

**Our reference – 2021/809**

**Your reference - 2021/23/11**

2 December 2021

[REDACTED]

[REDACTED]

### **Response - Official Information Request**

I refer to your request for information received on 23/11/2021. Your request has been considered under the Local Government Official Information and Meetings Act 1987 (LGOIMA) and I provide the following information.

#### **Copy of the Levin Landfill presentation made by BERL and Morrison Solutions at recent Council meeting**

The Council meeting prior to your request was on 10 November 2021. At this meeting two presentations were made in relation to the Levin Landfill; one was from BERL and the other was from Morrison Solutions. We have taken your request to mean those two presentations.

We attach the presentations to this response.

Horowhenua District Council publishes responses to Local Government Official Information and Meetings Act 1987 (LGOIMA) requests that we consider to be of wider public interest, or which relate to a subject that has been widely requested. To protect your privacy, we will not generally publish personal information about you, or information that identifies you. We will publish the LGOIMA response along with a summary of the request on our website. Requests and responses may be paraphrased.

If you have any queries regarding this information, please contact the LGOIMA Officer on 06 366 0999 or email - [LGOIMAOfficer@horowhenua.govt.nz](mailto:LGOIMAOfficer@horowhenua.govt.nz)

Yours sincerely,



Lisa Slade

**Executive Sponsor - LGOIMA**

# *Levin Landfill and Horowhenua waste disposal*

## **Wellbeing case**

Nick Robertson, Senior Consultant  
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*Making sense of the numbers*



# What is the wellbeing case?

- Wellbeing is about people and creating conditions to thrive across generations
- The wellbeing case assesses how options contribute to, or detract from **economic, social, cultural** and **environmental** wellbeing
- A wellbeing case presents broader longer-term impacts, not captured by the strategic, management, commercial, and financial cases
- Wellbeing does not have to be a number or measured directly. Options are assessed against impacts on outcomes
- Wellbeing consideration is required by the Local Government Act 2002.

# The wellbeing framework

Outcomes	Weight
Waste disposal supports healthy lifestyles	8.5
Waste disposal creates a safe and supportive environment	10
Waste disposal supports inclusive and connected communities	6.5
<b>Social wellbeing total</b>	<b>25</b>
Waste disposal creates and supports jobs and contributes to GDP in the Horowhenua District	5
Waste disposal is affordable for businesses and residents	11
Waste disposal meets the future needs of the District, including population and business growth	4.5
Horowhenua promotes waste reduction, recycling, energy conservation and efficiency	4.5
<b>Economic wellbeing total</b>	<b>25</b>
Waste disposal meets best practice for environmental management of landfills	12
Waste disposal does not further degrade Horowhenua's rivers, lakes and waterways	8
Waste disposal will not compromise a sustainable environment	5
<b>Environmental wellbeing total</b>	<b>25</b>
Horowhenua supports cultural and traditional activities in the area surrounding the current landfill	10
Waste disposal supports the development and capacity building of local Marae, hapū and iwi	6
The landfill decision builds and enhances the relationship between HDC and Tangata Whenua	9
<b>Cultural wellbeing total</b>	<b>25</b>
<b>Total weighting</b>	<b>100</b>

# Social wellbeing

**Social wellbeing** involves individuals, families, whanau, hapū, iwi, and communities being able to set goals and achieve them, such as education, health, the strength of community, financial and personal security, equity of opportunity, and rights and freedoms.

- The potential to maximise social wellbeing is greatest the sooner the Landfill is closed
- Closure limits the volume of waste and odour, reducing the possible short- and long-term social impacts of the Landfill.

Outcomes	Weight	2022	2025	2037
Waste disposal supports healthy lifestyles	8.5	4	3	2
Waste disposal creates a safe and supportive environment	10	5	4	2
Waste disposal supports inclusive and connected communities	6.5	4	3	1
<b>Social wellbeing total</b>	<b>25</b>	<b>110</b>	<b>85</b>	<b>43.5</b>

# Social wellbeing headlines

- Ceasing disposal, closing the Landfill and restoring the site would improve the lifestyles of local residents
- Community members are scared by the experience of the old dump and are concerned that history will repeat
- Parties to the Landfill Agreement want to see the Landfill closed by 31 December 2025. This would allow HDC's chief executive to comply with the agreement
- If the Landfill was to remain open and grow past 2025 residents would be disappointed and lose further trust in HDC
- Closing at any time would remove a mental and physical barrier, improving the sense of connectivity for the Hōkio community
- The sooner the Landfill is closed, the sooner potential growth of Hōkio could occur.

# Economic wellbeing

**Economic wellbeing** looks at whether the economy can generate the employment and wealth necessary to provide the requirements that make for wellbeing, such as health, financial security, and equity of opportunity.

- Closing in 2037 has a lower cost over the 15 year period. However, when outstanding loans at the end of the period are included closing in 2022 is more favourable

Outcomes	Weight	2022	2025	2037
Waste disposal creates and supports jobs and contributes to GDP in the Horowhenua District	5	1	2	5
Waste disposal is affordable for businesses and residents	11	4	1	3
Waste disposal meets the future needs of the District, including population and business growth	4.5	3	3	3
Horowhenua promotes waste reduction, recycling, energy conservation and efficiency	4.5	3	2	1
<b>Economic wellbeing total</b>	<b>25</b>	<b>76</b>	<b>43.5</b>	<b>76</b>

# Economic wellbeing headlines (1/2)

- Closure in 2037 provides the greatest impact on GDP and employment across the Horizons Region

	2022	2025	2037
GDP (\$m)	16.6	26.7	27.7
Employment (FTEs)	162	268	276

- Cost has three main components:
  - Fixed cost regardless of whether the Landfill remains open
  - Variable costs that change depending on the option
  - Capital loan repayments outstanding
- Short term, the LRRF cost is unlikely to be impacted. However, this is not to say that costs won't increase. The LRRF currently sits just above the median and just below the average
- Closing in 2037 would provide competition in the market, but HDC may struggle to compete on price long-term.



# Economic wellbeing headlines (2/2)

- All three options increase the cost for residents and ratepayers
- How costs are spread is a decision for HDC (Rates, bag charges, transfer station gate fees) Rates only example is below.

	2022	2025	2037
Rating unit cost increase per year ex GST (\$2021)	58	67	57
Current average rate inc GST (\$2021)	2,433	2,433	2,433
New average rate inc GST (\$2021)	2,500	2,511	2,499
Rate increase (percent)	2.7	3.2	2.7

- The increase does not include any potential offset from the Landfill aftercare fund, or repayments of capital loans outstanding
- All options will provide for the needs of the District from 2022-2036 and have the capacity to take increased volumes of waste
- Fly tipping is not expected to increase.

# Environmental wellbeing

**Environmental wellbeing** considers whether the natural environment can sustainably support the activities that constitute healthy community life, such as air quality, fresh water, uncontaminated land, and control of pollution.

- Option 1 has the greatest impact on minimising the negative impacts of waste disposal on environmental wellbeing.

Outcomes	Weight	2022	2025	2037
Waste disposal meets best practice for environmental management of landfills	12	4	3	2
Waste disposal does not further degrade Horowhenua's rivers, lakes and waterways	8	5	5	4
Waste disposal will not compromise a sustainable environment	5	5	4	3
<b>Environmental wellbeing total</b>	<b>25</b>	<b>113</b>	<b>96</b>	<b>71</b>

# Environmental wellbeing headlines

- There is no evidence that the modern Landfill is currently causing environmental degradation of rivers, lakes and waterways
- Although low, the risk of off-site movement of leachate and gas at the Landfill is higher than a site that has the same engineering controls, but with natural containment
- Finite life of Landfill liners, location on sand dunes and larger footprint increase the risk to Horowhenua's natural environment
- Alternative landfills closest to Levin have superior gas capture
- Transporting and disposing of waste to an alternative landfill would create less emissions
- Disposing waste at an alternative landfill outside the District minimises the risk of future environmental impacts in Horowhenua.

