Regulatory impact statement

Increase and expansion of waste disposal levy

Advising agencies	*Ministry for the Environment*
Decision sought	*Approval to draft regulation for increasing and expanding the waste disposal levy*
Proposing Ministers	*Hon Eugenie Sage, Associate Minister for the Environment*

Section A: Summary: Problem and proposed approach

Problem definition

The proportion of waste that is sent to landfill in New Zealand is steadily increasing. The waste disposal levy aims to create an incentive to divert waste from landfill but it is currently too low and too narrowly applied to be effective.

Summary of preferred option

The preferred approach is to improve the effectiveness of the levy by progressively increasing the rate of the levy and expanding its application to more types of landfill as set out in the table below.

Landfill Class	2021	2022	2023	2024
Municipal landfill (class 1)	$20	$30	$50	$60
Construction and demolition fill (class 2)		$20	$20	$30
Managed fill (class 3)	-	-	$10	$10
Controlled fill (class 4)	-	-	$10	$10

The proposed rate and coverage is expected to:

- provide an incentive to businesses and households to change behaviour
- create market opportunities through making alternatives to waste disposal more competitive
- significantly increase revenue for investment in waste minimisation.

This approach is expected to be feasible:

- it is based on expanding an existing tool for waste minimisation
- waste levies are widely used in other jurisdictions
- the proposed approach was informed by analysis of evidence and has been tested through consultation and stakeholder engagement.

An investment framework has been developed for the increased levy revenue.

It is expected that the preferred approach will be reflected in the Cabinet paper.

Section B: Summary Impacts: Benefits and costs

Main expected beneficiaries and benefits

Society as a whole and the environment are expected to benefit:

- costs of waste disposal will better reflect the true costs of current patterns of extracting, using and disposing of waste
- more re-use of materials and less use of virgin materials with associated impacts on natural resources and greenhouse gas emissions
- reduced greenhouse gas emissions from organic waste disposed of to landfills
- investment in the resource recovery sector will improve the range and quantity of materials that can be recycled onshore, providing greater resilience to global changes in markets for recyclables, and generating more local employment (the resource recovery sector typically generates around 5 jobs for every 1 job in waste disposal)
- reduced need for landfills along with less associated environmental nuisance, hazards, and loss of amenity.

The resource recovery sector will benefit through:

- increased business opportunities for recycling/re-use as a result of increased viability of alternatives to landfill and investment of increased levy revenue
- greater certainty of feedstock flows and market demand for recycling businesses
- opportunities to apply for levy revenue funding for investment.

Fill site operators may benefit through:

- regulation being applied more evenly across the waste sector- landfills that are currently subject to the levy could benefit from reduced competition from sites that are currently unlevied; and it would be more equitable to apply reporting and monitoring requirements to more fill sites
- opportunities arising from investment of increased levy revenue.

Central and local government will benefit through:

- more revenue for waste management and minimisation
- improved data for understanding, managing and minimising waste
- reduced demand for landfill capacity.

Costs

The costs and benefits of the preferred option have been modelled, drawing on estimates and trends from the past decade. The current economic situation remains highly uncertain as a result of COVID-19, which means that cost-benefit assumptions are now more uncertain, because it is hard to predict what impact the economic down turn will have on waste production and disposal.

Fill site operators (including landfills already subject to the existing levy, who would need to pay higher levy costs, and those not yet subject to a levy) would directly bear the costs of the increased and expanded levy. It is likely that fill site operators would pass these costs on to customers through increased gate charges, but would adjust pricing and practices in different ways. Once the changes are fully implemented, it is expected that total additional per annum levy charges faced by fill site operators would be around $240 million.

Fill site operators not currently subject to the levy will also face new compliance costs for accurately measuring, calculating, recording and reporting levy payments and waste tonnages. This could be done through using a weighbridge or an estimate-based approach. One-off compliance costs are estimated to be in the range of $5,000 to $80,000 per landfill site ($2m to $6m across around 300 sites in total), with ongoing costs of $1000 to $5,500 per annum per landfill site ($700,000 to $1.5m across around 300 sites in total) for maintenance and checking of systems. It is also estimated that it could cost up to $10,000 per annum per facility for collecting and reporting data ($2 million to $3million across around 300 sites in total).

Demand for landfills is expected to fall as a result of more waste being diverted, which could affect profits. However, the additional business opportunities created by investment of levy revenue could benefit fill site operators, for example through increased value for materials that are sorted at fill sites and sold on for resource recovery, as well as opportunities for business diversification into resource recovery.

It is expected that the total additional per annum costs for fill site operators would be between $244.7 million and $250.5 million.

See section 5.2 for more detail.

Households will likely face increased costs for waste disposal but this will vary depending on how territorial authorities and landfill operators charge for rubbish collection – it is expected that the impact on households is likely to be relatively low given that the levy is a small component of the overall costs and charges for disposing of waste, and most households produce less than a tonne of waste per annum. Increased costs could be minimised over time by the increasing availability of opportunities to divert waste as a result of the investment of increased levy revenue in waste minimisation.

As an example, costs for an average-sized household council rubbish bag (6.5kg) could rise by 11.5 per cent (from $2.50 to $2.83) with a levy of $60 per tonne. On this basis, a household disposing of one rubbish bag per week would pay an extra $17.16 per annum.

Total additional costs for household waste including domestic kerbside collection and waste dropped off to landfill directly are estimated to be around $75 million per annum at the proposed levy rate of $60 per tonne for municipal landfills – as noted above, the additional amount paid by households will depend on how these costs are passed on, particularly by territorial authorities.

Businesses: The main sectors of the economy that generate waste include hospitality, manufacturing, wholesale and retail trade and the primary sector. Waste production and disposal data by sector is not available for New Zealand. Costs for business have been estimated based on a wide range of sources, including a 2017 report by Eunomia on the waste disposal levy[1].

It is not possible to break these estimates down for individual businesses, because the amount of waste that businesses dispose of varies considerably and because of limited data. Some examples of estimated additional costs are:

[1] Eunomia 2017. *The New Zealand Waste Disposal Levy. Potential impacts of adjustments to the current levy rate and structure.* Auckland: Eunomia Ltd.

- an additional food waste disposal cost of around $117 per year for the average cafe or restaurant owner at the proposed levy rate of $60 per tonne for municipal landfills
- an additional cost of $75 for disposing of waste from the average house build, and an additional cost of $305 for disposing of waste from a house demolition at the proposed rate of $30 per tonne for construction and demolition fills.

Additional levy costs for businesses disposing of industrial, commercial and institutional waste at municipal landfills are estimated to be around $52.2 million (at the proposed levy rate of $60 per tonne for municipal landfills).

Levy costs for construction and demolition fills are estimated to be $88 million at the proposed levy rate of $30 per tonne for construction and demolition fills, with the majority of these additional costs likely to be passed on to construction and demolition companies.

An estimated 7.5 per cent of rural waste from the primary sector is disposed of at municipal landfills[2]. Current levy costs for this are estimated to be $1.3 million. Additional costs could be $6.3 million at the proposed rate of $60 per tonne for municipal landfills.

In general, the impact on smaller businesses is expected to be relatively low while larger producers of waste could face substantial cost increases. For this reason, industrial monofills which take waste produced by a specific industrial operation have been excluded from the proposals (see section 3.1 for more information). As with households, increased costs could be minimised over time by the increasing availability of opportunities to divert waste as a result of the investment of increased levy revenue in waste minimisation.

Territorial authorities: The cost to councils can be estimated based on the share of waste to municipal landfills that comes from kerbside collections (around 35 per cent). The levy-related costs of disposing of this waste are around $12.7 million at present. Additional costs are estimated to be $63.3 million at a levy rate of $60 per tonne. This is a small portion of the overall costs of operating waste collection and disposal services. These costs are often passed on to ratepayers, although councils make different decisions about the degree to which they will recover costs.

Territorial authorities will also have costs associated with implementation including undertaking more compliance, monitoring and enforcement. Some of these activities can be funded through increased levy revenue.

Central government: costs of administering and allocating the levy will increase and there will be some additional costs for compliance, monitoring and enforcement, however these costs can mostly be paid for with levy revenue. The Ministry for the Environment (the Ministry) has been allocated Vote Environment 2020 funding to cover implementation costs that cannot be covered by the levy. These are estimated to be $2.5 million for upgrading ICT systems, around $3 million for additional staff resources for implementation, and $400,000 ongoing costs for ICT licenses.

Likely risks and unintended impacts

Levy avoidance

The differential rates proposed for different types of landfill could lead to waste being inappropriately disposed of at landfills with lower levy rates, or at fills that are not proposed to be subject to the levy, such as sites that only take virgin, excavated natural materials

[2] Ibid.

(cleanfills), or dumps located on individual farms (farm dumps)[3]. There could also be an increased risk of illegal dumping onto land not authorised to take waste such as roadsides, forests, public land etc. (fly tipping).

Levy avoidance would result in harm to the environment and reduced levy revenue, as well as increased costs for local government and private landowners for dealing with fly tipping.

The likely extent of levy avoidance is difficult to predict and will depend on the effectiveness of compliance, monitoring and enforcement activities.

This risk will be mitigated in a number of ways including:

- phasing in the implementation of the changes
- strengthening the existing compliance, monitoring and enforcement regime
- providing funding and developing strategies, including education campaigns, to address illegal dumping and littering
- proposed reviews of the Waste Minimisation Act 2008 and the Litter Act 1979.

Further detail is set out in section 6 (implementation).

Disproportionate impacts on rural households and remote Māori communities

There is a risk that the levy could disproportionately affect rural households, including remote Māori communities, where costs of disposing of waste are higher and there are fewer opportunities for waste diversion. The impact on rural and low income households is still expected to be low and any disproportionate impacts could be mitigated through targeted use of levy funds for waste minimisation in rural areas. The litter and illegal dumping strategies noted above would also include explicit consideration of the needs of rural and remote communities, including Māori communities.

Recycling operations

Some recycling operators will face increased costs for disposing of unavoidable by-products of their operations. For example, scrap metal processors extract valuable metals from cars and whiteware, but are left with low-value residual materials known as ‘shredder floc’. Further work is proposed to address this issue, to be concluded before the first increases in levy rates come into effect (ie, by July 2021) – see section 5.2 for more detail.

[3] Farm dumps should only take waste from the property on which they are located

Section C: Evidence certainty and quality assurance

Rating of evidence certainty

Evidence limitations are discussed further in section 1.2.

There are gaps in data on waste in New Zealand. While there is good quality data on landfills that are currently subject to the levy, there is limited data on unlevied sites, and on other aspects of waste and recycling. This has been addressed by using estimated data, drawing on New Zealand and international literature, and analysis of submissions and engagement with stakeholders during the consultation process.

- There is good evidence of the problem, supported by stakeholder views and consultation submissions.
- There are uncertainties over how households and businesses will respond to changed levy settings because of the complex and interacting factors that influence waste disposal decisions. Three elasticity options were modelled.
- A further constraint on analysis is uncertainty over the impacts of COVID-19 on the economy. Existing modelling and estimates need to be interpreted in this new context.

Because of these data limitations, the proposals focus on a short time period. The levy is reviewed at least every three years. The proposals will result in much improved data on waste which will inform future decisions on adjusting levy settings.

To be completed by quality assurers:

Quality Assurance Reviewing Agency:
A joint panel with representatives from Treasury's Regulatory Quality Team (RQT), the Ministry for Primary Industries and Ministry for the Environment has reviewed this Regulatory Impact Assessment in accordance with the quality assurance criteria set out in the CabGuide.
Quality Assurance Assessment:
A joint review panel with representatives from Treasury's Regulatory Quality Team, the Ministry for the Environment and the Ministry for Primary Industries has reviewed the Regulatory Impact Assessment (RIA) "Increase and Expansion of Waste Disposal Levy" produced by the Ministry for the Environment and dated 26 May 2020. The review team considers that it **meets** the Quality Assurance criteria. A strong case has been made for expanding coverage and increasing the rate of the waste disposal levy to incentivise diverting waste from landfill. There is good evidence of the problem, supported by stakeholder views and submissions both before and during the COVID-19 lockdown period. The RIA indicates that it is difficult to predict accurately how households and business will respond to the change in levy settings. This means there is some uncertainty about the total volume of landfill that will be diverted, the extent of levy avoidance resulting from differential rates for different types of landfills (i.e. waste being inappropriately disposed of at landfills with lower levy rates), and the total revenue generated by the levy. However, the levy is reviewed at least every three years and the proposed

changes to the levy will provide improved data on waste to inform decisions on adjusting levy settings.

There are still some detailed design issues to work through. A Cabinet report back is planned in October 2020 on an investment framework for the levy revenue. In addition, a review of the Waste Minimisation Act and related legislation is scheduled for 2021 and will cover: enforcement tools to address levy avoidance, what the levy is spent on and hypothecation of the levy revenue.

Impact Statement: Increase and expansion of the waste disposal levy

Section 1: General information

1.1 Purpose

The Ministry for the Environment is solely responsible for the analysis and advice set out in this Regulatory Impact Statement, except as otherwise explicitly indicated.

In November 2019 Cabinet approved the release of a consultation document that set out proposals to expand and increase the waste disposal levy. Consultation took place from late November 2019 to early February 2020.

This analysis and advice has been produced for the purpose of informing final decisions to be taken by Cabinet to proceed with the development of regulations under the Waste Minimisation Act 2008 (the Act) to improve the effectiveness of the existing waste disposal levy by applying it to more sites and progressively increasing its rate.

1.2 Key Limitations or Constraints on Analysis

Data gaps

There is good quality data on landfills that are currently subject to the levy (that is, class 1 municipal landfills), including numbers and location of landfills, and quantities of waste collected. However, there is limited data on other classes of fill sites and on sites taking virgin, excavated natural materials (cleanfills). This makes it difficult to forecast the impacts of the proposals on businesses and on fill sites not currently subject to the levy.

