expansion)	Budgeted item Local TA Waste Levy	Ongoing	Reduction in contamination levels in kerbside recycling

Part C – Appendices

Appendix A – Glossary

Cleanfill: a landfill that accepts only cleanfill material.[1]

Cleanfill material: material that, when buried, will have no adverse effect on people or the environment. Including virgin natural materials such as clay, soil and sock and other inert materials such as concrete or brick that are free of:
(a) combustible, putrescible, degradable or leachable components;
(b) hazardous substances;
(c) products or materials derived from hazardous waste treatment, hazardous waste stabilisation or hazardous waste disposal practices;
(d) materials that may present a risk to human or animal health such as medical and veterinary waste, asbestos or radioactive substances; and
(e) liquid waste.[1]

Disposal: means –
(a) the final (or more than short-term) deposit of waste into or onto land set apart for that purpose; or
(b) the incineration of waste.[2]

Disposal facility: means –
(a) a facility, including a landfill; -
(i) at which waste is disposed of; and
(ii) at which the waste disposed of includes household waste; and
(iii) that operates, at least in part, as a business to dispose of waste; and
(b) any other facility or class of facility at which waste is disposed of that is described as a disposal facility.[2]

Diverted material: 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.[2]

Hazardous waste: waste that:
(a) contains hazardous substances at sufficient concentrations to exceed minimum degrees of hazard specified by Hazardous Substances (Minimum Degrees of Hazard) Regulations 2000 under the Hazardous Substances and New Organism Act 1996; or
(b) meets the definition for infectious substances included in the Land Transport Rule: Dangerous Goods on Land; or
(c) meets the definition for radioactive material included in the Radiation Protection Act 1965 and Regulations 1982.[3]

Household waste: waste generated as a result of the day-to-day running of a residential household.

Industrial / Commercial / Institutional waste: waste from industrial, commercial and institutional sources (i.e. supermarkets, shops, schools, hospitals, offices).[3]

Recovery: means –
(a) extraction of materials or energy from waste or diverted material for further use or processing; and
(b) includes making waste or diverted material into compost.[2]

[1] Ministry for the Environment, (2002) *A Guide for the Management of Cleanfills*
[2] Parliament of New Zealand, (2008) *Waste Minimisation Act No 89*
[3] WasteMINZ, (2015) *New Zealand Waste Data Framework Volume Two: Information about Waste Services and Facilities*

Recycling: the reprocessing of waste or diverted material to produce new materials.[2]

Reduction: means –
(a) lessening waste generation, including by using products more efficiently or by redesigning products; and
(b) in relation to a product, lessening waste generation in relation to the product.[2]

Resource Recovery Park (RRP): a facility established for the recovery of resources from the waste stream for subsequent use as raw materials for reuse, and for the consolidation of residual waste for transfer to landfill.[1]

Residual waste: applied in a domestic sense means: household rubbish not able to be recycled, reused or composted.

Reuse: means the further use of waste or diverted material in its existing form for the original purpose of the materials or products that constitute the waste or diverted material, or for a similar purpose.[2]

Reuse stores: means: items that are salvaged or diverted from the waste stream undergo little or no modification and are sold at stores run by the community or territorial authorities.

SWAP: Solid Waste Analysis Protocol. A study carried out to determine the composition of residual waste.

Treatment: means –
(a) subjecting waste to any physical, biological or chemical process to change its volume or character so that it may disposed of with no or reduced adverse effect on the environment; but
(b) does not include the dilution of waste.[2]

Waste: means –
(a) anything disposed of or discarded; and
(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); and
(c) to avoid doubt, includes any component or element of diverted material, if the component or element is discarded.[2]

Waste Disposal Levy: a levy introduced under the Waste Minimisation Act 2008 as a per tonne cost on all waste sent to landfill in order to:
(a) raise revenue for promoting and achieving waste minimisation; and
(b) increase the cost of waste disposal to recognise that disposal imposes costs on the environment, society, and the economy.[2]

Waste minimisation: means –
(a) the reduction of waste; and
(b) the reuse, recycling and recovery of waste and diverted material.[2]

[1] Ministry for the Environment, (2002) *A Guide for the Management of Cleanfills*
[2] Parliament of New Zealand, (2008) *Waste Minimisation Act No 89*
[3] WasteMINZ, (2015) *New Zealand Waste Data Framework Volume Two: Information about Waste Services and Facilities*
[1] WasteMINZ, (2008) *The New Zealand Resource Recovery Park Design Guide*

Appendix B – 2017 Waste Assessment