# Cultural wellbeing

**Cultural wellbeing** looks at the shared beliefs, values, customs, behaviours and identities reflected through language, stories, visual and performing arts, ceremonies and heritage that make up our communities.

- Option 1 limits the volume of waste. Moving away from using the site as a landfill will support restoration
- Option 2 would delay the positive impacts by four years.

Outcomes	Weight	2022	2025	2037
Horowhenua supports cultural and traditional activities in the area surrounding the current landfill	10	4	3	1
Waste disposal supports the development and capacity building of local Marae, hapū and iwi	6	0	0	0
The landfill decision builds and enhances the relationship between HDC and tangata whenua	9	5	3	1
<b>Cultural wellbeing total</b>	<b>25</b>	<b>85</b>	<b>57</b>	<b>19</b>

# Cultural wellbeing headlines

- To promote and support cultural and traditional activities in the area, it is necessary to stop perceived environmental degradation
- Tangata whenua wish for the early closure of the Landfill
- Iwi seek to work in a positive relationship with HDC. Collaborating positively to enhance cultural values and alleviate negative effects would be beneficial
- Delaying Landfill closure delays the opportunity to build relationships therefore, limiting HDC's ability to support cultural and traditional activities
- If the Landfill closure date is past 2025, time and resources will likely be diverted to efforts to prevent the Landfill remaining open
- The options do not explicitly provide opportunities for local Marae, hapū and iwi, and do not enable capacity and capability building.

# Final wellbeing assessment

Outcomes	Weight	2022	2025	2037
Waste disposal supports healthy lifestyles	8.5	4	3	2
Waste disposal creates a safe and supportive environment	10	5	4	2
Waste disposal supports inclusive and connected communities	6.5	4	3	1
<b>Social wellbeing total</b>	<b>25</b>	<b>110</b>	<b>85</b>	<b>43.5</b>
Waste disposal creates and supports jobs and contributes to GDP in the Horowhenua District	5	1	2	5
Waste disposal is affordable for businesses and residents	11	4	1	3
Waste disposal meets the future needs of the District, including population and business growth	4.5	3	3	3
Horowhenua promotes waste reduction, recycling, energy conservation and efficiency	4.5	3	2	1
<b>Economic wellbeing total</b>	<b>25</b>	<b>76</b>	<b>43.5</b>	<b>76</b>
Waste disposal meets best practice for environmental management of landfills	12	4	3	2
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Horowhenua supports cultural and traditional activities in the area surrounding the current landfill	10	4	3	1
Waste disposal supports the development and capacity building of local Marae, hapū and iwi	6	0	0	0
The landfill decision builds and enhances the relationship between HDC and tangata whenua	9	5	3	1
<b>Cultural wellbeing total</b>	<b>25</b>	<b>85</b>	<b>57</b>	<b>19</b>
<b>Total wellbeing score (out of 500)</b>	<b>100</b>	<b>384</b>	<b>281.5</b>	<b>209.5</b>



*Making sense of the numbers*

[www.berl.co.nz](http://www.berl.co.nz)

# Future of Levin Landfill

## Presentation of Business Case

10 November 2021



# Overview of today

- Overview of landfill and closure date review process
- Morrison Solutions' recommendation
- Performance of Levin Landfill
- Impact regional and national initiatives
- Description of options
- Financial assessment of options
- Wellbeing assessment of options

# Levin Landfill – site map

- Current landfill opened 2004 with consents until 2037
- Old landfill operational to 2004, now closed and capped



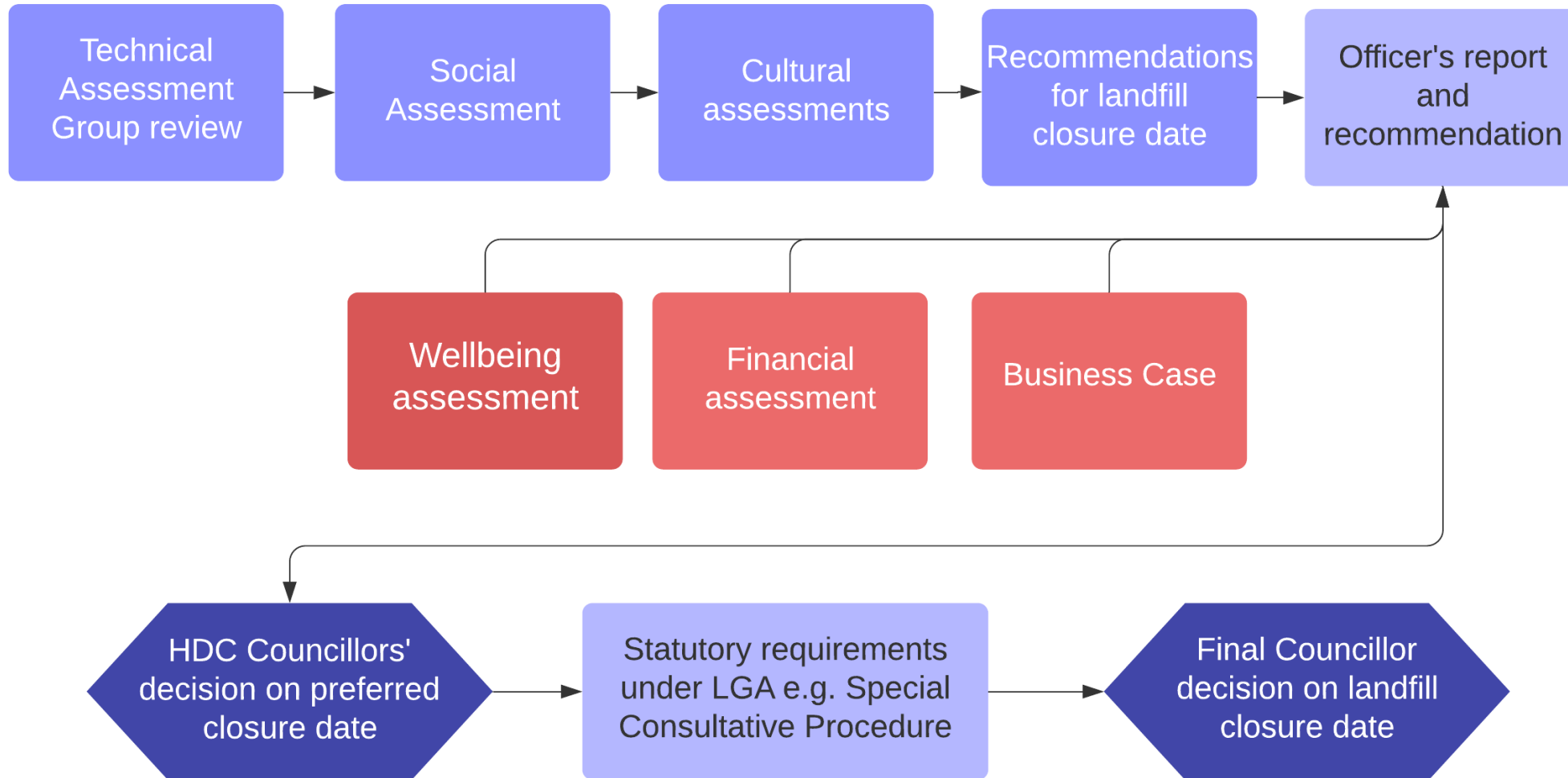
# Overview

- Old landfill operating from 1950s
- Unlined on sand dunes
- New landfill commenced operations in 2004, consented through the RMA process with an engineered liner
- Resource Consent conditions include a five-yearly review of consent conditions
- 2016 review took 3.5 years until resolved in 2019 by the signing of the Landfill Agreement