The lack of data has been addressed through developing estimates based on research conducted in New Zealand, as well as international data and research.

In addition, submissions and engagement with stakeholders have provided further useful information, particularly in relation to industry sectors such as recyclers.

Key data gaps are:

- the numbers and location of fill sites (including cleanfills) that are not currently subject to the levy and how they should be classified under the proposed classification system. This data was estimated using existing survey data and follow up research conducted by the Ministry in conjunction with regional councils in 2019
- quantities of waste produced by different industries and economic activities. These have been estimated using a range of domestic and international studies, in particular a report produced by Eunomia[4]
- quantities of waste that are diverted from landfill. Territorial authorities and industry bodies collect some data but this is inconsistent and no national dataset exists.
- regional variations in access to and costs of waste management services for non-levied landfill sites – while the Ministry was able to commission good quality survey data on class 1 (municipal landfill) sites, only limited data was available on gate fees

[4] Eunomia 2017. *The New Zealand Waste Disposal Levy. Potential impacts of adjustments to the current levy rate and structure.* Auckland: Eunomia Ltd.

for other landfill classes. This has been estimated based on the Eunomia report and follow up research conducted by the Ministry.

Extending the levy to other fill sites will enable much better collection of data. The current proposals include reporting of quantities of materials disposed of for fill sites, transfer stations, and cleanfills; and establishing a national record of fill sites and cleanfills. The Ministry also consulted on further proposals for addressing gaps in data (advice will be developed separately on these proposals – see section 7). Improved data will inform future reviews of the effectiveness of the levy and future consideration of changes to the levy.

Uncertainties over how businesses and households will respond to levy changes

Even with improved data, it would be difficult to predict how businesses and households will respond to increases in the levy (elasticity) because:

- there are complex and interacting factors that influence how waste is disposed of including availability and pricing of alternatives
- the levy is only one component of charges for disposing of waste, and these charges vary widely across the country
- the price signals sent by the levy will work alongside a range of other initiatives which are also aimed at reducing waste
- in part, outcomes will depend on how effectively levy revenue is invested in waste minimisation initiatives.

NZIER were commissioned to produce a cost-benefit analysis of the proposals[5]. Because of uncertainties over elasticity, NZIER modelled three elasticity options – high, medium and low.

The NZIER analysis may be conservative in estimating benefits because:

- the analysis models a relatively narrow range of benefits based largely on calculation of direct negative externalities. It is difficult to incorporate the wider benefits of using resources in a more circular way (such as reduced energy and resource use during extraction and processing of virgin materials) using available data
- the analysis assumed that all landfills would need to have weighbridges in place where they do not already – in practice not all sites will need to do this, and therefore implementation costs in practice may be lower than those modelled.

Uncertainty over the economic impact of COVID-19

COVID-19 is expected to result in a severe economic downturn. There is a high degree of uncertainty over the extent of the downturn and how soon the economy might be expected to recover, particularly because of uncertainty of the effects of COVID-19 on global trading partners.

NZIER were commissioned to provide a cost-benefit analysis of the proposals before the COVID-19 situation arose. The analysis was based on various assumptions including forecast changes to waste production, and modelled changes in waste disposal as a result of increases to the cost of disposal. These assumptions are now more uncertain, because it is hard to predict what impact the economic down turn will have on either waste production or disposal.

[5] NZIER (2019) *Waste levy extension: estimates of extending and raising levy*. Accessed at: https://www.mfe.govt.nz/consultations/landfill-levy

It should be noted however that:

- evidence from overseas indicates that waste is often reduced during an economic downturn, which could result in lower levy revenue (and lower impacts on waste producers)
- the economy may have started to recover by the time the levy proposals are implemented
- economic stimulus initiatives could lead to an increase in waste – particularly construction waste. The Ministry is looking at how this could be mitigated
- the Ministry is exploring opportunities to invest in resource recovery infrastructure in advance of the implementation of the levy proposals – if this were to happen, the higher of the range of elasticities used in the NZIER analysis may be more accurate, as waste producers respond to increased opportunities for diversion.

Consultation

The consultation period was 10 weeks, but took place over the Christmas period. Some submitters – councils in particular - raised concerns that they needed more time to develop their submissions and have them approved by council. During the consultation period a number of stakeholder events were held including webinars and workshops – these were useful for sharing information about the consultation and understanding the perspectives of stakeholders.

The Ministry re-engaged with key stakeholder and sector groups during the COVID-19 lockdown period, to ask whether their views had changed since their submission. The Ministry also had ongoing engagement with the waste sector as part of the COVID-19 response and this was useful for understanding sector viewpoints on the changed context.

Further information on the consultation is set out in section 2.4. 479 submissions were received from a wide range of submitters including individuals, businesses, NGOs, the waste sector and local government. We consider this to be a reasonable number of submissions and these have been valuable for informing the subsequent analysis. We received only a small number of submissions from iwi, and plan to use upcoming engagement opportunities including development of a revised Waste Strategy, investment plan, and review of the Waste Minimisation Act to allow for further substantive input from iwi.

1.3 Responsible Manager (signature and date):

Electronically approved by:

Glenn Wigley

Director, Regulatory and Policy

Resource Efficiency

Ministry for the Environment

28 May 2020

Section 2: Problem definition and objectives

2.1 What is the current state within which action is proposed?

Key points

- A high proportion of New Zealand's waste is sent to landfill and New Zealanders are among the highest producers of household waste per capita in the OECD. Waste sent to municipal landfills increased by 48 per cent between 2009 and 2019, with per capita waste increasing from 570kg to 740kg per annum.
- There is very little onshore infrastructure for recycling in New Zealand, and increasing restrictions on international markets have made it increasingly difficult to export waste for recycling.
- Recycling rates in New Zealand are low – only around 35 per cent[6] compared with 58 per cent in Australia[7].
- COVID-19 has exacerbated the situation, with many councils suspending recycling collections during lockdown, and an ongoing impact on global markets for recyclables.

Waste collection

Delivery of waste and recycling services is decentralised with variation in services across the country.

Territorial authorities collect and dispose of solid waste, and operate municipal landfills, often in partnership with the private sector.

Household waste is collected through kerbside collections provided by territorial authorities (often under contract) or the private sector. In rural areas that do not have kerbside collection, household waste is dropped off by individuals to facilities that often provide both waste disposal and recycling services.

Businesses in urban areas may use council-provided or private kerbside collections. Large industrial and construction and demolition businesses rely on private contractors for waste and/or recycling collection and disposal. Some industrial operations run landfills solely for waste from their own processes (industrial monofills).

Transfer stations

Waste is often collected at a transfer station where it is consolidated before being taken to landfill. Waste transfer stations may be operated by territorial authorities or private companies.

Landfills

There are a range of different types of landfill in New Zealand:

- 41 municipal landfills that take household waste
- Approximately 14 industrial monofills
- Approximately 22 construction and demolition fills
- Approximately 276 managed and controlled fills taking inert materials.

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[6] Estimated from Eunomia, ibid

[7] Department of the Environment and Energy (2018) *National Waste Report 2018*, accessed at: https://www.environment.gov.au/protection/waste-resource-recovery/national-waste-reports/national-waste-report-2018

There are also an unknown number of cleanfills (sites that take virgin excavated natural materials such as clay, soil and rock) and approximately 47,000 farm dumps located on individual farms, often in remote locations.

Most municipal landfills are owned by territorial authorities – four are privately owned and two are owned by a joint venture. Municipal landfills are operated either by territorial authorities, under contract to a private operator or in public-private partnership. Other types of landfill are operated by the private sector.

Recycling and resource recovery in New Zealand

Household recycling makes up around a quarter of recycling that is collected in New Zealand. Most of this is collected through territorial authority kerbside recycling collections or through drop off facilities. Territorial authorities often subsidise kerbside recycling collections[8].

New Zealand has limited infrastructure for recycling and most recyclable material (including the majority of metals and plastics and around half of all paper and cardboard) is sold offshore.

Since 2018, restrictions imposed by a number of countries on imports of waste materials have made it much more difficult to export recyclables for processing overseas. The resulting dramatic price falls in international markets have particularly affected recycling of plastics, paper and card. An amendment to the Basel Convention which will come into force on 1 January 2021 will further restrict the export of plastic waste by requiring exporters of hard-to-recycle, mixed plastic waste to obtain consent from the governments of receiving countries before shipping.

Unlike in many European countries, there is no large-scale incineration of waste for energy in New Zealand, and this is not viewed as a suitable option for New Zealand for a range of reasons (including the cost of establishing such plants and the ongoing need for relatively large quantities of waste to sustain them).

Costs of disposing of waste

Costs for disposing of waste vary across New Zealand. Households and businesses using private companies to collect and dispose of their waste pay the full cost determined by the provider.

Territorial authorities charge for kerbside waste collections in a number of different ways:

- some operate a user pays system where residents purchase bags (or bag tags) sold by the council at a price that covers the cost of collection and disposal
- some fully fund kerbside refuse collections through rates
- some use a combination of user pays and rates to fund services
- some do not provide a service at all but license private operators to provide waste collection services.

Landfills charge gate fees for individuals and businesses to dispose of waste. These vary depending on a number of factors including the type of landfill, operating costs and local competition. The waste levy is a component of landfill gate fees.

[8] Eunomia (2019) *National Resource Recovery Project- Situational Analysis Report*, accessed at: https://www.mfe.govt.nz/publications/waste/national-resource-recovery-project-situational-analysis-report

Social and environmental context

Disposing of waste to landfill creates long-term economic, social and environmental costs. These include:

- direct costs – such as managing landfills to avoid discharges to land and air, and reduced amenity in surrounding areas
- greenhouse gas emissions – around 5 per cent of greenhouse gas emissions come from waste, mostly from organic waste disposed of to landfills. New Zealand has the highest waste emissions per capita in the OECD
- indirect costs of not recovering and reusing material and continuing to extract virgin resources.

The New Zealand public is increasingly concerned about waste. Surveys carried out in 2018[9] and 2019[10] have found that New Zealanders see waste as one of the most important challenges facing New Zealand, and they are more concerned about the build-up of plastic in the environment than any other issue. Over half of New Zealanders have a high commitment to recycling and reducing waste. Proposals for new landfills often generate considerable community opposition[11].

2.2 What regulatory system(s) are already in place?

The Waste Minimisation Act 2008

The waste disposal levy was introduced in 2009 under the Waste Minimisation Act 2008 (the Act). Under the Act, the levy has two purposes:

- to raise revenue for promoting and achieving waste minimisation, and
- to increase the cost of waste disposal to recognise that disposal imposes costs on the environment, society and the economy.

The levy has been set at a rate of $10 per tonne of waste since its introduction and only applies to municipal landfills that take household waste. These take around 45 per cent of all waste disposed of at landfills in New Zealand (this figure excludes waste disposed of at cleanfills). The Act provides for the Minister for the Environment to make regulations specifying new disposal facilities, or classes of disposal facilities, and to set different levy rates for those disposal facilities.

The Act sets out how levy revenue can be spent. Revenue is hypothecated for central and local government waste management and minimisation activities, administered by the Ministry. Levy revenue is currently approximately $36 million per annum and must be allocated as follows:

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[9] Colmar Brunton. 2018. *Environmental attitudes baseline*. Accessed at: https://www.mfe.govt.nz/more/science-and-data/understanding-new-zealanders%E2%80%99-attitudes-environment

[10] Colmar Brunton. 2019. *Better Futures: celebrating a decade of tracking New Zealanders' Attitudes and behaviours around sustainability.* Accessed at: https://www.colmarbrunton.co.nz/better-futures-climate-change-concern-rising-but-plastics-top-of-mind-for-kiwis/

[11] For example, *Petition of Michelle Carmichael for Fight the Tip: Tiaki te Whenua Incorporated: Ban landfills near waterways.*

- 50 per cent of gross revenue is allocated to territorial authorities, on a population basis, where it typically forms a small proportion of their total spend on waste management and minimisation.
    - Under the Act, territorial authorities must spend their portion of levy revenue 'on matters that promote or achieve waste minimisation'
- the remainder of the revenue (after deducting administrative costs) is invested in waste minimisation projects, largely allocated through a contestable Waste Minimisation Fund (WMF).
    - The WMF supports a wide range of projects that promote or achieve waste minimisation including feasibility studies, community initiatives, and infrastructure investment.

The levy complements other environmental legislation that manages some of the externalities associated with waste:

- the New Zealand Emissions Trading Scheme seeks to address greenhouse gas emissions from landfills
- the Resource Management Act 1991 (RMA) allows councils to establish controls to avoid, remedy and mitigate environmental effects of disposal to land.

Government intervention in waste is needed to address market failure

The waste disposal levy addresses a market failure.

- Waste sent to landfill continues to increase because the externalities of waste disposal are mostly not reflected in costs and it is often cheaper or more convenient to send waste to landfill than to recycle it.
- Until recently, waste has been sent overseas for recycling, but restrictions imposed by a number of countries on importing waste, and volatile global markets are making it increasingly difficult to do this.
- The low cost of waste disposal along with the small scale nature of waste and limited markets for recycled products in New Zealand undermine the viability of onshore recycling operations.
- Even when households and businesses are committed to producing less waste, they may be constrained by a lack of facilities and services, and information about the best way to do this.

Government intervention can address this problem through:

- raising money for investment in waste minimisation infrastructure and other initiatives
- creating disincentives that reflect the true cost of waste disposal to landfill
- taking a strategic and more nationally consistent approach to waste minimisation including planning and investment of infrastructure and services and creating markets for recycling
- providing and supporting education and awareness-raising aimed at changing behaviours.

Agencies and organisations with an interest in the waste system

A wide range of agencies have an interest in the waste system including territorial authorities, regional councils, private sector waste and resource recovery businesses, NGOs, and businesses and households that produce waste. Further information on the waste sector and on stakeholders is covered in sections 2.1 and 2.4.