# Levin Landfill Agreement

- The Landfill Agreement required a review of the closure date of the Landfill
- HDC's CEO must recommend a closure date of no later than 31 December 2025
- HDC Councillors decide on the closure date for the Levin Landfill
- If Levin Landfill remains open past beyond 2025, the Landfill Agreement terminates
- Parties can take whatever action they see fit following this
- The Resource Consent review process will happen again in 2024, 2029 and 2034, regardless of closure date chosen

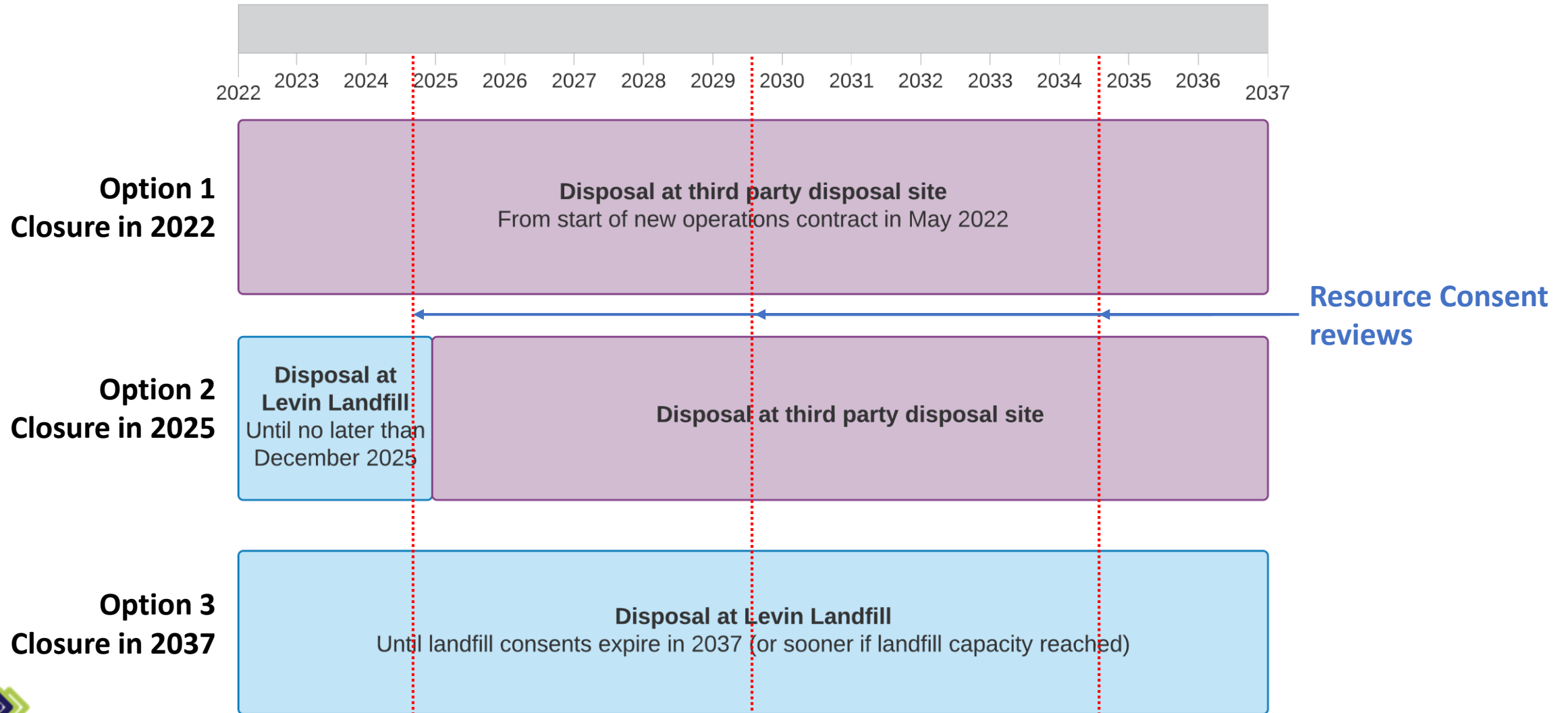
# Levin Landfill Agreement – closure date process



# Business Case

- Morrison Solutions has prepared a business case and recommended a closure date to Council
- Our assessment follows the Better Business Case Framework, adapted to suit the specific project and local government environment
- Five key parameters which are assessed using multi-criteria analysis:
  - Strategic fit
  - Wellbeing analysis
  - Financial analysis
  - Commercial implications
  - Implementation considerations

# Options for landfill closure date



# Recommendation from Morrison Solutions

- In our independent opinion, the recommended option is for closure of the Levin Landfill in 2022 (Option 1)
- This is because it provides the best outcome for Council from a strategic, financial and wellbeing perspective in a much lower risk environment



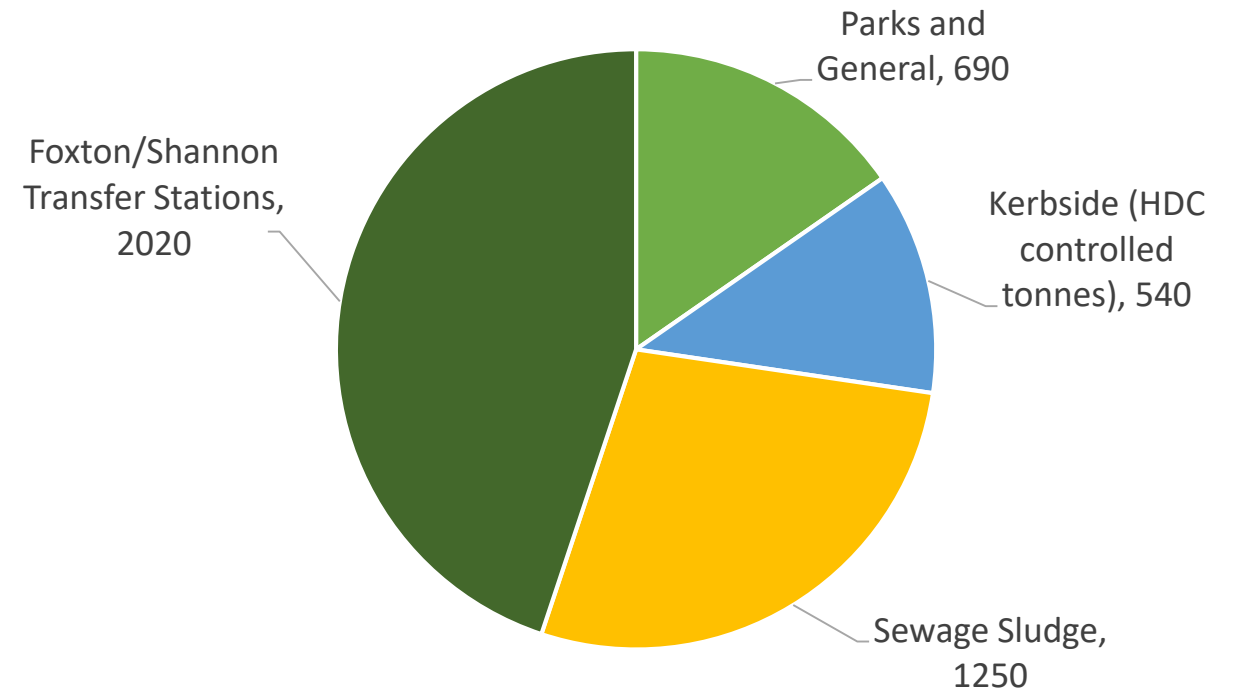
# Overview of assessment

	Option 1: Close the Levin Landfill in 2022	Option 2: Close the Levin Landfill in 2025	Option 3: Close the Levin Landfill in 2037, or sooner if full
Strategic alignment	●	●	●
Wellbeing – cultural	●	●	●
Wellbeing – social	●	●	●
Wellbeing – environment	●	●	●
Wellbeing – economic	●	●	●
Financial	●	●	●
Risk	●	●	●

# Current HDC council-controlled waste volumes

- HDC's WMMP proposes investigation of food and green waste collections
- Government potentially banning food and green waste to landfill by 2030
- WMMP also references:
  - bulky household waste collection
  - construction & demolition waste sorting
- These will all have a different impact on Council-controlled waste volumes

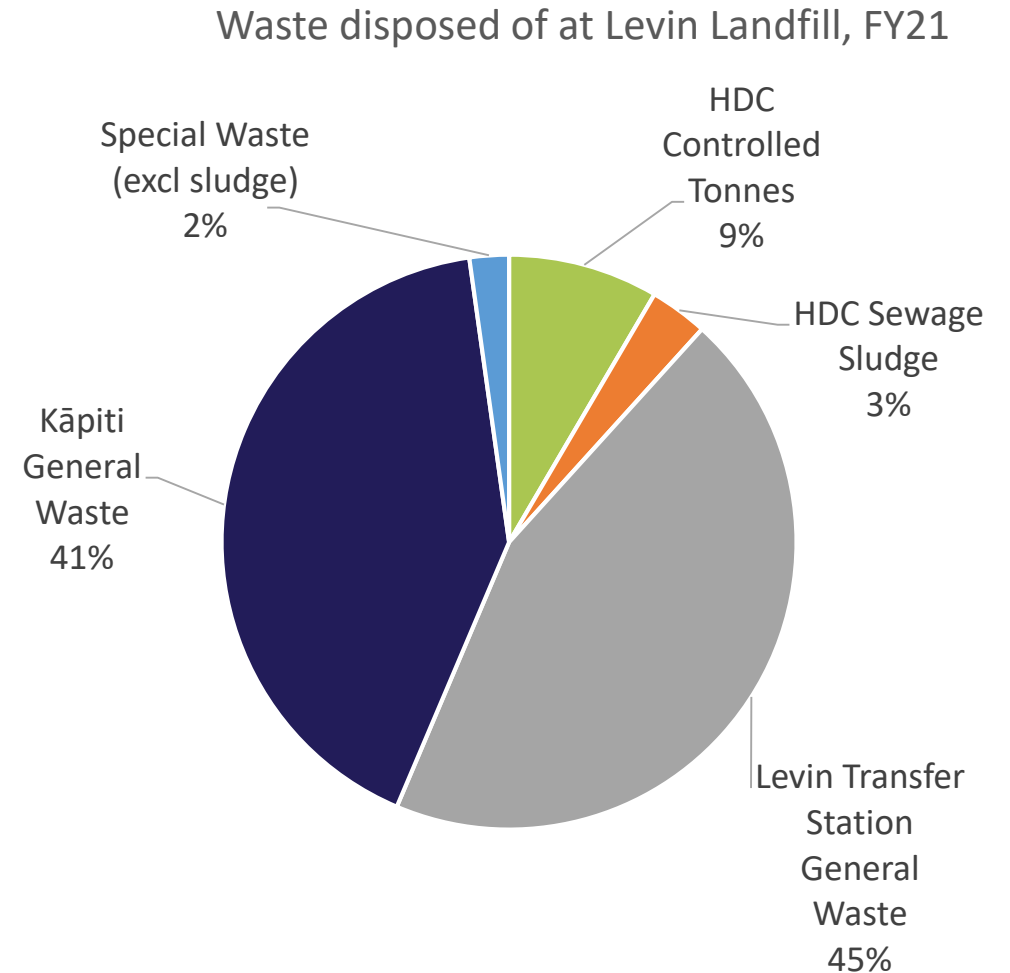
Composition of HDC controlled waste FY21



Total council-controlled waste 2021: 4500t

# Current Levin Landfill waste volumes

- Estimated total tonnes per person in Horowhenua District is 660kg
- WMMP target is 400kg
- Data quality issues, will be improved with new bylaw
- Ministry for the Environment will be exerting stronger influence on waste minimisation in future



Total waste to Levin Landfill FY2021: 38,500t

# Levin Landfill – historic consent compliance

Consent	HRC Compliance Report covering the period:			
	Dec 2019 – Dec 2020	Jul 2017- Dec 2019	Jul 2017 - Jun 2018	02/2017-07/2017
6009 Discharge solid waste to land	Comply full	Moderate Non-Compliance	Comply – On Track	Comply – Full
6010 Discharge landfill leachate onto and into land	Low Risk Non-Compliance	Moderate Non-Compliance	Comply	Comply
6011 Discharge landfill gas, odour and dust to air	Significant Non-Compliance	Low Risk Non-Compliance	Significant Non-Compliance	Significant Non-Compliance
6012 Divert stormwater from around the landfill	Comply Full	Not covered in this report	Not covered in this report	Comply
7289 Discharge liquid waste onto and into land	Comply Full	Comply Full	Comply - Full	Not covered in this report
102259 Discharge stormwater to land and potentially to groundwater via ground soakage	Comply Full	Comply Full	Comply - Full	Comply
106798 Discharge to air (flared landfill gas)	Low Risk Non-Compliance	Not covered by this report	Not covered in this report	N/A

# Leachate

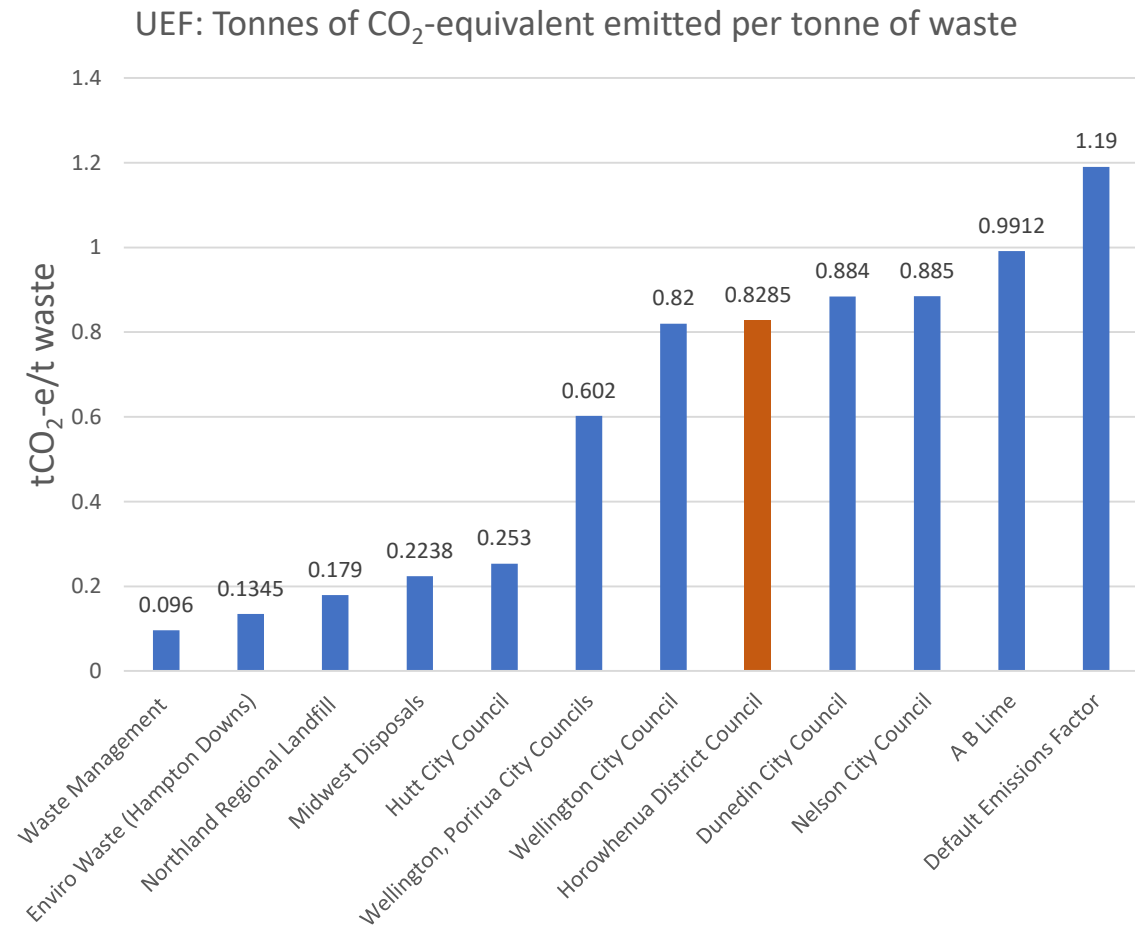
- Tonkin and Taylor concluded that:
  - the Original Landfill is the primary source of leachate discharge at the site. This impacts the water quality in the Tatana Drain and has a minor to negligible impact on the Hōkio Stream
  - the Current Landfill is lined and is not thought to be a significant source of leachate discharge as no leachate impacts can be detected down-gradient of the new Landfill
  - closure of the Current Landfill either immediately or at any date in the future will not materially reduce the leachate entering the Tatana Drain and Hōkio Stream
- HDC has an obligation under its Resource Consents and the Landfill Agreement to (if feasible) cease or materially reduce the discharge of leachate by June 2023
- The Landfill Agreement sets out a process that HDC must work through with the PMG to identify options and select the Best Practicable Option for leachate remediation