Other central government agencies with a particular interest in the waste system include:

- MBIE – regional investment in infrastructure, business, research and innovation, and construction
- MPI – agricultural waste
- Housing and Urban Development – construction waste
- Kāinga Ora Homes and Communities – construction waste
- Department of Internal Affairs – local government.

The levy has been reviewed regularly by the Ministry and others

Under the Act, the effectiveness of the waste levy must be reviewed every three years. Reviews were carried out in 2011, 2014, and 2017. The Ministry will provide a formal review of the effectiveness of the levy alongside the proposals to expand the levy. Findings from previous reviews are set out in section 2.3. These proposals respond to recommendations of the 2014 and 2017 reviews.

A range of other bodies have also reviewed the levy for different purposes (see discussion in section 2.3).

A review of the Act and related legislation such as the Litter Act 1979 is also proposed, beginning in 2021. Issues that could be addressed in a review include:

- stronger data gathering and compliance, monitoring and enforcement powers
- hypothecation settings
- purposes for which waste levy revenue can be used
- how it is allocated and spent.

The waste disposal levy is part of a wider work programme aimed at minimising waste

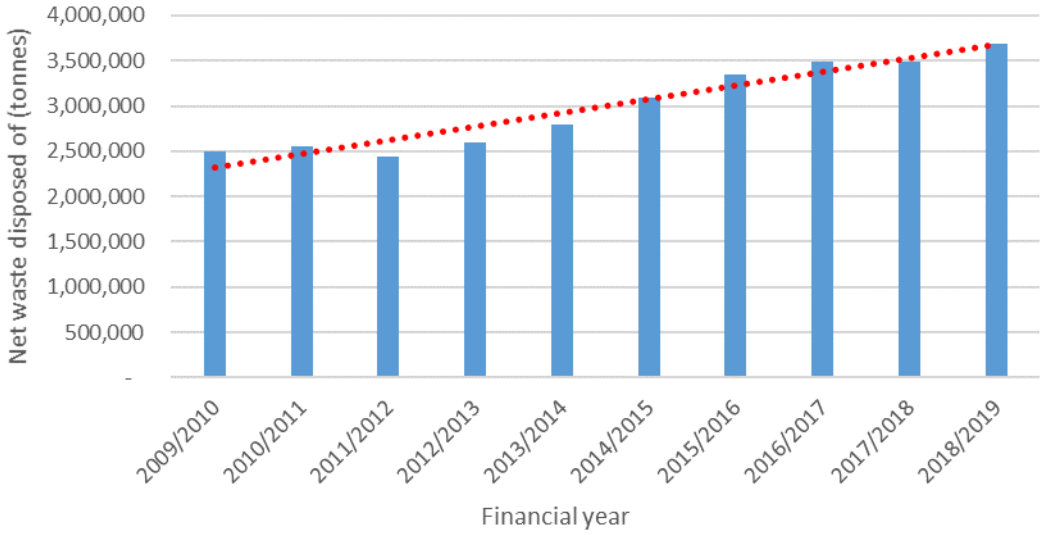
Further detail on the waste work programme is set out in section 3.1. There are interdependencies between the wider work programme and the levy proposals. Increased levy revenue will raise funds for investment in waste minimisation, and initiatives in the wider work programme will influence decisions about waste disposal and will affect future waste streams.

2. 3 What is the policy problem or opportunity?

Waste disposed of to landfill is increasing

As noted above, waste disposed of to landfill creates both direct and indirect environmental and social harm. Waste disposed of to municipal landfills has increased by 48 per cent since 2009, despite the introduction of the levy.

Figure 1: Trends in disposal of waste at municipal landfills since 2009[12]



The levy is not effective in diverting waste from landfill under current settings

The waste disposal levy was intended to address market failure through providing an incentive to divert waste from landfill, as well as generating revenue for waste minimisation.

The levy is currently set at $10 per tonne and only applies to municipal landfills, which comprise approximately 11 per cent of landfills, taking around 45 per cent of waste[13].

This rate is very low by international standards and does not provide an effective incentive for diverting waste. This is supported by evidence from reviews of the levy, independent consultants, and the Productivity Commission:

- the 2017 levy review noted that waste had increased during the reporting period, indicating that public was not responding appropriately to price signals produced by the levy[14].
- the report by Eunomia on the levy commented that: “with the rate set at its current level it is apparent that it is too low to influence key strategic waste management decisions in respect of recovery... Until the Levy is set at a higher level it is likely that its main impact will continue to be to simply accumulate funds that can be applied to waste minimisation activities.”
- the Productivity Commission considered that the waste disposal levy is too low to incentivise emissions reductions and that it is not adequate in coverage across waste disposal sites[15].

Reviews of the levy carried out by the Ministry in 2014 and 2017 note that the $10 per tonne rate for municipal landfills was intended as ‘a starting point’ and that the levy was never intended to apply exclusively to household waste. The 2014 review notes that limiting the

[12] Source: MfE waste levy data

[13] Percentage does not include material that is recovered ie recycled or reused

[14] Mfe. 2017. *Review of the effectiveness of the waste disposal levy*. Accessed at: https://www.mfe.govt.nz/publications/waste/review-of-effectiveness-of-waste-disposal-levy-2017

[15] The Productivity Commission. 2018. *Low Emissions Economy*. Accessed at: https://www.productivity.govt.nz/inquiries/lowemissions/

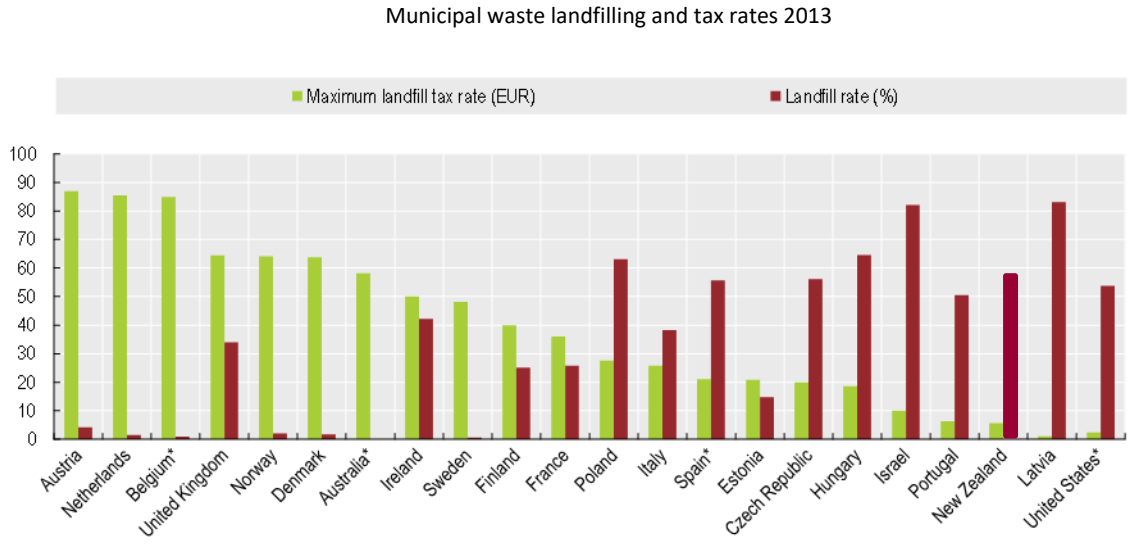
levy to municipal landfills was a 'pragmatic' decision to facilitate implementation and that policy documentation showed that the intent was to make other landfills subject to the levy over time. The review notes that the narrow application of the levy has limited its ability to act as an incentive because a significant amount of waste (ie, waste disposed of to non-levied sites) is not subject to the levy. The price signal sent by the levy is easily 'blocked' because it is only a small part of the overall gate fee[16].

Alternatives to landfill cannot compete with the low cost of waste disposal, and the $36 million per annum generated by the levy is not adequate for the large-scale investment in waste minimisation infrastructure and services that are needed to reduce waste.

A higher levy, applied to more landfills, could create a more effective incentive to divert waste from landfill

Landfill levies are widely used overseas, particularly in Europe and Australia. New Zealand's levy rates are significantly lower than most other OECD countries. Evidence suggests that jurisdictions with higher landfill taxes have lower rates of waste going to landfill.

Figure 2: Landfill taxes and rates by country[17]



Source: OECD[18]

The 2014 levy review looked at overseas rates including a 2012 EU study on four EU countries. The study concluded that in all four countries, the tax appears to have achieved significant reductions in waste going to landfills and in three countries, the tax had been especially good at diverting homogeneous waste types eg, construction and demolition

[16] Mfe. 2014. *Review of the effectiveness of the waste disposal levy*. Accessed at: https://www.mfe.govt.nz/publications/waste/review-effectiveness-waste-disposal-levy-2014

[17] Note: *tax rates refer to Flanders for Belgium, to New South Wales for Australia, to Catalonia for Spain, and to New Jersey, North Carolina, Mississippi and Indiana for the United States. Landfill rate refers to percentage of total waste production that is disposed of to landfills (instead of being recycled, or disposed of another way eg, through incineration).

Not all countries report data to the OECD in a way that allows the landfill rate (ie, the percentage of total waste produced that is sent to landfill) to be calculated. The New Zealand landfill rate has been added to the figure, and is estimated drawing on Eunomia (2017). Some countries with a low landfill rate use incineration as their main disposal method (but most also have high recycling and recovery rates).

[18] OECD. 2017. *Green Growth Indicators.* Paris. OECD Publishing.

waste and garden waste[19]. The review also looked at waste disposal levies in Australia and concluded that these had resulted in a decrease in waste to landfill.

The Tax Working Group's 2019 'Future of tax' report concluded that generating waste is highly responsive to price signals and identified the waste disposal levy as an environmental tax that could be better used. The Tax Working Group concluded that a significant increase in the levy rate would likely change behaviour and noted 'there is a case to expand the coverage of the Waste Disposal Levy beyond the 30 per cent of waste currently covered, potentially with split rates to account for different external costs associated with different types of waste'[20].

The Productivity Commission noted that there were major opportunities for mitigating greenhouse gas emissions through reducing waste and recommended that the levy should be applied to all known, consented waste disposal facilities, should be steadily increased over time and a differentiated levy rate introduced[21].

The OECD, in its 2017 Environmental Performance Review of New Zealand recommended that New Zealand should extend the waste levy[22].

The Eunomia report on the levy recommended that the levy should be applied to all disposal facilities and that increasing the levy rates 'should be a matter of priority'.

The 2014 review of the levy recommended investigation of making additional waste disposal sites subject to the levy across additional classes of landfills and the 2017 review recommended that an approach be developed to apply the levy across additional classes of landfills and assess the role of a differential rating system.

No change will mean waste will continue to increase

Without Government intervention, waste sent to landfill is likely to continue to increase, with associated social and environmental costs. These include loss of amenity, environmental hazards and nuisance associated with landfills; greenhouse gas emissions from organic waste, and continued use of virgin materials (along with associated energy and emissions). Increasing levels of waste will create pressure on existing landfill capacity, and new landfills are likely to generate local community opposition. This will not address rising public expectations for action on waste, and will hamper the transition to a low-waste, low-emissions economy.

Increasing the effectiveness of the waste levy provides an opportunity to make a significant difference to the amount of waste that is sent to landfill in New Zealand. Increasing the cost of disposal for all types of waste will provide a disincentive for disposing of waste in landfill, make alternatives more viable and will raise revenue to modernise New Zealand's waste management and resource recovery infrastructure and services.

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[19] ETC/SCP Working Paper No.1 (2012) *Overview of the Use of Landfill Taxes in Europe*. Prepared for theEuropean Environment Agency. Retrieved from http://scp.eionet.europa.eu/publications/WP2012_1/wp/WP2012_1

[20] Tax Working group. 2019. *Future of tax: final report volume I. Recommendations.* Accessed at: https://taxworkinggroup.govt.nz/resources/future-tax-final-report-vol-i-html

[21] The Productivity Commission. 2018. *Low Emissions Economy*. Accessed at: https://www.productivity.govt.nz/inquiries/lowemissions/

[22] OECD (2017) *OECD Environmental Performance Reviews: New Zealand 2017.* Paris: OECD Publishing

2. 4 What do stakeholders think about the problem?

Stakeholders

There are a number of stakeholders with an interest in waste.

- Territorial authorities deliver waste collection, disposal and recycling services and some own and operate municipal landfills and transfer stations. Territorial authorities also deal with litter and illegal waste disposal - under the Litter Act 1979, territorial authorities must appoint litter control officers.
- Regional councils are responsible for resource consents for fill sites and for monitoring and enforcing rules about the environmental effects of waste disposal on land, under the Resource Management Act 1991.
- Private sector waste companies own and operate landfills and transfer stations, and operate waste collection and disposal services
- Resource recovery businesses are involved in all aspects of recycling and resource recovery including collection, sorting, processing, brokering and shipping.
- A number of NGOs and community organisations lobby for change in relation to waste, and run a range of waste minimisation initiatives often focussing on education and behaviour change.
- Businesses and the general public produce and pay for waste disposal either indirectly through council rates, directly through, for example, purchasing council rubbish bags, or directly through a private sector provider. They also use recycling services.
- WasteMINZ is a member-based organization that represents the waste, resource recovery and contaminated land sectors. With over 1,000 members. The Waste Management Industry Forum is a smaller representative body.
- There are a number of industry bodies representing business sectors with a particular interest in waste, such as packaging, quarry operation, land remediation, and recycling.

The statutory Waste Advisory Board provides independent advice to the Minister for the Environment on matters relating to the Waste Minimisation Act 2008 and waste minimisation, including the waste levy.

Public consultation

Consultation was open for a 10 week period from late November 2019 to early February 2020.