# Odour

- Levin Landfill has been subject of a large number of odour complaints
- Significant non-compliances received for discharge of odour in 2017
- There have been no verified instances of objectionable odour beyond the site boundary since 2017, but numerous odour complaints over the same period
- This continues to be an ongoing concern of local residents
- During the 2016 consent review, the air quality experts identified the main sources of odour as:
  - passive discharge of landfill gas from portions of the landfill that had not yet received final cover
  - landfill gas emissions from the leachate collection manhole
- Odour from the active landfill tipping area is likely to be a minor contributor
- The closure of the Levin Landfill would likely reduce substantially, but possibly not entirely eliminate, the odour generated
- MWH note that in certain weather conditions the impact of odour can change

# Methane emissions and gas capture

- Landfill emissions are reported via a unique emissions factor (UEF)
- Most large landfills have gas capture systems and a UEF
- This allows landfills to measure their methane emissions and also reduce their ETS costs
- Large landfills have been much more successful in capturing landfill gas
- ETS cost is based on the UEF multiplied by the ETS unit price
- The ETS unit price has doubled in 12 months



# Carbon costs

- ETS units are currently trading at approximately \$65 per unit

	Unique Emissions Factor	
	CO <sub>2</sub> -e Emissions per tonne of waste	ETS cost per tonne of waste
Levin Landfill	0.8285	\$53.85
Spicer's Landfill (Porirua)	0.602	\$39.13
Bonny Glen	0.2238	\$14.55

Source: CommTrade Carbon; Jarden Securities



# MfE- drive to reduce waste

- MfE is looking to reduce waste to landfill
- Key levers include:
  - Increase to the Waste Levy
  - Increased ETS costs (covered above)
  - Potential regulatory action

MfE's proposed approach is to “work towards a future decision on organic material bans in both municipal and non-municipal landfill types by 2030. This could potentially include any of food and green waste, fibre (paper and cardboard) and possibly wood waste for municipal landfills.”

MfE: Transitioning to a low-emissions and climate-resilient future: Have your say and shape the emissions reduction plan

# Waste Levy increase

- Progressive increase of waste levy has already commenced
- MfE still to release guidance on how these funds will be spent

<b>Landfill levy per tonne of waste</b>	<b>Until 1 July 2021</b>	<b>From 1 July 2021</b>	<b>From 1 July 2022</b>	<b>From 1 July 2023</b>	<b>From 1 July 2024</b>
Municipal landfill	\$10	\$20	\$30	\$50	\$60
Estimated Waste levy for HDC controlled waste at current volumes	\$45,000	\$90,000	\$135,000	\$225,000	\$270,000

# Waste Minimisation

- The increasing levies and regulatory levers forced onto landfill operators and passed onto waste producers will highly incentivise all forms of waste minimisation
- HDC's waste per household is reported to be increasing not decreasing which will directly continue to exacerbate householder costs
- If HDC's controlled waste can be minimised this will reduce the impact of higher waste charges on rates

# Regionalisation

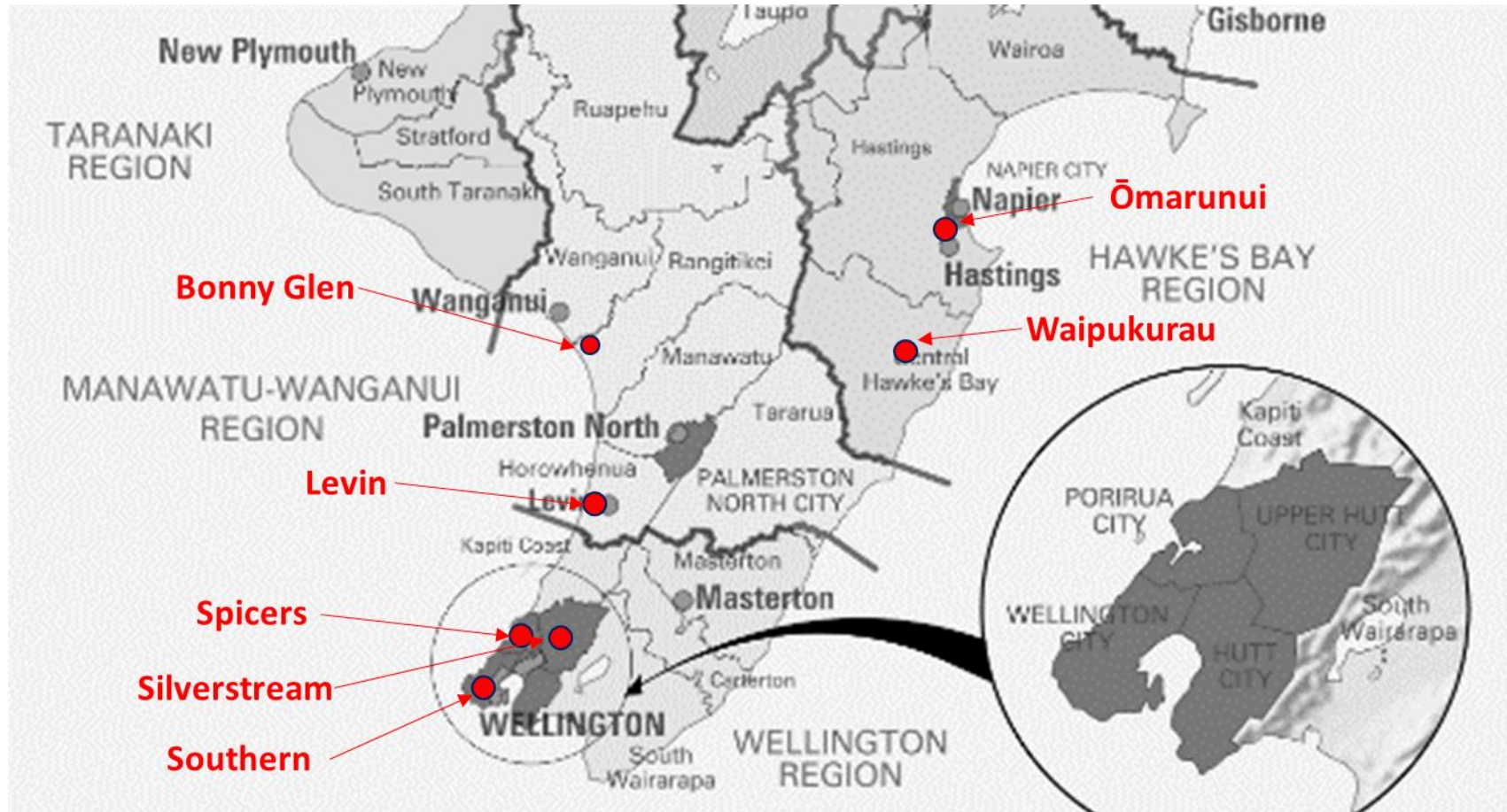
- Section 17A review of waste disposal options concluded:
  - The territorial authorities in the Horizons Region should work together to develop a joint WMMP. This will identify the areas that are best suited to joint procurement or delivery.
  - Joint procurement for refuse disposal would not be practical in the short term
  - The refuse disposal or landfill operations should continue to be outsourced to a contractor, regardless of whether HDC's refuse is to be disposed of in the Levin Landfill or elsewhere