During the consultation period, the Ministry:

- ran webinars for specific stakeholder groups
- held stakeholder workshops (jointly hosted by the Ministry and WasteMINZ)
- sent letters to several hundred landfill operators around New Zealand
- directly met with key stakeholders over the consultation period
- used the Ministry's media channels (Facebook, Twitter, website) to publicise the consultation.

The consultation received 479 submissions. These included:

- iwi (2)
- local government (41, including some joint submissions)
- environmental NGOs (24, including some joint submissions)
- other NGOs (11)
- businesses (96)
- individuals (264)
- other or unspecified submissions (41).

Business and industry submitters included large companies (such as the Warehouse Group), industry associations (eg. Plastics NZ), landfill operators, construction and forestry companies, consultancies, and smaller businesses and social enterprises. Local government submitters were primarily territorial authorities. WasteMINZ made separate submissions from four of their sector groups:

- Contaminated Land Management Sector Group
- Disposal to Land Sector Group
- Organic Materials Sector Group
- WasteMINZ Territorial Authority Officers Forum.

The majority of stakeholders share the Ministry's view of the problem and its causes

WasteMINZ, Local Government New Zealand and territorial authorities have been calling for change for some time.

- In 2018, the Territorial Authority Officers Forum of WasteMINZ produced a waste management manifesto which stated that 'the levy is the single most powerful tool available to Government to reduce waste and improve resource efficiency and recovery'. The manifesto called for the levy to be expanded to all fill types and substantially increased over time[23].
- Local Government New Zealand passed a remit at its 2018 AGM requesting that central government expand and progressively raise the levy and it also passed a remit in support of the WasteMINZ manifesto.
- An unpublished WasteMINZ member survey conducted in 2019 found nearly 80 per cent of respondents supported increasing the levy.

The majority of submitters to the consultation across all submitter types (84 per cent) agreed that the current situation of increasing waste to landfill needed to change, while only two per cent disagreed. The Waste Advisory Board also agreed that change was needed.

Examples of comments received:

> *"New Zealand's level of consumption and reliance on landfills for disposal of materials is out of step with the majority of the developed world and increasing levels of waste going to landfill is of concern. A significant change is required to drive a more resourceful society, where materials currently thrown away, due to the cheap costs of disposal, are valued and recovered*." Christchurch City Council

[23] WasteMINZ (2018) *Local Government Waste Management Manifesto*. Accessed at: https://www.wasteminz.org.nz/wp-content/uploads/2018/01/Local-Government-Waste-Manifesto-final-22012018.pdf

"The TAO Forum agrees that the 48% increase of waste to landfill over the last decade is a cause for concern and needs to change. Both local and central government recognise the need to move to a circular economy to ensure that resources are used and reused effectively as in the long term our current consumption patterns are unsustainable. Many councils have aspirational goals of working towards zero waste. The levy as an economic instrument provides funding for waste minimisation activities and infrastructure and if set at a higher rate can make recycling and reusing viable financial options to landfilling." WasteMINZ Territorial Authority Officers Forum

"Yes, the Consultation Document accurately describes Aotearoa's current challenges around waste. We have one of the worst landfill rates in the OECD. The data on the number of landfills, the volume of different waste streams going to landfill, the sources of that waste and the greenhouse emissions produced by different waste streams is also patchy and unreliable." Individual submitter

"In a world of resource depletion, climate change and pollution, increasing waste to landfill is untenable. We must aim for waste to landfill decreasing over time, until waste is completely designed out." NGO shared submission

"Fletcher Building agrees with the Government's position that the quantity of waste going to landfill needs to decrease. We support the adoption of circular economy principles in order to preserve natural resources, reduce waste impact on climate change and bring economic benefits to the New Zealand economy. We agree with the Government's position that the quantity of waste going to landfill needs to decrease. We support the adoption of circular economy principles in order to preserve natural resources, reduce waste impact on climate change and bring economic benefits to the New Zealand economy. We support the Government's proposal to improve materials stewardship in New Zealand by progressively increasing the landfill levy." Fletcher Building

2. 5 What are the objectives sought in relation to the identified problem?

The objective of the proposals is to improve the effectiveness of the waste disposal levy. By increasing the cost of waste disposal to recognise that disposal imposes costs on the environment, society and the economy, the levy will create a greater incentive to reduce the waste that is sent to landfill and will raise revenue for investment in alternatives. These proposals will help New Zealand transition to a lower-waste future.

Section 3: Option identification

3.1 What options are available to address the problem?

Developing options

The status quo

Consideration was given to improving the effectiveness of current arrangements without changing levy settings. Previous levy reviews have suggested areas for improvement such as:

- taking a more strategic approach to funding including evaluating Waste Minimisation Funding outcomes
- investing in a national waste data collection and evaluation framework.

However, the reviews recommended these changes alongside changes to levy settings. These changes alone would not achieve the objective, and waste would be expected to continue to rise along the lines of existing trends.

Current rates of revenue, at around $36 million per annum, are likely to increase in line with increased amounts of waste disposed of to landfill, but this would not be sufficient to generate the revenue needed to address New Zealand's waste management and minimisation deficit. Work commissioned from Grant Thornton for the Ministry identified potential infrastructure funding needs of approximately $2.1 to $2.6 billion and other enabling service funding needs of approximately $0.9 billion over the next 10 years to modernise New Zealand's waste management and resource recovery system (see section 6 for more information about the proposed investment approach). This scale of investment would be a substantial commitment in Crown finances.

As noted above, stakeholders and submitters to the consultation strongly supported change to the status quo.

Four options were considered[24]

- Option 1 ("flat rate"): Expanding the levy to Class 2, 3 and 4 fill sites and applying a single flat rate
- Option 2 ("differential rate"): Expanding the levy to Class 2, 3 and 4 fill sites and progressively increasing the rates (preferred option)
- Option 3 ("differential, high rate"): Expanding the levy to Class 2, 3 and 4 fill sites as with option 2, but applying significantly higher rates for municipal landfills (eg $140 per tonne)
- Option 4 ("narrower expansion"): Expanding the levy to construction and demolition sites (class 2) only.

These options set out broad approaches but there are a number of possible variations of different levy rates and implementation phasing and combinations of different options.

[24] Five alternative approaches were set out in the consultation document alongside the proposals (Appendix C). Two of those were subsequently ruled out of scope as further analysis suggested they would be too difficult to implement – these are described in section 3.3.

Settings for a more effective waste disposal levy

Developing the four options required consideration of a number of different factors and analysis of available evidence.

Expanding the waste disposal levy to other types of fill sites

Currently, the levy is only applied to municipal landfills, which only take around 45% of the waste disposed of to landfill in New Zealand.

Expanding the levy to other types of fill sites would increase the disincentive to dispose of waste to a fill site, would increase revenue and would create more of a 'level playing field' between fill sites.

As noted above, a number of commentators, reports and reviews have recommended that the levy should be expanded.

For the purposes of the waste levy expansion it is proposed to classify landfills according to the type of waste they take and potential for environmental harm. These classifications are based on the WasteMINZ *Technical Guidelines for Disposal to Land*, produced by waste stakeholders and government[25]. The table below sets out indicative classifications.

Fill type	Class under the landfill guidelines	Waste that should be accepted at these sites	Approximate number of sites
Municipal landfill	**Class 1**	Wastes that could discharge contaminants/emissions, from household as well as commercial, institutional and/or industrial sources disposed of at facilities that accept household waste	41
Industrial monofill	**Class 1**	Solid wastes that could discharge contaminants/emissions, from a range of industrial sources including steel- or aluminium-making and pulp- and paper-making	14
Construction and demolition fill	**Class 2**	Solid wastes with lower potential for environmental harm, including rubble, plasterboard and other construction and demolition materials	22
Managed fill	**Class 3**	Contaminated but non-hazardous soils and other inert materials (eg, rubble) that allow the site to be used for a restricted purpose on closure	56
Controlled fill	**Class 4**	Soils and other inert materials with low levels of contamination relative to receiving environment, which allow the landfill site to be used for an unrestricted purpose on closure	226
Cleanfill	**Class 5**	Virgin excavated natural materials such as clay, soil, rock	Unknown
Farm dumps	**N/A**	Disposal on farmland where the waste comes only from that property. Generally a permitted activity in council plans if it meets specified criteria (eg, not on a floodplain; not containing hazardous substances, sewage, offal, or animal carcasses)	46,680

[25] WasteMINZ (2018) *Technical Guidelines for Disposal to Land,*. Auckland

The consultation document asked for views on expanding the levy to industrial monofills (class 1), construction and demolition fills (class 2), and fill sites taking contaminated soils and inert materials (classes 3 and 4). Analysis of submissions showed:

- 78 per cent were in support of expanding the levy to industrial monofills (class 1)
- 77 per cent were in support of expanding the levy to construction and demolition fills (class 2)
- 72 per cent were in support of expanding the levy to fill sites taking contaminated soils and inert materials (classes 3 and 4).

Examples of comments from stakeholders on expanding the levy:

> *"In order for the levy to be effective it will need to target the large volume of waste which is going to these sites. If any of these types of site are not covered by the levy then there is likely to be an incentive to divert waste to these sites*." Whangarei District Council
>
> *"…there is insufficient evidence to understand the economic impact of introducing levies on class 2-4 landfills."* Rooney Earthmoving Ltd
>
> *"…it's estimated that roughly 50 per cent of waste to landfill in NZ is construction and demolition waste…As long as they're getting a free ride, why would the construction and demolition industries bother to reduce their waste?"* Individual submitter

Submissions and feedback from further re-engagement during the COVID-19 lockdown, raised a number of issues with applying the levy to industrial monofills. Submitters noted that environmental effects of industrial monofills are tightly controlled, with limited or no alternatives to disposal, and many industrial monofills have waste minimisation measures in place already. A number of industrial monofills are operated by wood and pulp processing plants and a high proportion of their waste is residual ash from burning wood waste for energy for their operations (ie, the result of a waste minimisation process). Operators of these sites can produce very large quantities of waste. In current economic circumstances, with some of these operations under severe financial pressure, there is a risk that the levy could significantly increase costs with only limited opportunities to reduce waste. It is proposed that industrial monofills should not be included in levy proposals at this stage, but that further work should be undertaken with operators of these fills to better understand waste composition and opportunities for waste minimisation. This would include introducing reporting requirements and setting targets where appropriate. The next review of the levy (in 2023) would take into account the success of waste minimisation initiatives for industrial monofills, and consider whether it would be appropriate to apply a levy to industrial monofills at that time.

None of the options include expanding the levy to farm dumps. Farm dumps are usually permitted activities and should only take waste from the property on which they are located. A significant amount of waste (estimated at 1.5m tonnes per annum, or around 18 per cent of total waste) is disposed of in farm dumps and it is estimated that there may be around 46,680 farm dumps dispersed across New Zealand. Some consultation submitters considered that farm dumps should be subject to the levy because all waste should be minimised, and because of concerns that more waste could be disposed of in farm dumps to avoid paying the levy. Other submitters recognised the practical difficulties of levying farm dumps, and the lack of alternatives in many remote rural locations. We consider a levy is not the best approach, but instead it is proposed to continue work that is already underway to improve the management of rural waste including product stewardship, investigating an overarching regulatory framework for agricultural waste (such as a national direction under

the RMA) and considering coverage of farm dumps in practice standards for freshwater farm plans. None of the options include levying cleanfill sites. These are sites that should take only Virgin Excavated Natural Material (VENM), which does not necessarily impose costs on the environment, society or the economy. Submitters held mixed views on whether cleanfills should be subject to a levy. Many submitters were concerned that exempting cleanfills would lead to inappropriate disposal practices and levy avoidance. However, some submitters noted it could be difficult in practice to differentiate between a short-term cleanfill site and large earthworks, leading to potential ambiguity about whether importation of gravel, sand and other inert materials to development sites should be levied. We consider that a levy would not be the most effective approach for these sites, but we propose to collect data from these sites to gain a better understanding of how they operate and to assist with monitoring levy avoidance behaviour.

Setting levy rates

Levy rates need to be set at a level where they will provide a disincentive for waste disposal, raise revenue and better reflect the true costs of disposing of waste. This needs to be balanced with minimising the risk of levy avoidance through fly tipping or disposal to an inappropriate fill type; and the need to avoid creating hardship for low-income households, or placing an undue burden on businesses.

There are different approaches that can be taken to setting levy rates.

One approach to setting levy rates would be to price the externalities that are not reflected in the current price of waste going to landfill. There are difficulties with calculating this. NZIER, in their cost-benefit analysis of the levy proposals, noted that there are numerous approaches to calculating externalities and it is difficult to find reliable estimates of economic value of different externalities[26]. With the exception of greenhouse gas emissions and discharges to water, external effects are often localised, so economic value depends on occupation and uses of land around them. NZIER noted that overseas, most levies have not been set at a rate to put a price on externalities – those that started out doing so (eg the UK) have switched to applying levies at rates primarily intended for revenue raising or encouraging diversion of material by making alternatives more competitive.

Another approach would be to set the levy at a rate that will create an incentive for diverting waste. However, waste disposal levies are only one component of the overall charge for disposing of waste. In New Zealand, landfill charges vary across the country – they tend to be more expensive in rural areas whereas in Auckland competition and economies of scale have resulted in lower charges.

Price is only one of a number of complex and interacting factors that influence whether waste is disposed of at landfills. Other factors include availability and pricing of alternatives such as recycling, and the impacts of other policy initiatives such as landfill bans. The value of materials for recycling can fluctuate significantly in international markets, which are vulnerable to policy changes in countries accepting waste for recycling, as well as the price of alternatives against which they compete (for example, when oil prices are low, as at present, it is hard for recycled plastic to compete against virgin plastic).