# Solid waste arrangements in lower North Island

- HDC's current service provision is similar to neighbouring local authorities
- Most control only a small proportion of their district's waste
- HDC is the last landfill-owning council in the lower part of the region

<b>Council</b>	<b>Kerbside refuse collection</b>	<b>Transfer Station provision</b>
Horowhenua	Council bags or private	Council and private TSs
Manawatū	Council bags or private	Council TS
Palmerston North	Council bags or private	Private TS
Rangitīkei	Council bags or private	Council TS
Tararua	Private collections only	Council TS
Whanganui	Urban – private/ Rural - council	Private TS
Kāpiti Coast	Private collections only	Council TS

# Landfill sites in the Lower North Island



# Option 1: Close Levin Landfill in 2022

- Assumes transport of council controlled waste to an out of district location based on a long-term disposal contract
- Levin Landfill future use:
  - Capping and closure
  - Light grazing or reserve are allowed under Resource Consents
  - Other future activity would require new consents
- Provides strong alignment to WMMP objectives
- Enables Council to best give effect to its community wellbeing obligations
- Provides lower overall risk to HDC

# Option 1: Close Levin Landfill in 2022

- Resource Consent implications:
  - Consent still will be reviewed in 2024, 2029 and 2034
  - Consent will still need to be renewed in 2037 for discharge from closed landfill
- Landfill Agreement implications:
  - Landfill Agreement remains in place
  - Remaining parts come into effect including development of a closure plan and reconciliation process
- Leachate remediation from old landfill
  - Required to be complete by June 2023



# Option 2: Close Levin Landfill in 2025

- Landfill would continue operations until 2025
- Landfill could be managed by council or via a CCTO
- From 2026, waste would need to be disposed of elsewhere
- Provides encouragement for waste minimisation after 2025
- Allows Council to give effect to its community wellbeing obligations, particularly from 2025
- A range of waste volumes and gate rates have been modelled
- Provides the worst outcome financially
- Provides less risk to HDC than Option 3, but more than Option 1

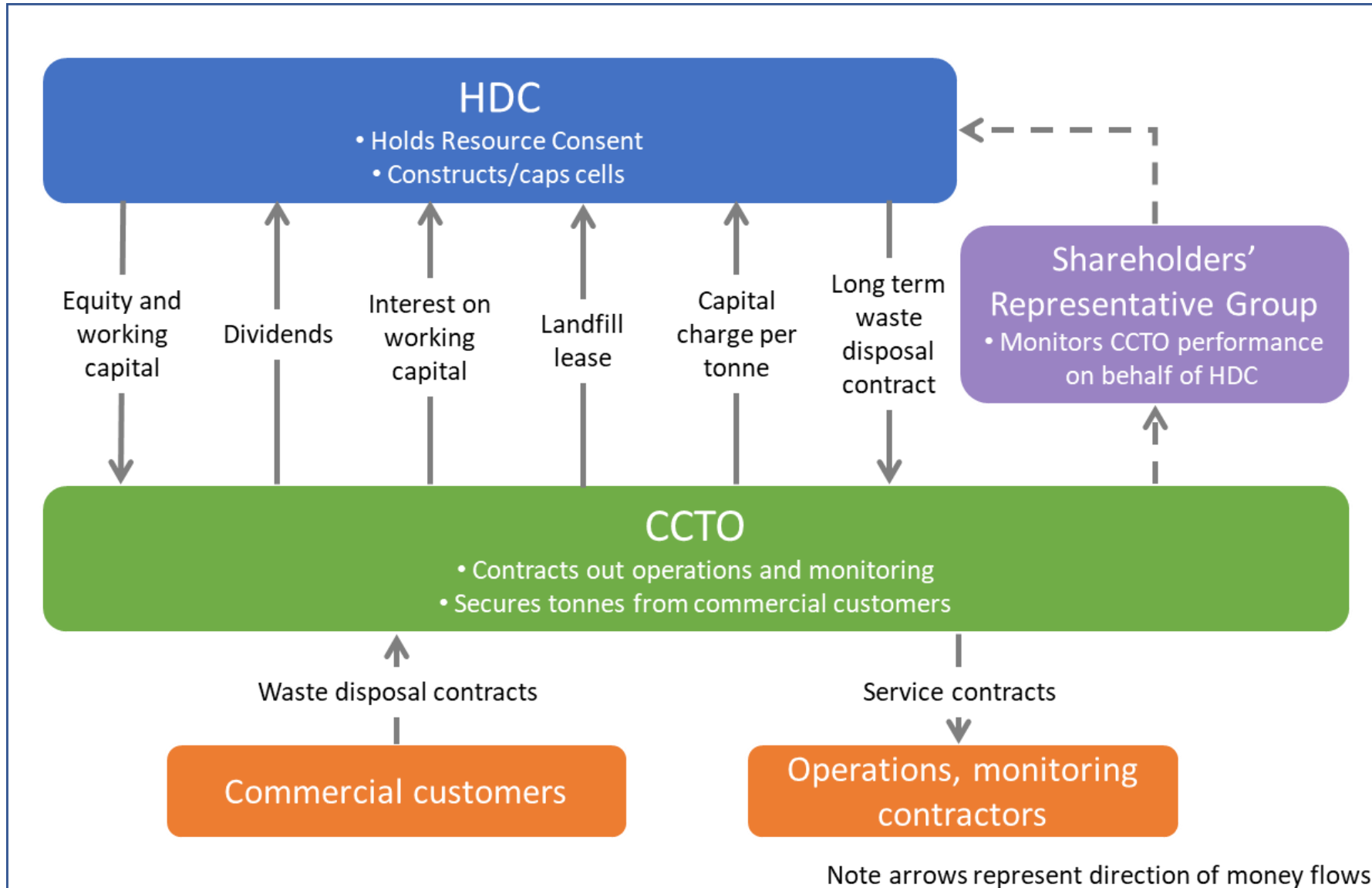
# Option 2: Close Levin Landfill in 2025

- Resource Consent implications:
  - Consent still will be reviewed in 2024, 2029 and 2034
  - Consent will still need to be renewed in 2037 for discharge from closed landfill
- Landfill Agreement implications:
  - Landfill Agreement remains in place
  - Remaining parts come into place including development of a closure plan, annual review of odour and reconciliation process
- Leachate remediation from old landfill
  - Required to be complete by June 2023

# Option 3: Close Levin Landfill in 2037, or when full

- Landfill would continue to operate until 2037, or when full
- Recommend establishment of Council Controlled Trading Organisation (CCTO)
- Financial outcome dependent on volume and price of waste secured which increases financial risk
- Resource consent review risk starting 2024
- HDC will have less incentive to minimise council-controlled waste as this will impact landfill finances
- Will create additional economic activity in the district including jobs
- Does not provide a strong outcome in terms of the social, cultural and environmental wellbeings
- Provides higher overall risk to HDC than Options 1 and 2

# Interface with CCTO



# Option 3: Close Levin Landfill in 2037, or when full

- Landfill Agreement implications:
  - Landfill Agreement terminates
- Resource Consent implications:
  - Consent will be reviewed in 2024, 2029 and 2034
  - Consent will still need to be renewed in 2037, either for future landfill operations or for discharge from closed landfill
- Leachate remediation from old landfill
  - Required to be complete by June 2023

# Wellbeing assessment

- Presentation by Nick Robertson, BERL

*Levin Landfill and Horowhenua waste disposal Wellbeing Case*

# Financial assessment - overview

- 14 year assessment, using Net Present Value
- Includes repayment of historical and new landfill debt
- Input information based on combination of:
  - current costs
  - tendered prices
  - engineer's estimates (Stantec)

# Financial assessment

The following table shows the 'base case' assessment (\$M) for 14 years

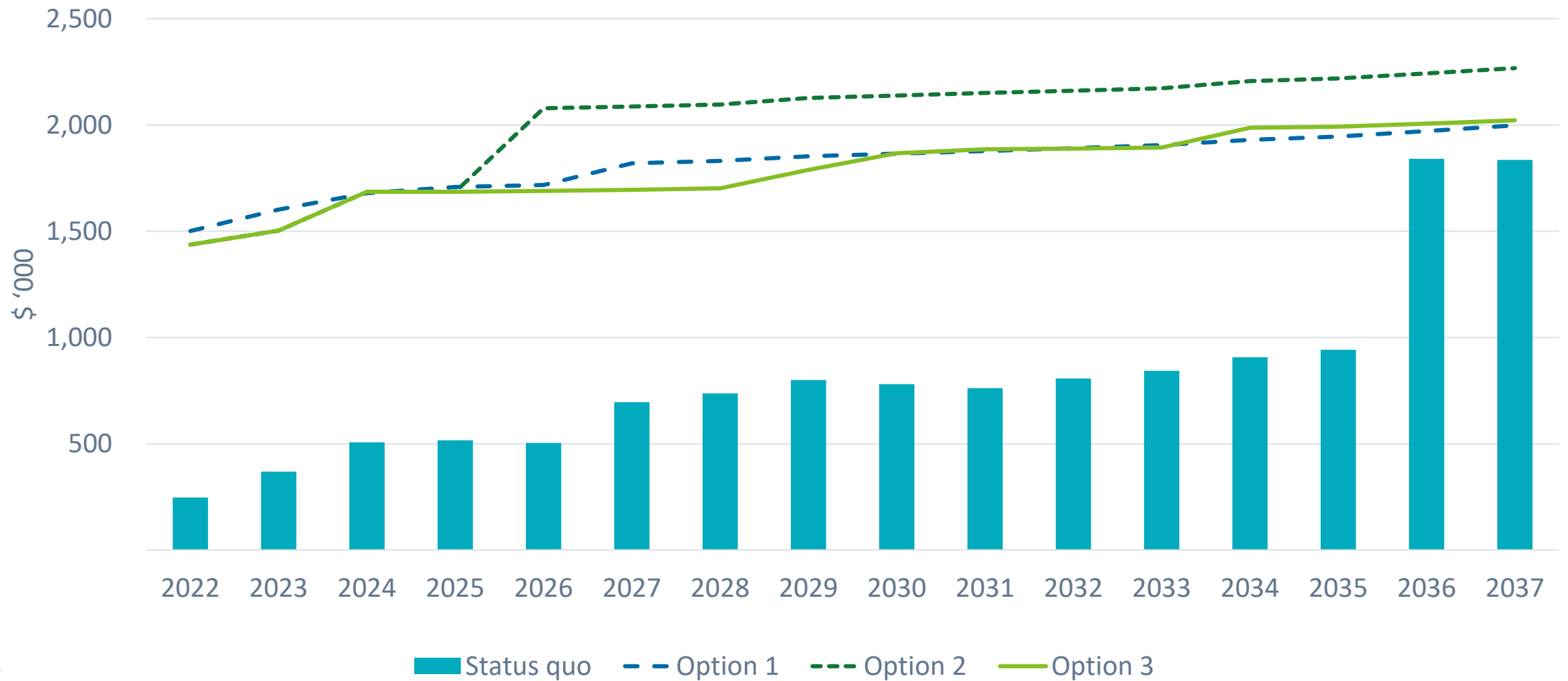
\$M	Option 1 - 2022	Option 2 - 2025	Option 3 - 2037
Total NPV over 14 years	-\$19.1	-\$21.5	-\$20.6
Financial ranking of options	1	3	2



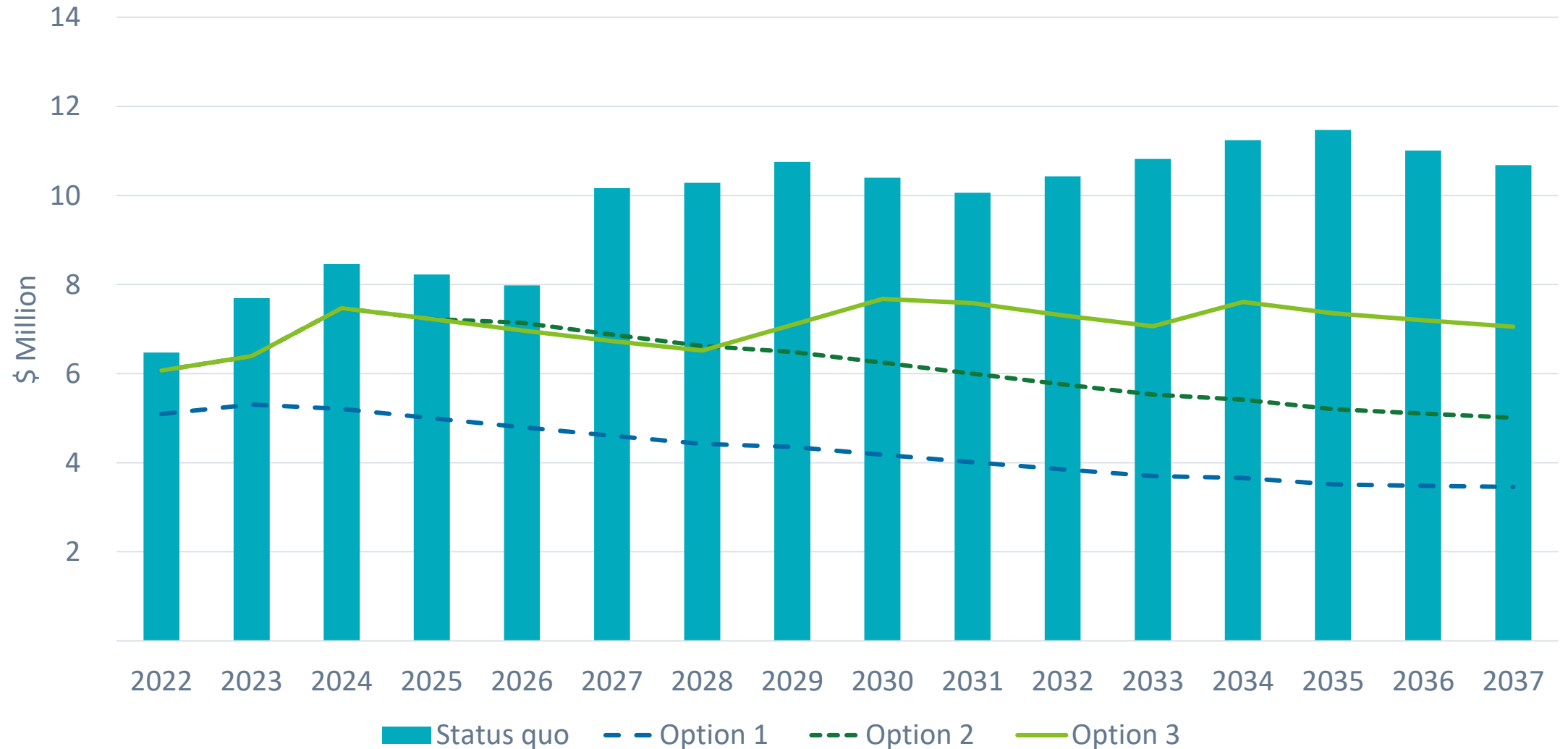
# Scenario analysis

- A range of scenarios were modelled:
  - Change to council-controlled tonnes
  - Change to third-party tonnes
  - Change to gate rate for third-party tonnes
  - Increased ETS costs
  - Improved gas capture
  - Different rates of inflation