The increased revenue from the proposed levy changes will be invested in waste minimisation – this would work alongside the levy price signals to create more opportunities for minimising the generation of waste and diverting it from landfill. This will include increasing New Zealand's capacity and markets for onshore recycling where appropriate

[26] NZIER (2019) *Waste levy extension: estimates of extending and raising levy*. Accessed at: https://www.mfe.govt.nz/consultations/landfill-levy

which would create more opportunities and certainty for the recycling sector. Where commodities have a relatively stable/developed export market (eg, most metals), there would be no need to invest in onshore capacity and this will be reflected in the investment approach.

The Ministry's work programme for waste includes a range of other initiatives that are also aimed at reducing waste. These include:

- product stewardship – making producers more responsible for the end of life of their products, which could reduce waste and increase recyclables
- the proposed container return scheme, which could significantly increase recycling rates of beverage containers
- the plastics work programme, which may include banning types of plastic that are harmful and difficult to recycle - this could also have a significant impact on waste streams.

These factors and how they interact makes it difficult to predict how households and businesses will respond to changes in the application and rate of the levy.

Levy rates could be set on the basis of increasing the viability of alternatives to landfill. The Eunomia report on the levy looked at the costs of collecting and recovering some waste streams including organics, and construction and demolition materials, to ascertain the 'threshold' levy level at which significant diversion from landfills starts to occur. For a number of waste streams, waste diversion would be more economic at a rate of $50-60 per tonne. It would be difficult to use this as the only basis for levy settings as there are currently practical difficulties with applying the levy to types of waste (see section 3.3).

As well as reflecting externalities and creating incentives, consideration also needs to be given to the revenue needed to achieve objectives for waste minimisation. Estimates of revenue from various levy rates were modelled and work has been undertaken to identify infrastructure and waste minimisation priorities (see section 6).

Levy rates need to be balanced with the risk of unintended consequences

Consideration also needs to be given to avoiding unintended consequences. Unfortunately, there is limited evidence on how levy rates influence levy avoidance behaviours such as illegal dumping and fly tipping. Evidence from the UK suggests that people fly tip for a number of complex and inter-related reasons. While avoiding disposal fees can be a motivator for fly tipping behaviour, there are usually additional factors[27]. A large number of submitters raised concerns about levy avoidance, for example:

> "*There is concern that setting the levy at the proposed $50 rate will increase illegal dumping of waste, which councils will have to clean up and cost recovery is a difficult and long process, which often does not have a positive outcome*."
> Hurunui District Council

There is also a need to avoid economic hardship for households and businesses.

[27] Zero Waste Scotland. 2017. *Evidence review of flytipping behaviour.* Pp25-32. Accessed at: https://www.zerowastescotland.org.uk/sites/default/files/Evidence%20Review%20of%20Flytipping%20Behaviour.pdf; UCL Jill Dando Institute of Crime Science (2006) *Fly-tipping: Causes, Incentives and Solutions*, accessed at: http://www.tacklingflytipping.com/Documents/NFTPG-Files/Jill-Dando-report-flytipping-research-report.pdf

Our approach was to take into account and balance a number of factors

Our development and analysis of options took a number of these factors into account. These included:

- potential for harm of different types of waste
- potential for reuse/recovery of materials
- setting price signals
- results of cost-benefit modelling
- investment needs
- the potential for levy avoidance behaviour
- viability of alternatives to landfill.

Because of uncertainties over elasticity (how much people would respond to an increase in disposal cost by decreasing their waste disposal), NZIER modelled three elasticity options for the cost-benefit analysis – high, medium and low. Estimates used for the proposals are based on medium elasticity. We consider that the cost-benefit analysis estimates are likely to be conservative for two reasons:

- The NZIER cost-benefit analysis models a relatively narrow range of benefits based largely on calculation of direct negative externalities. It is difficult to incorporate the wider benefits of using resources in a more circular way (such as reduced energy and resource use during extraction and processing of virgin materials) using available data. This means that the estimated benefits are likely to be conservative.
- The NZIER model assumed that all landfills would need to have weighbridges in place where they do not already – in practice not all sites will need to do this, and therefore costs in practice may be lower than those modelled.

The required three-yearly reviews of the levy and improved waste data will provide an opportunity to gauge the effectiveness of levy settings and whether they need to be adjusted.

Option 1: flat rate

Key features

The waste disposal levy would be expanded to class 2, 3 and 4 landfills and a single flat rate would be charged. This could be applied progressively, depending on the rate.

Stakeholder views

The consultation asked for views on whether the levy should be the same for all waste types. 24 per cent of submitters who responded (including the two largest waste management companies) were of the view that a single levy rate should be applied across all classes of landfill in order to:

- incentivise waste reduction, reuse or recycling of all materials (regardless of where they are disposed of)
- avoid incentivising diversion of waste streams to inappropriate landfill types, and in particular to discourage wastes that should be disposed of in class 1 landfills from being disposed of at other landfill classes, creating potential for environmental harm
- avoid administrative complexity.

"in the long term I think the levy rate should be the same for all waste types. The levy is about more than quantifying the environmental harm of different waste types; it is an economic instrument to decrease waste disposed of in landfills, increase waste diverted

from landfills (through recovery, reuse, and recycling), and raise revenue to reinvest in waste minimisation. The relative harm of different wastes in different landfills is a side note to the larger problem of a linear economy and the goal of reimagining all wastes either as resources or as a material to be designed out of the economy, regardless of the level of (currently known) harm caused when landfilled … in addition, differing landfill levy rates risk incentivising diversion of waste streams to inappropriate landfill types. The necessary costs and resources of monitoring and enforcing such breaches could be avoided through a flat landfill levy rate, and invested in developing alternative options to disposal instead." Individual submitter

Analysis

It would be administratively simpler to apply a single levy rate across all levied fill sites and this would reduce incentives to dispose of waste in inappropriate landfills. However, there would still likely be a price differential in gate fees because:

- landfills that take active types of waste have higher levels of environmental controls and higher operating costs
- operating costs vary between different areas
- competition varies between different areas.

Some submitters thought that the current $10 per tonne rate should be applied across all landfills. Indicative modelling suggests that once fully implemented, this would raise an additional $30m per annum. This would not be enough to make the significant investments in infrastructure that are required. Modelling suggests that a flat rate of around $35 per tonne would be required to raise additional revenue of around $240 million per annum – equivalent to the amount raised by option 2 (preferred option). Introducing the levy to currently non-levied sites at this rate could have a significant impact on costs for some businesses, particularly for larger producers of waste. At the same time, a rate of $35 per tonne for municipal landfills may be less effective in diverting waste, such as organic waste, both because it would create less of a financial incentive, and because alternatives would be less viable.

Furthermore, a flat rate would not reflect the different potential for environmental harm and diversion of different types of waste disposed of in different classes of landfill.

Option 2 (preferred): differential rate

Key features

- The waste disposal levy would be expanded to Class 2, 3 and 4 fill sites
- A differential rate would be charged for different classes of landfill to reflect potential for diversion and the harm caused by the types of waste taken
- The levy would be progressively increased to $60 per tonne for municipal landfills and other rates applied to other classes of landfill as follows.

Landfill Class	2021	2022	2023	2024
Municipal landfill (class 1)	$20	$30	$50	$60
Construction and demolition fill (class 2)		$20	$20	$30
Managed fill (class 3)	-	-	$10	$10
Controlled fill (class 4)	-	-	$10	$10

Stakeholder views

The consultation document sought views on progressively expanding and increasing the levy and on differential rates for different classes of landfill. The proposed rates per tonne were:

- either $50 or $60 for municipal landfills (class 1)
- $20 for industrial monofills (class 1)
- $20 for construction and demolition fills (class 2)
- $10 for managed and controlled fills (classes 3 and 4)

Levy rate

Of those who answered the question on levy rates for municipal landfills, 32 per cent supported a municipal landfill levy rate of $60 per tonne, while 13 per cent supported a rate of $50 or lower. 55 per cent wanted a different rate, with a majority of these preferring a higher rate than $60 per tonne. Submitters who wanted a higher rate felt there was a need for urgent action on waste, and a stronger financial incentive was needed. They also felt the levy should be in line with rates charged in other jurisdictions. Some submitters thought $50 or $60 was a good starting point and the levy could be raised further as more reuse and recycling options became available – in fact, a majority of submitters (84 per cent) supported progressive increases to the levy beyond the time period of the consultation proposals. Some submitters who wanted a lower rate were concerned that waste disposal costs are already high in some areas and could disproportionately affect low-income households and rural communities. There were also concerns that an increase in costs could lead to illegal dumping.

Differential rates for different fill types

60 per cent of submitters who answered the question about whether there should be differential levy rates for different fill types, were in agreement with this, while (as noted above) only 24 per cent felt there should be a single flat rate.

Several submitters felt that the rate of $20 per tonne for construction and demolition sites proposed in the consultation document should be higher to create more of an incentive to divert waste.

> "*A new house currently creates 4 tonnes of waste where maybe 50 per cent could be reused. Charging 1 hour of builder labour for 1 house is not going to motivate the builder to recycle*". Individual submitter.

Option 2 proposes a rate of $30 for construction and demolition sites to reflect these views.

Some submitters felt that differential rates were an acceptable short-term approach to help fill sites not currently subject to the levy to make the transition, but that in future, rates should converge to a single flat rate to support a transition to a circular economy. The Waste Advisory Board considered that given the poor availability of data on waste it was prudent to set differential rates but that consideration should be given to a single levy rate in future reviews when better data is available.

Analysis

This option seeks to balance an improved incentive to minimise waste and increased revenue for investment, with minimising the risk of unintended outcomes such as increased fly tipping and illegal disposal of waste, and financial impacts for households and businesses. Once fully implemented, it would raise an additional $240m per annum which would have the

potential to achieve a step change in waste minimisation and resource recovery infrastructure in New Zealand.

Option 3: differential, high rate

Key features

Expanding the levy to all fill sites as with option 2, but applying significantly higher rates for municipal landfills (eg $140 per tonne).

Stakeholder views

A large number of submitters called for higher levy rates. Many referenced the 2017 report produced by Eunomia on the levy which concluded that a levy rate of $140 per tonne would bring the greatest level of benefits. Others felt that the levy should be significantly higher to bring it into line with rates in Australia and Europe.

> *"The levy should increase over time to the rate Eunomia recommended in 2017 to trigger reductions in waste disposal: $140 per tonne. An incineration levy should be aligned to the landfill levy so as not to perversely incentivise waste incineration over landfill*." NGO shared submission

Analysis

The 2017 Eunomia report concluded that the levy needs to be much higher than the rates proposed. Eunomia modelled scenarios including $90 and $140 per tonne for active waste and $15 per tonne for inert waste by 2024 and concluded that that the greatest level of benefit in terms of diversion from landfill, jobs created, GVA increase and revenues from material would be at the $140 per tonne rate for active waste.

NZIER also modelled a $140 per tonne rate for municipal landfills as part of the cost-benefit analysis carried out for the Ministry. Their modelling also showed higher net gains than options for lower rates. NZIER noted that international literature suggests that 'levies may need to be substantial to be effective in changing levels of waste disposal' and that they need to reach a critical threshold at which alternative uses of material become viable. However, it was noted that one key study suggested that beyond a certain level, the effect of further increases becomes very small[28]. Because of this, NZIER were of the view that Eunomia may understate the potential for unintended consequences such as fly tipping, and over-estimate the likely benefits.

NZIER also cautioned that large increases become increasingly difficult to model. Their view was that large price increases create uncertainties over how people and businesses respond and that as a result, elasticities (predictions of how people respond) become less valid.

Setting a rate of $140 per tonne for municipal landfills would be a very significant leap from the current $10 per tonne. Overseas jurisdictions seem to have mostly introduced levy increases progressively over a number of years[29].

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[28] ACIL Allen Consulting (2014), Economic Drivers of Waste, Department of Environment Regulation and Waste Authority of Western Australia

[29] Eunomia 2017. *The New Zealand Waste Disposal Levy. Potential impacts of adjustments to the current levy rate and structure.* Auckland: Eunomia Ltd.

We consider that this option carries a high risk of unintended consequences including illegal disposal of waste and inappropriate disposal to fill sites with lower levy rates. It could also create hardship for some households and businesses in the short to medium term, before alternatives to disposal to landfill are available.

It would also be undesirable to increase levy revenue to this extent before carrying out the proposed review of the Waste Minimisation Act. In particular, the current hypothecation arrangements may be inappropriate for a significantly larger revenue stream. Other settings of the Act may need to be reviewed before significantly increasing levy rates, including:

- the offences and penalties regime
- data gathering and compliance, monitoring and enforcement powers
- institutional arrangements for spending levy funds.

It may be appropriate for future levy reviews to consider increasing levy rates in future to continue to provide an incentive to divert waste from landfill.

Option 4: narrower expansion

This option would expand the levy to construction and demolition sites (class 2) only.

This option would increase levy revenue, and would focus on the landfill class with the greatest potential for environmental harm and diversion.

This option could have lower implementation costs and risks as the levy would be applied to far fewer additional landfills (approximately 22 extra landfills compared with around 300 if classes 3 and 4 are included). It would not have a significant impact on additional revenue compared with the other options, as waste volumes for class 3 and 4 fill sites are relatively low (estimated at around 74,000 tonnes per annum, raising around $740,000 additional revenue at a rate of $10 per tonne). However, not applying the levy to class 3 and 4 landfills would make it more attractive to divert waste from levied to non-levied landfills, which do not have appropriate controls for dealing with active waste. This would create a significant compliance and enforcement burden on local authorities, as well as an increased risk of environmental harm. Excluding classes 3 and 4 from the levy would reduce opportunities to incentivise waste reduction for inert wastes, eg, onsite remediation of contaminated sites, or use of concrete and rubble as an alternative to quarried materials.

3.2 What criteria, in addition to monetary costs and benefits have been used to assess the likely impacts of the options under consideration?