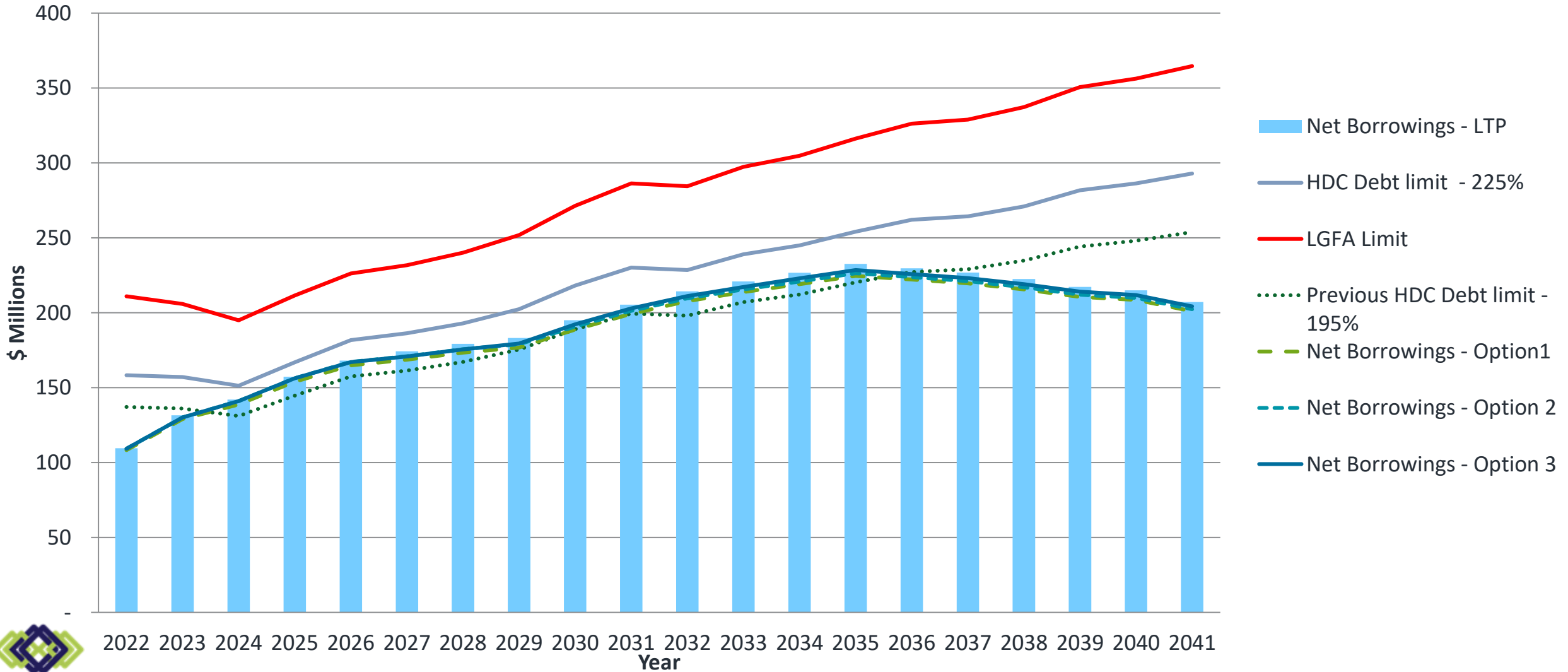
# Impact on operating costs



# Impact on borrowings

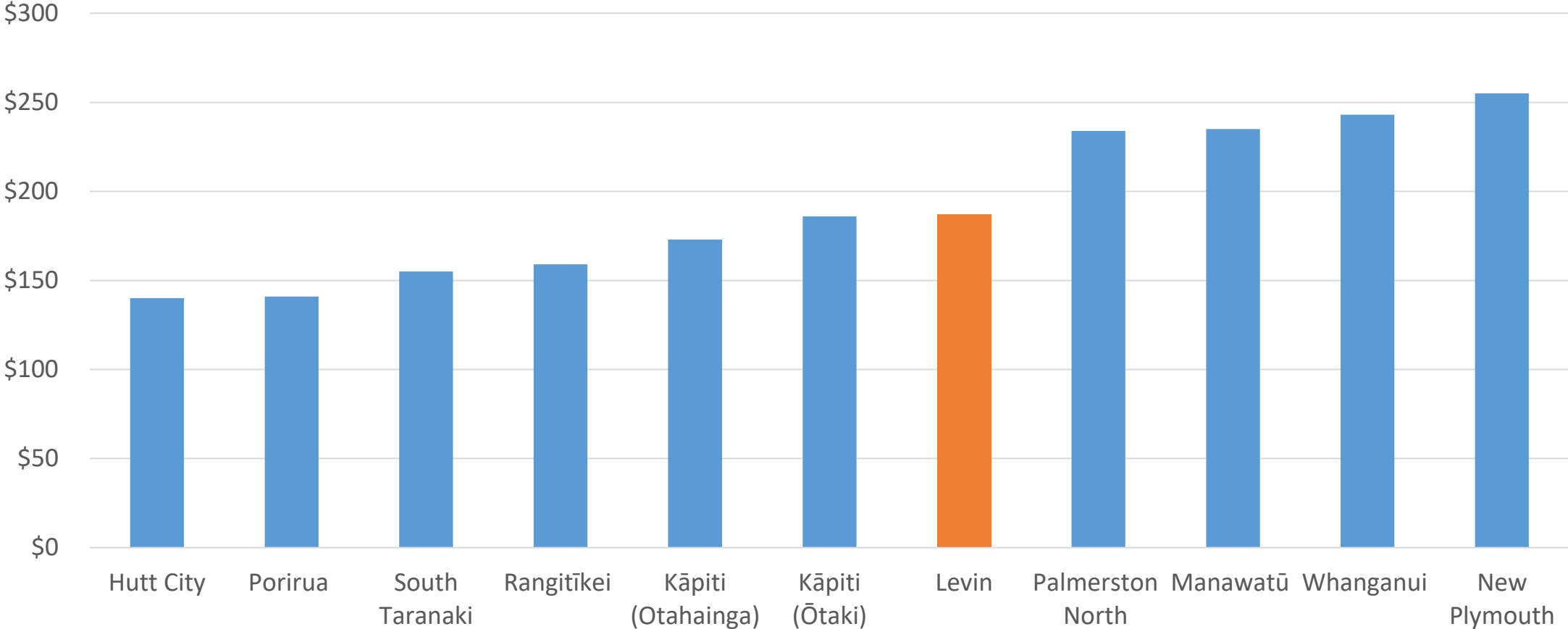


# Impact on debt limit



# Transfer Station fees

Comparison of Transfer Station fees



# Summary

- The Landfill Agreement places a number of responsibilities on HDC, including a review of closure dates
- Closure of the landfill provides the best alignment to HDC's waste minimisation objectives
- Wellbeing analysis concluded:
  - Economic assessment shows either Option 1 or 3 would provide the best outcome
  - Social, cultural and environmental assessment shows Option 1 would provide the best outcome
- Financial analysis concluded Option 1 the preferred option financially in most scenarios, with Option 3 the preferred option financially in some scenarios
- Risk assessment concluded substantially higher downside risk with Option 2 and 3
- In our independent opinion, the recommended option is for closure of the Levin Landfill in 2022 (Option 1)