Criteria for assessing options were:

- makes a greater proportion of fill sites subject to a levy – this would increase the effectiveness of the levy by increasing the cost of disposal for a wider range of waste types, improving data collection on waste and would mean that the levy would be applied more equitably
- increases the cost of waste disposal to recognise that disposal imposes costs on the environment, society and the economy – this would increase the effectiveness of the levy by creating more of an incentive to divert waste, and by making alternatives to landfill more viable

- raises additional revenue for promoting and achieving waste minimisation – this would enable large-scale investment in resource recovery infrastructure and services, creating a step-change in how New Zealand deals with waste
- does not create undue incentives for levy avoidance behaviour – high levels of levy avoidance would create challenges for implementation and undermine the effectiveness of the levy.

The criteria do not involve any trade-offs, but the first three criteria need to be balanced with the risk of levy avoidance.

3.3 What other options have been ruled out of scope, or not considered, and why?

Further options were considered but ruled out because of implementation challenges or scope for unintended consequences.

Option 6: Applying different levy rates to different types of waste

There is provision in the Act to set different levies for different types of waste. Various New Zealand commentators consider this would be the fairest approach to applying a levy, because the same rate would apply regardless of where the material is disposed of. This could be used to ensure a level playing field for operators of different landfill classes.

It is common for overseas jurisdictions to make specific materials subject to either a lower or higher rate than general waste, to achieve various policy objectives. Landfill bans are also used overseas to control specific materials from being disposed of in landfills (eg, organic waste or items that could be recycled).

This is an option that could be considered in future. However, there would be practical difficulties with applying this option at present. It could create administrative complexity and potential loopholes for levy avoidance. It would also be challenging to impose obligations on landfill operators and seek levy payments on specific waste types at sites that are not otherwise subject to the levy. It is considered preferable to first expand the levy, and establish the necessary systems and infrastructure for implementing it, including collection of data, before seeking to apply levy rates to different types of waste.

Option 7: Applying different levies in different geographical areas

Some submitters and stakeholders raised concerns that because of economies of scale, areas with a smaller population base may already face higher costs of waste disposal, and this would be exacerbated by higher levy rates.

The Act provisions could be used to set a lower levy rate in different geographical areas, for example, rural areas, to avoid disproportionate impacts on rural households and businesses. However, there has been experience in Australia of substantial cross-boundary movements of waste, reflecting regional differences in levy rates, with associated compliance and monitoring challenges. Instead, levy revenue could be used to address some of these issues, for example to fund alternatives to waste disposal. This option was therefore ruled out, because the administrative complexity was not outweighed by potential benefits.

Section 4: Impact analysis

Marginal impact: How does each of the options identified in section 3.1 compare with taking no action under each of the criteria set out in section 3.2?

	No action	Option 1: flat rate	Option 2: (preferred) Differential rate	Option 3: Differential, high rate	Option 4: Narrower expansion
Criterion 1: Makes a greater proportion of fill sites subject to a levy	**0**	**++** Class 2, 3 and 4 fill sites will be subject to a levy (around 300 additional sites)	**++** Class 2, 3 and 4 fill sites will be subject to a levy (around 300 additional sites)	**++** Class 2, 3 and 4 fill sites will be subject to a levy (around 300 additional sites)	**+** Only around 22 additional sites would be subject to the levy
Criterion 2: Increases the cost of waste disposal to recognise that disposal imposes costs on the environment, society and the economy	**0**	**+** Extending the levy to all fill sites would increase the cost of disposal, however, a flat rate would not reflect the potential for harm of different types of waste	**++** Increasing the levy from the current rate for municipal fills better reflects the cost of waste disposal. Differential rates for different fill sites reflect the harm caused by the different types of waste they take.	**++** A much higher rate for municipal fills better reflects the cost of waste disposal and would create a greater incentive for diverting waste. Differential rates for different fill sites reflect the harm caused by the different types of waste they take	**+** This option would increase the cost of waste disposal but only at municipal landfills (class 1) and construction and demolition sites, class 2
Criterion 3: Raises additional revenue for promoting	**0** At the current $10 per tonne rate, levy revenue would be expected to increase	**+** This would raise more revenue than at present. A single flat rate of $10 would raise around $30m	**++** This option is expected to raise around $240m additional revenue per	**++** Modelling suggests this option would raise more revenue than other options (around $420m additional	**++** This option is expected to raise around $239m additional revenue once fully implemented

and achieving waste minimisation	in line with current trends of waste disposal	additional revenue per annum once fully implemented	annum once fully implemented	revenue per annum once fully implemented), however, there is much greater uncertainty over elasticity for large levy increases	
Criterion 4: Does not create undue incentives for levy avoidance behaviour	**0** Levy avoidance behaviour occurs now through fly tipping and also may occur through inappropriate waste disposal (ie to non-levied sites) – but there is limited data on this	**+** A single flat rate reduces the risk of inappropriate disposal	**0** Applying the levy more widely and increasing the levy may create some additional incentive for levy avoidance – the proposed rates aim to balance this risk, and this would also be addressed through increased monitoring	**-** A much higher rate for municipal landfills increases the risk of flytipping and illegal dumping – particularly if it is implemented before alternatives to disposal are available	**-** Excluding class 3 and 4 fill sites from the levy while increasing it for municipal landfills and extending to class 2 fill sites is likely to increase the risk of inappropriate disposal to non-levied sites
Overall assessment	**0**	**+** This option would be better than the status quo and would reduce the risk of fly tipping but would not reflect the risk of environmental and social harm of different types of waste	**++** This option best meets the criteria.	**+** This option would be better than the status quo and could raise the most revenue but has a much higher risk of levy avoidance.	**+** This option would be better than the status quo – it would significantly increase revenue, but would increase the risks of levy avoidance through inappropriate disposal

Key:

++	much better than doing nothing/the status quo
+	better than doing nothing/the status quo
0	about the same as doing nothing/the status quo
-	worse than doing nothing/the status quo
- -	much worse than doing nothing/the status quo

Section 5: Conclusions

5.1 What option, or combination of options is likely to best address the problem, meet the policy objectives and deliver the highest net benefits?

All options are better than the status quo. Overall option 2 (expanding the levy to classes 2, 3 and 4, progressively increasing the rate for municipal landfills to $60 per tonne, and applying differential rates to other classes) best meets the criteria and is the preferred option.

As noted in section 3.1, there are a number of different approaches that can be taken to setting levy rates and evidence on optimal levy rates is mixed. Of the four options, we consider that option 2 levy rates provide the best balance a number of different factors including mitigation of harm, potential for diverting waste, setting price signals, investment needs and the potential for unintended consequences.

Option 2 has a higher risk of levy avoidance than a single flat rate (option 1) but this will be addressed through measures set out in section 6.

Under the Waste Minimisation Act, the levy is reviewed every three years. Future reviews of the levy could consider elements of the other options including setting higher rates and convergence towards a single rate.

As noted in section 1.2, there is limited data on waste and therefore modelling has been based on estimates. There is also uncertainty over elasticity. Better data on waste will mean that the effectiveness of the levy can be better assessed in future, and future changes can be modelled with greater confidence.

The proposed review of the Act could also lead to future changes in the approach to levy-setting, for example, through consideration of:

- improvements to enforcement tools, which could reduce the risk of levy avoidance
- changing what levy revenue can be spent on – for example a wider range of waste-related activities
- hypothecation and the formula for allocating revenue to territorial authorities.

Public consultation took place from the end of November 2019 until the beginning of February 2020. Over 80 per cent of submitters agreed that the status quo needed to change and most were broadly in support of increasing and progressively expanding the levy. The statutory Waste Advisory Board was also broadly in agreement with this approach. Only a small number of submitters were opposed to the proposals. Most submitters who were opposed were concerned that it would lead to an increase in flytipping or that it would create hardship for low income households. The two main waste management companies called for a single flat rate across all landfills rather than differential rates.

Many submitters called for higher rates than those proposed and a majority supported further progressive increases to levy rates in future.

Valuable feedback was also received on the data proposals, principles for levy investment, and other aspects of the consultation including issues that a future review of the Act should consider.

The following changes were made in response to submissions:

- The consultation document asked for views on rates of either $50 or $60 per tonne for municipal landfills. The preferred option is for a $60 rate, reflecting the preferences of submitters in relation to these rates. While a number of submitters called for higher rates, we consider that there is a need to balance an improved incentive to minimise waste and increased revenue for investment, with minimising the risk of unintended outcomes such as increased fly tipping and illegal disposal of waste, and disproportionate financial impacts for households and businesses.
- The consultation document proposed a rate of $20 for construction and demolition sites – this was raised to $30 to reflect submitter views
- Phasing was adjusted with longer lead-in times
- Further work is proposed to accommodate concerns raised about the impact on recycling operators
- Further work has been carried out on flytipping/levy avoidance as part of developing implementation proposals.

Following the changed economic circumstances as a result of the COVID-19 pandemic, the Ministry informally re-engaged with a number of key stakeholders and sector groups and asked whether their views had changed since their submission. The Ministry also had ongoing engagement with the waste sector as part of its COVID-19 response work.

Most stakeholders had not changed their views from their original submissions – in fact, most felt that the pandemic and expected economic downturn had reinforced their previous viewpoints. There was a common view that COVID-19 had exacerbated existing problems with waste management and resource recovery in New Zealand, and many stakeholders were looking for leadership from Government and a clear sense of investment priorities in waste minimisation.

As a result of the COVID-19 context and associated delays in decision-making, phasing has been further revised. It is also proposed not to extend the levy to industrial monofills at present.

Engagement with Māori
Iwi partners were informed about the consultation through the Ministry's Te Kōmiromiro newsletter and the Ministry also worked with Para Kore, an organisation that works with marae on waste minimisation to reach out to iwi and other interested parties.

The timing of the consultation made it difficult to use the Ministry's network of consultation hui. We anticipate additional opportunities for engagement with Māori as more work takes place on the strategic direction for waste and resource efficiency in New Zealand (including a revised waste strategy and changes to the Act). One of the suggestions made by a number of submitters and by the Waste Advisory Board was for the revised Act to better reflect Mātauranga Māori approaches to managing and minimising waste.

5.2 Summary table of costs and benefits of the preferred approach

Affected parties	Comment	Impact	Evidence certainty
Additional costs of proposed approach compared to taking no action			
Regulated parties (see endnote a)	One-off costs for currently non-levied landfill sites (includes installing weighbridges or other systems for calculating and recording the levy, training and related costs at landfills)	$2m-$6m	Low-Medium
	Ongoing costs associated with weighbridges and measurement systems for currently non-levied landfill sites, and additional administration costs for all landfills	$2.7m - $4.5m per annum	Low-Medium
	Ongoing levy costs (once fully implemented) – costs are expected to be passed on to customers	$240m per annum	Medium
Regulators (see endnote b)	One-off upgrade to OWLS data system	$2.5m (includes upgrade needed for data proposals)	Medium
	Operating costs for OWLS system per annum	$400,000	High
	Increased compliance, monitoring and enforcement costs	Low (levy revenue can be used for some of these)	Medium
	FTE to develop and implement proposals, and associated policy work to 2024	$3m	Medium
Wider government – territorial authorities (see endnote c)	Increased compliance, monitoring and enforcement costs. Education and information on changes.	Low (levy revenue can be used for some of these)	Medium
	Territorial authorities will also have increased costs for disposal of waste they collect. This is likely to be passed on to households and businesses. Territorial authorities will receive significantly increased levy revenue for waste minimisation	$63.4m per annum (included in the $240m per annum levy costs)	Medium

Other parties (see endnote d)	Businesses and households will face increased costs passed on by regulated parties. How costs are passed on by landfill operators will vary. Costs will depend on how much waste is disposed of. These costs would be expected to reduce over time as more alternatives to landfill become available, funded through increased levy revenue	Low-Medium	Medium
Total Monetised Cost	Levy (per annum)	$240m per annum	Medium
	Costs associated with implementing the levy	One off: $7.5m-$11.5m	Medium
		Ongoing: $3.1m - $4.9m per annum	
	Total	Ongoing: $243.1m - $244.9m per annum One off: $7.5m-$11.5m	
Non-monetised costs		Low-medium	Medium

Expected benefits of proposed approach compared to taking no action			
Regulated parties	Depending on the nature of their operations, individual landfill operators may not directly benefit from the proposals, although levy costs would be likely to passed on to customers. The waste sector as a whole (including landfill operators) would benefit from: • Increased business opportunities for recycling/re-use as a result of increased viability of alternatives to landfill and investment of increased levy revenue • Regulation applied more evenly across the waste sector • Greater certainty of feedstock flows and market demand for recycling businesses	Medium	High

	• Opportunity to bid for levy revenue funding for business opportunities		
Regulators and wider government	• More revenue for waste management and minimisation • Improved data for understanding, managing and minimising waste • Reduced demand for landfill capacity	$240m additional levy revenue (split 50:50 between central government and territorial authorities) High	High
Society and the environ-ment	• Reduced need for landfills along with less associated environmental nuisance and loss of amenity • Environmental, economic and social costs of waste will shift from society as a whole to the producers of waste • More efficient use of resources and less need for virgin extracted resources • Reduced greenhouse gas (GHG) emissions • More jobs • Greater resilience to global changes in markets for recyclables	High	High
Total Monetised Benefit	Additional revenue per annum for investment in waste minimisation	$240m	Medium
Non-monetised benefits	Estimated reduction in greenhouse gas emissions of around 125,000 tonnes CO_2 equivalent per annum[30] 317,000 additional tonnes of waste diverted from landfill per annum once fully implemented Around 315 to 495 new jobs in waste minimisation once fully implemented[31]	High	Medium

[30] NZIER corrected an error in their earlier analysis which lead to an over-estimation of greenhouse gas emissions reductions.

[31] Waste recovery activities generally create more employment opportunities than landfilling

Notes:

(a) Operators of the approximately 300 fill sites not currently subject to the levy will have to comply with requirements to accurately calculate and record levy amounts under the Act. Best practice for this is to use a weighbridge.

The regulations permit other estimate-based approaches for calculating the levy – we anticipate this would create some costs associated with establishing and maintaining procedures for measuring, calculating and recording waste disposed of. These are difficult to estimate as they will depend on the systems that are currently in place - these will vary from site to site.

Some larger fill sites may already have weighbridges installed. If this is the case, the upfront costs for ensuring recording systems are accurate enough for using a conversion factor are estimated to be around $5,000 per fill site.

Weighbridge installation is estimated at $60,000 to $80,000 per facility with ongoing costs of around $5,500 per annum for weighbridge maintenance and calibration (or $1,000 to $5,000 per annum for those without weighbridges to ensure average tonnages or conversion factors are applied correctly). It is difficult to estimate the total compliance cost because we do not know how what systems fill sites currently use, and we do not know how many will choose to install a weighbridge. Estimates are therefore provided as a range. Consideration is being given to supporting fill sites with the capital costs of installing weighbridges.

It is also estimated that it could cost up to $10,000 per annum per facility for collecting and reporting data.

(b) **Regulator (central government):** implementing the levy will involve costs for upgrading existing IT systems, and employing staff to work with territorial authorities and landfill operators. There will also be increased costs for ongoing compliance, monitoring and enforcement, administering the levy and allocating levy revenue. Some of these can be covered by levy revenue.

(c) **Territorial authorities**: The cost to councils can be estimated based on the share of waste to municipal landfills that comes from kerbside collections (around 35 per cent). The levy-related costs of disposing of this waste would be around $12.7 million at present. Additional costs are estimated at $63.4 million at a levy rate of $60 per tonne. Under the current arrangements for allocating levy revenue (see section 6, implementation), territorial authorities will receive significantly increased funding from their portion of levy revenue.

Territorial authorities will also have costs associated with implementation, including education, information and promotion of the new proposals, and the need to undertake more compliance, monitoring and enforcement – as set out in section 6 (implementation). Some of this can be funded through increased levy revenue.

(d) **Households** will likely face increased costs for waste disposal but this will vary depending on how councils and landfill operators charge for rubbish collection – it is expected that the impact on households is likely to be relatively low given that the

waste levy is a relatively small component of overall costs and charges for disposing of waste.

- Costs for an average-sized household council rubbish bag (6.5kg) could rise by 11.5 per cent (from $2.50 to $2.83). On this basis, a household disposing of one rubbish bag per week would pay an extra $17.16 per annum.
- The average per capita waste production for individuals is 314kg per annum – the direct cost of the levy may increase from $3.14 plus GST (at a levy of $10 per tonne) to $18.84 plus GST at a levy of $60 per tonne.

Businesses: The main sectors of the economy that generate waste include hospitality, manufacturing, wholesale and retail trade, and the primary sector. Waste production and disposal data by sector is not available for New Zealand. Costs for business have been estimated based on a wide range of sources, including a 2017 report by Eunomia on the waste disposal levy[32].

Levy costs for businesses disposing of industrial, commercial and institutional waste at municipal landfills are estimated at around $10.4 million per annum currently. Additional costs are estimated at around $52.2 million at a levy rate of $60 per tonne.

Levy costs for construction and demolition fills are estimated to be $88 million at a levy rate of $30 per tonne, with the majority of these additional costs likely to be passed on to construction and demolition companies.

In general, the impact on smaller businesses is expected to be relatively low while larger producers of waste could face more substantial cost increases.

For both households and businesses, increased costs could be minimised over time by the increasing availability of opportunities to divert waste as a result of the investment of increased levy revenue in waste minimisation). Larger businesses are more likely to be able to use efficiencies of scale to minimise waste and the levy increase would create direct incentives for reducing waste production and/or increasing reuse and recycling.

Hospitality businesses: A major source of industrial and commercial waste is likely to be hospitality businesses. As an example of the likely impact of increasing the waste levy, a small-scale survey of 20 cafes across New Zealand found that, on average, cafes and restaurants produced 2.8 tonnes of food waste per year[33]. This means that a levy increase to $60 per tonne would result in an additional food waste disposal cost of around $117 per year for the average cafe or restaurant owner (assuming no diversion to composting, animal feed or other options for dealing with organic waste). Across the hospitality sector, levy-related costs for hospitality could increase from $4 million currently to around $25 million by 2024. Hospitality sales exceeded $11 billion in 2018. However, this sector is likely to face economic challenges as a result of COVID-19. Planned investment in waste management activities, such as food rescue, could help this sector to reduce levy costs by minimising waste.

Construction and demolition sector: Based on current disposal patterns, the Ministry for the Environment estimates current levy-related waste disposal charges

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[32] Eunomia 2017. *The New Zealand Waste Disposal Levy. Potential impacts of adjustments to the current levy rate and structure.* Auckland: Eunomia Ltd.

[33] WasteMINZ (2018) *Food waste in the café and restaurant sector in New Zealnad.* Auckland: WasteMINZ

for the construction and demolition sector of around $6.6 million per annum. The levy-related cost of disposal under the proposed new levy could be around $85 million per annum. The construction sector contributed nearly $15 billion to the economy in 2017.

The levy could result in additional levy-related costs of disposing of waste from the average house build of $75, compared with less than $10 at present.[34] The levy-related cost of disposing of waste from a house demolition is estimated to be around $25 at present.[35] The proposed levy rates could result in an additional $305 in levy charges.

While this is not necessarily a significant sum relative to overall construction or demolition costs for a single dwelling, it would be a more substantial increase for a large-scale developer. There are significant opportunities to reduce or avoid increased levy costs through additional recovery of construction materials – research suggests that typically at least 50 per cent of waste can be recycled from a construction site[36]. Larger developers would potentially have more opportunities for reducing waste through efficiencies of scale, for example through using standardised housing designs.

Primary sector: An estimated 7.5 per cent of rural waste from the primary sector is disposed of at municipal landfills[37]. Current levy costs for this are estimated to be $1.3 million. Additional costs could be $6.3 million at the proposed rate of $60 per tonne for municipal landfills.

Small amounts of waste from other primary sectors including forestry, fisheries and aquaculture are likely also disposed of at landfills. These types of waste can already sometimes serve as 'feedstocks' for other businesses (a critical part of a circular economy). Increased levy revenue could be used to support further research and development of innovative uses of this type of waste. For example, funding from the Waste Minimisation Fund (the WMF) is currently being used to investigate alternative uses of grape marc (a by-product of wine-making).[38]

Recycling operators raised concerns about cost increases for disposing of recycling by-products and the impact on their businesses.

Recycling operators have to dispose of contaminated recyclables from kerbside collections, as well as other by-products of their operations. For example, scrap metal processors extract valuable metals from cars and whiteware but are left with low-value residual materials known as 'shredder floc' which currently has no potential for reuse.

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34 Based on an estimated 5 tonnes of waste per newbuild three-bedroom house (using the mid-point of 4 tonnes – Rohani et al. (2019) and Beacon Pathway (2013)), and assuming the split of that waste between different disposal options based on Eunomia (2017) (ie, some of that waste already goes to municipal (class 1) landfills, while other components go to construction and demolition sites and so on).

35 Based on an estimated 20 tonnes of waste, drawing on Envision (2019) and assuming disposal of waste based on Eunomia (2017).

36 BRANZ Ltd (2014) Waste Reduction – Construction. Wellington: Building Research Association of New Zealand

37 Eunomia 2017. *The New Zealand Waste Disposal Levy. Potential impacts of adjustments to the current levy rate and structure.* Auckland: Eunomia Ltd.

Overall, benefits for recycling operators would be expected to outweigh costs because the proposals would lead to increased demand for recycling services and investment of levy revenue into waste minimisation services and infrastructure. Other policy initiatives in the waste work programme such as proposals for improving kerbside collections and sorting, regulatory product stewardship and a container return scheme will also benefit recycling operators.

However, in the short term, increased costs for disposal of by-products could create challenges particularly for the metal and fibre (paper and card) sectors. These challenges are likely to be exacerbated by the global response to COVID-19 (eg, additional challenges accessing international markets).

This is a difficult issue to address within the current settings of the Act. For example, levy exemptions can only be made in “exceptional circumstances” under the Act. Another option would be to set a lower levy rate for the by-products of recycling operations but this would create administrative complexity and potential loopholes for levy avoidance. Further investigation of available options is proposed to address this – these will be concluded before changes are implemented (ie, by July 2021).

5.3 What other impacts is this approach likely to have?

The levy proposals are expected to benefit society as a whole and the environment:

- Costs of waste disposal will better reflect the true costs of current patterns of extracting, using and disposing of waste
- More re-use of materials and less use of virgin materials with associated impacts on natural resources and greenhouse gas emissions
- Reduced greenhouse gas emissions from organic waste disposed of to landfills
- Investment in the resource recovery sector will improve the range and quantity of materials that can be recycled onshore, providing greater resilience to global changes in markets for recyclables, and generating more local employment (the resource recovery sector typically generates around 5 jobs for every 1 job in waste disposal)
- Reduced need for landfills along with less associated environmental nuisance, hazards, and loss of amenity.

Section 6: Implementation and operation

6.1 How will the new arrangements work in practice?

Implementation

Implementation of the proposals requires the development of new regulations under the Waste Minimisation Act 2008 (the Act). It is proposed that regulations would be gazetted in November/December 2020.

The Ministry will develop a substantial implementation programme that will focus on working with all regulated parties to make sure they understand their obligations.

Implementing an increased levy for municipal landfills (class 1) is relatively straightforward for the Ministry and would not require a significant lead-in time to notify landfills and make changes to the Ministry's system to support higher charges and payments. There is a need for lead-in time however for territorial authorities, as they set their landfill gate fees as part of their annual plan process, and other landfill operators may need to change rates in commercial contracts.

Expanding the levy to other classes of landfill is more complex and involves:

- extending the Ministry's online Waste ICT system to additional fill sites and incorporating new functionality to collect additional waste data
- identifying and classifying fill sites, and ensuring operators are aware of their obligations
- fill site operators may need to install weighbridges and/or systems that allow them to comply with the regulations for accurately measuring, calculating and recording levy payments and waste tonnages
- fill site operators will need to be trained in using online systems and processes.

Implementation of the proposals would be phased. Because many affected businesses will have commercial contracts in place, the proposed changes would take effect on 1 July to align with the financial year.

Phasing implementation allows time for central government, territorial authorities, and fill site operators to prepare for the changes. It also allows time for businesses to consider opportunities for waste minimisation ahead of increased costs for waste disposal.

The consultation document invited views on four options for phasing implementation. Many submitters called for rapid action given the pressing waste challenges we currently face.

> "…*drive change as rapidly as we can*" Resilienz Ltd

> "…*phasing in will blunt the effectiveness by allowing people to get used to just paying the higher amount*". Individual submitter

Other submitters, particularly territorial authorities and the waste sector, raised concerns about the need for sufficient lead-in time for effective implementation.

"Adopting a phased approach to bring in any agreed increase in waste levy would permit Hurunui District Council and others to manage the effect of increased costs, prepare infrastructure and enable enhanced or additional education and awareness raising to be implemented." Hurunui District Council

"We need to allow time for the adjustment to new costs and any necessary plans to manage the financial impact for businesses to be identified, developed and implemented. The phasing in of the levy allows for this transition and as in most, if not all cases, costs will be passed on to customers it also allows time for them to prepare to meet the additional costs that they will incur." Business North Harbour

Implementation timescales have been extended from the options set out in the consultation document in response to concerns about lead-in time, to allow more time to work with the waste sector and local government on implementation. The impact of COVID-19 has delayed the decision-making process and this is also reflected in implementation phasing. It is currently proposed that implementation is phased as follows:

Landfill Class	2021	2022	2023	2024
Municipal landfill (class 1)	$20	$30	$50	$60
Construction and demolition fill (class 2)	-	$20	$20	$30
Managed fill (class 3)	-	-	$10	$10
Controlled fill (class 4)	-	-	$10	$10

The levy would be expanded to class 2 construction and demolition sites first as there are existing opportunities for waste minimisation and diversion of construction and demolition materials. Implementation for these sites is more straightforward than other sites as there are relatively few class 2 fill sites. Class 3 and 4 fill sites have a longer lead-in time as they present more of an implementation challenge. Many class 3 and 4 fill sites operate on a relatively informal and often time-limited basis. The implementation timescale allows time to identify and prepare these sites.

The Ministry would work in partnership with territorial authorities, regional councils and the waste sector to identify sites. As noted in section 3.1, it is proposed to classify landfills according to the type of waste they take and potential for environmental harm, based on the WasteMINZ *Technical Guidelines for Disposal to Land*, produced by waste stakeholders and government[39]. The Ministry is also investigating an enhanced national direction on disposal to land under the Resource Management Act to provide greater certainty and clarity on landfill classifications and the type of materials allowed at different classes of fill site.

It is proposed that fill sites would be required to start reporting on waste quantities six months in advance of the levy changes coming into effect. This would enable systems to be put in place and fully embedded in advance of changes to the levy.

It is proposed that a team of up to ten FTE staff will be employed by the Ministry to develop and implement systems and processes in advance of the proposals taking effect. Where

[39] WasteMINZ (2018) *Technical Guidelines for Disposal to Land,*. Auckland

practicable, these staff will be regionally based to be proximate to councils and newly levied landfills.

Compliance

The Ministry is responsible for the compliance assurance programme that monitors disposal facilities and territorial authorities to ensure they are fulfilling their obligations under the Act and associated regulations.

Under the Resource Management Act 1991 (RMA), regional councils are responsible for monitoring and enforcing rules about the environmental effects of waste disposal on land. These include provisions to manage discharges, use an effective liner to prevent leaching and ensure only the consented waste type is disposed of at the site.

Waste collection and disposal is a core service that territorial authorities are responsible for. Territorial authorities also have a role under the Litter Act 1979. Territorial authorities must appoint litter control officers, who have powers to prevent littering from occurring, can require litter to be cleared, and issue infringement notices. Councils may spend considerable amounts on managing fly tipping. As noted elsewhere, there is a risk of an increase in fly tipping with higher levy rates.

Investment of levy revenue

The levy proposals are expected to result in additional revenue of around $240 million per annum once fully implemented. This would create a significant opportunity to invest in a number of key priority areas such as improving New Zealand's resource recovery infrastructure; research, development and innovation; data; compliance, monitoring and enforcement, and community initiatives.

Developing an investment approach

The consultation document proposed that an investment plan was developed for the 50 per cent portion of levy revenue allocated to central government for waste minimisation and sought views on a set of principles for the plan. Consultation submissions supported having a plan and taking a more strategic and proactive approach to investment. Submitters called for appropriate governance arrangements for the funding, including stakeholder involvement in decision-making. Many submitters also called for investment priorities to be underpinned by an updated waste strategy, informed by the waste hierarchy and focussed on minimising the generation of waste.

The Ministry commissioned Grant Thornton to provide advice on investment priorities and to consider options for institutional arrangements for delivering the investment plan. Grant Thornton consulted with a wide range of key industry and local and central government stakeholders as well as considering submissions on the levy consultation.

Both this work and the consultation, has confirmed that:

- there is a major infrastructure gap in New Zealand for recycling and waste minimisation – the increased levy revenue would make a significant contribution to addressing this, thereby diverting more waste from landfill and reducing New Zealand's reliance on sending waste overseas for processing
- there is a compelling need for the strategic investment of resources in a range of other waste minimisation activities (eg, research and development, consumer education etc.)

- the current Waste Minimisation Fund process is not fit for purpose for large–scale, strategic investment across a range of investment types such as infrastructure and research and development
- the Act is too restrictive on the purposes for which levy revenue can be used, and the requirement for fifty per cent of revenue to be allocated to territorial authorities (on a population basis). The scope of the proposed Act review could include consideration of how the Act could better enable the strategic investment of revenue to improve our overall performance on waste.

Based on Grant Thornton's advice, a strategic framework for setting direction and investment in waste minimisation has been developed. This identifies a set of key investment envelopes for the 50 per cent share of revenue for central government waste minimisation activities. These are set out in the table below.

Funding envelope	Initial allocation	Likely to involve	Examples
Infrastructure	65%	All parts of sector (central & local govt, business, NGOs)	• Equipment for standard kerbside collections, including organic waste. • New material processing facilities and/or equipment
RDI	10%	State research organisations, business, NGOs	Research into design, alternative products and packaging, construction techniques, re-use options, disposal methods
Information & education	3%	All parts of sector (central & local govt, business, NGOs)	• Large public information campaigns • School based education programmes • Local education initiatives
Community activity	10%	Local govt, NGOs, business, others	• Many things currently funded by WMF • Food waste rescue and redistribution, local resource recovery, surveys, innovation
Regulatory activity	3%	Central and local govt	Compliance, monitoring and enforcement
Data & evaluation	2%	Central & local govt	• Record of all waste disposal activities • Data on waste quantities, sources, composition • Use of levy funds, performance on waste minimisation

Legacy waste problems	5%	All parts of sector (central & local govt, business, NGOs)	Remediation projects, eg closed landfill sites, toxic sites
Other/contingency	2%		

The framework recognises that waste is a multi-dimensional challenge and that it is important to both reduce the generation of waste at source as well as increase our capacity to recycle, recover and manage waste. The investment approach is grounded in the waste hierarchy. For example investment in research and development could support the top level of the waste hierarchy, perhaps by focussing on reducing harmful plastic waste. Investment in infrastructure would support the diversion of existing waste streams from landfill and would be informed by a waste sector infrastructure plan (with a horizon of at least ten years).

Initial priorities are expected to include onshore plastic reprocessing, organic waste, and paper and card reprocessing infrastructure.

There is likely to be around a three year lead-in for large-scale infrastructure investment, although some smaller scale infrastructure needs that have been identified in existing work programmes could be developed sooner, such as improving kerbside collection and container refund infrastructure.

A dedicated research and development fund would be established to develop and commercialise sustainable alternatives to harmful and difficult-to-recycle plastics. Smaller, but still significant, amounts of revenue would be allocated to community solutions for local waste issues and community engagement in waste minimisation; addressing gaps in data; behaviour change initiatives and enhancing compliance, monitoring and enforcement.

It is also proposed that funding could be made available for addressing risks from legacy landfills. Some elements of the investment framework, for example legacy landfills, would be subject to the proposed review of the Act as they fall outside the current provisions of the Act for use of levy revenue.

The investment approach would be guided by:

- a revised New Zealand waste minimisation strategy which would set long term direction and goals
- a ten year waste infrastructure plan
- a four year waste action and investment plan which would translate the strategy and infrastructure plan into medium term priorities across each waste stream.

It is proposed that the Ministry will continue to develop the strategic investment approach and report back to Cabinet before the end of October 2020 with proposals for the content of the guiding strategy and plans, and the process for finalising them.

Governance arrangements

Grant Thornton identified options for the governance of investment funding that involved delegating investment responsibilities to existing organisations. The full range of investment functions could also be aggregated in a new organisation (eg, a Schedule 4A company or Crown Entity). Revenue from the increased levy would not become available until the 2021/22 financial year, allowing time to establish appropriate arrangements for governing

and allocating funding. It is proposed that the Ministry further investigate optimal institutional arrangements for investing levy revenue, and report back to Cabinet on these before the end of October 2020.

Territorial authority portion of levy revenue

Further work is planned with local government to ensure the 50 per cent portion of levy funds allocated to territorial local authorities is invested strategically.

Territorial authorities are required to spend levy funds to promote or achieve waste minimisation, in accordance with their waste management and minimisation plans. They are required to have regard to the New Zealand Waste Strategy in preparing, amending, or revoking their waste management and minimisation plans. The existing Waste Strategy is high-level, and does not provide much guidance, particularly if levy funds substantially increase.

It is proposed:

- to amend the New Zealand Waste Strategy in the second half of 2020, to provide a robust strategic framework for the large-scale changes required to waste and recycling systems
- to investigate the use of tools in the Act to provide further guidance to territorial authorities:
    - give direction to territorial authorities on what they should include in their waste management and minimisation plans in order to assist in achieving the revised Waste Strategy, and/or
    - set performance standards for implementation of their waste management and minimisation plans.

Currently, territorial authorities report on their spending of levy money on a voluntary basis. This information is often incomplete and is not reported consistently. The proposed data reporting requirements (not included in the current proposal) would require territorial authorities to report on their spending of levy revenue in a standardised way. It is also proposed that territorial authorities are required to provide information about their performance in achieving waste minimisation.

Timing

Revenue from the increased levy would not start to become available until the 2021/22 financial year. This allows time to establish institutional arrangements for governing and allocating funding, revising the New Zealand Waste Strategy, and to initiate the proposed review of the Act. There would be scope to develop other funding options in the short term for urgent priorities.

6.2 What are the implementation risks?

Adequate time and resources for implementation

As noted above, expanding the levy to more fill sites is complex and there could be a risk that systems and processes may not be in place at the point where the levy changes come into effect. This will be mitigated by careful implementation planning and recruiting additional staff to assist with implementation.

Levy avoidance and fly tipping

As noted previously, the differential rates proposed for different types of landfill could lead to waste being inappropriately disposed of at landfills with lower levy rates. Waste could also be disposed of inappropriately in cleanfills or farm dumps which are not proposed to be subject to the levy, and there could be an increased risk of fly tipping.

Risks will be mitigated by:

- phasing the implementation of the changes
- investment of levy revenue in alternatives to disposal to landfill, providing more accessible and affordable opportunities for waste diversion
- compliance, monitoring and enforcement.

The Ministry plans to increase its capacity for compliance assurance, funded through the increased levy revenue, with a focus on:

- communication with and education of landfill operators
- site visits by compliance staff to landfill operators and territorial authorities
- continuing to use external auditors when required.

RMA controls will be important to ensure that levy avoidance behaviour does not lead to waste being disposed of in the wrong type of landfill, or into cleanfills. Illegal dumping can be addressed under the provisions of the RMA, but this can take time and be resource intensive. It can also be difficult for smaller authorities with limited resources and large areas to monitor. In the short term, updated landfill guidelines will help regional councils include more effective consent conditions for new fill sites. There will be better clarity around what monitoring and reporting is required, and what waste types are acceptable at the specific type of fill. Effective levy implementation will include a medium- to long-term work programme to improve plan rules (in line with the updated landfill guidelines) and provide councils with better support for monitoring and enforcing rules.

The Ministry is planning further support for territorial authorities including guidance on how levy funds can be used in relation to littering and fly tipping. Levy funds have in the past been directed to litter minimisation projects. It would be beneficial for all council waste management and minimisation plans to include a section addressing the issues of fly tipping and illegal dumping.

Proposed review of the Act

The proposed review of the Act would consider the best tools and systems for dealing with levy avoidance and fly tipping. This might include:

- making levy funding available to regional councils to support their monitoring roles
- addressing the offences and penalties regime to bring it into line with best practice enforcement models
- increasing the range of compliance tools available.

It is also proposed to review the Litter Act (1979) to ensure it is fit for purpose.

Further work to address levy avoidance

Further proposals for addressing levy avoidance include:

- establishing funds for illegal dumping prevention and enforcement and for litter prevention and enforcement, open to councils and community groups
- developing strategies for litter prevention and for illegal dumping
- proposals for data reporting requirements including for cleanfills
- continuing work already underway to improve management of rural waste including through regulated product stewardship and an overarching regulatory framework for agricultural waste.

Minimising compliance costs

The main compliance costs will fall on newly levied landfill operators. Compliance costs can be minimised through:

- free access to the OWLS tool, including online support and potentially phone-based and in-person training for operators
- the online reporting system will be compatible with landfill management software
- as part of implementation, the Ministry is looking at the potential to provide partial funding to offset the cost of infrastructure at newly levied sites or sites subject to data proposals
- as mentioned above, allowing alternative options to weighbridges (eg, estimation methods).

Section 7: Monitoring, evaluation and review

7.1 How will the impact of the new arrangements be monitored?

Improving data on waste

Under the Act, operators of landfills that are subject to the levy are required to report on tonnages of waste disposed of and diverted from landfill (s86 1(a)). This is recorded in the Ministry for the Environment's Online Waste Levy System (OWLS).

As the levy is expanded to other sites as proposed, this requirement will come into effect. It is proposed to implement reporting on waste quantities six months in advance of the levy coming into effect (see section 6 above).

It is also proposed to establish a national record of landfills, cleanfills and transfer stations

The Act also has provision to require reporting to assist in measuring performance and progress in waste management and minimisation and in identifying improvements needed in infrastructure for waste minimisation (s86 1(b)).

Using these provisions it is proposed to establish further data reporting requirements. These requirements are not included in the current proposals – further advice will be provided on these later in the year. It is proposed to require reporting on the activity and geographic source of waste being disposed of and for the Ministry to carry out periodic surveys of waste composition at landfills and transfer stations.

The data proposals will enable the Ministry to develop comprehensive and consistent data on waste including quantities, composition and geographic flows. This will help with monitoring the effectiveness of the levy because it will provide an indication of whether waste is increasing or decreasing, and whether more waste is being diverted. It will also enable the Ministry to build a much more comprehensive picture of waste in New Zealand, and identify where to focus efforts to reduce particular types of waste. This will inform where increased levy revenue should be invested and the effectiveness of the investment.

Improving data on territorial authority performance on waste minimisation

Until now, territorial authorities have reported voluntarily on how they have spent the portion of levy revenue that they receive. As a result this data has been inconsistent and sometimes incomplete. The further data reporting requirements noted above will propose to make this reporting mandatory and to standardise how this information is reported.

It is also proposed that territorial authorities provide information about their performance in achieving waste minimisation outcomes. The Ministry would work with territorial authorities to develop the type of information that would be required and the best ways to collect and report this data.

This would provide a clearer picture of levy spending and performance as well as allowing territorial authorities to be compared and the measurement of progress towards targets.

7.2 When and how will the new arrangements be reviewed?

The Act requires the Minister to review the effectiveness of the levy at least once every three years

The Act states (s39) that, in undertaking a review, the Minister:

- must consider whether the amount of waste disposed of in New Zealand has decreased since the last review;
- must consider whether the amount of waste reused, recycled or recovered in New Zealand has increased since the last review; and
- may consider any other matters that he or she thinks relevant.

Reviews were undertaken in 2011, 2014 and 2017. A review has been undertaken in 2020 as part of the work to develop these proposals and the next review is due to be undertaken in 2023. At this stage, implementation of these proposals will still be underway, but it will be useful for identifying any preliminary issues with implementation and the initial impact of the levy proposals. The review due to take place in 2026 will be able to provide a more comprehensive picture of levy effectiveness and whether further changes should be made.

Previous reviews have been limited by a lack of waste data and have identified this as a priority area for improvement. The proposals to improve data on waste described above will greatly improve the quality of future reviews. Reviews will be important for understanding the effectiveness of levy rates in reducing waste, the impact of investment of levy revenue, and whether levy rates need to be further adjusted in future.

Under the Act, the Minister must obtain and consider the advice of the Waste Advisory Board in undertaking a review of the levy. Members of the Waste Advisory Board include stakeholders from community organisations, industry, local government and with tikanga Māori knowledge.

The Act also requires the Minister to be satisfied that there has been adequate consultation with affected parties before making any changes to the regulations (s41 2(b)).