

23 July 2021

Memorandum

To: All local board members

CC: Parul Sood – General Manager Waste Solutions

Subject: Review of kerbside refuse collection charging policy

From: Sarah Le Claire – Waste Planning Manager, Infrastructure and Environmental Services

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Purpose

1. To inform local boards of the review of Auckland's kerbside refuse charging mechanisms and opportunities to provide feedback to inform the analysis and recommendation that staff will present to the Environment and Climate Change Committee on 14 October 2021.

Summary

2. Auckland Council is currently committed to expanding the pay-as-you-throw (PAYT) funding model for kerbside refuse collection across the Auckland region. This reflects the policy within our Waste Management and Minimisation Plan 2018 to provide consistent waste services across the region.
3. This would involve moving the legacy Auckland and Manukau City Council areas away from a rates-funded service to a PAYT funding model.
4. Before we make this shift, Waste Solutions is reviewing the evidence to support the decision to move these areas to a PAYT model to assess whether PAYT is still the best solution for achieving the objectives of the Waste Management and Minimisation Plan.
5. Evidence gathered so far is being assessed against three options:
 - all areas pay-as-you-throw (PAYT)
 - keeping the current hybrid model (55 per cent rates-funded, 45 per cent PAYT)
 - all areas rates-funded.
6. The options will have a different impact on each local board area, depending on the current service charging mechanism relative to the proposed service change (Attachment A).
7. This memo outlines initial conclusions reached through the analysis of evidence gathered to date as a basis for discussion with local board members to understand their views on the risks and impacts of the potential options within their respective areas.
8. Waste Solutions staff will be attending workshops with local boards to present the options and evidence. Feedback received from local boards will inform the recommendation that staff will present to the Environment and Climate Change Committee in October 2021.
9. A template to guide local board feedback has been provided in Attachment B.

Context

10. A decision was made in the 2012 Waste Management and Minimisation Plan (WMMP) to move all Auckland households towards a user-pays charging system for refuse collection,

known in Auckland as pay-as-you-throw (PAYT). This transition to a consistent regional PAYT refuse service (weekly, changing to fortnightly over time) was confirmed in WMMP 2018.

11. The decision was based on:
 - best evidence at the time that this was the most effective way to incentivise diversion from landfill and enable householders to reduce their waste costs
 - the understanding that technology would be available to enable pay-per-lift charging through radio-frequency identification (RFID) chipped bins.
12. In legacy rates-funded areas, it was decided that the move to PAYT would take effect after the introduction of a food scraps collection service, to reduce the financial impact on households.
13. Since then, more information has become available about the effectiveness of PAYT, particularly in the context of the other complementary services that the council has rolled out, for example recycling and food scraps. Prior to making the change to PAYT, Waste Solutions is reviewing the evidence base for this shift.
14. In this review we are assessing several factors, including:
 - the potential effects of each funding model on communities
 - the potential waste minimisation impacts of each funding model
 - the expected cost to implement each funding model
 taking into account the changing financial circumstances of both ratepayers and council.
15. To assist with this review, Waste Solutions commissioned independent consultants, Morrison Low, to examine the evidence currently available against the following aspects of the refuse collection service and its impact on the council, customers and the environment:

<ul style="list-style-type: none"> • waste minimisation • cost effectiveness • reputation • technology • household responsibility / accountability 	<ul style="list-style-type: none"> • access / equity • downstream impacts on the collections industry • climate change • amenity • health and safety.
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16. Evidence gathered so far is being assessed against three options:
 - all areas PAYT
 - keeping the current hybrid model (55 per cent rates-funded, 45 per cent PAYT)
 - all areas rates-funded.
17. This memo provides a summary of the interim conclusions of the Morrison Low report, subject to further information being provided in a few key areas, such as costs, and outlines likely impacts on each local board area.

Discussion

18. Currently, 55 per cent of Auckland households (legacy Auckland City and Manukau City) are provided with a rates-funded refuse service, with the remaining 45 per cent (legacy Franklin, Waitākere, Papakura and North Shore City Council) on a PAYT service provided by either the council or a private operator. There is no council refuse collection service in legacy Rodney, but under current policy there is a commitment to provide a PAYT service in the

future. See Attachment A for breakdown of council refuse collection services by local board area.

19. In the process of examining the specific criteria above, Morrison Low also drew conclusions about several broader issues that impact on the council's ability to achieve its waste minimisation targets generally. These conclusions are set within the context of Auckland Council's legal obligation through the Waste Minimisation Act, Local Government Act and the Health Act to ensure that all residents of Auckland are provided with a waste collection service.

Conclusions on key issues

20. Aotearoa/New Zealand is unique in having side-by-side competition between private and council services in the residential refuse collection market. This impacts the way PAYT operates and introduces a number of challenges not experienced overseas.
21. Financial modelling currently indicates that PAYT is less cost-effective for the council than rates-funded solutions because of more complex systems, duplication of workloads by multiple suppliers and the council's need to offer the service to properties across the entire region.
22. Evidence from overseas found only a very weak link between marginal pricing changes and change in refuse quantities. This is consistent with a 2021 examination of refuse tonnages, which found no clear evidence that PAYT areas of Auckland produce less refuse per capita than rates-funded areas.
23. The current price in Auckland does not appear to be a sufficient economic driver to motivate behaviour change in households.
24. International evidence indicates the greatest waste minimisation is achieved through providing easy access to services that divert waste away from landfill (such as the recycling and food scraps collection services), good community education programmes and reduced access to refuse volume to encourage use of the diversion services.

Waste minimisation – *does the service minimise waste disposal?*

25. The Morrison Low study concluded:
 - all options are ranked equal for waste minimisation when supported by easy access to diversion services and community education
 - all options can positively influence refuse volumes when implemented properly, though PAYT is difficult to implement in NZ the same way as it has been overseas because of the limitations of the Commerce Act 1986
 - all options have negative behaviours that must be managed.
26. This conclusion is backed up by a detailed comparison by Waste Not Ltd of current per capita disposal rates of kerbside rubbish between legacy council areas with different funding models.
27. The 2021 estimates have analysed and compared discrete sample areas in four of the legacy council areas (Figure 1). This has allowed more reliable, granular data to be included in the analyses and for the comparisons to be made between primarily suburban residential areas (excluding commercial and multi-unit type dwellings), which reduced the effect other factors may have had on kerbside rubbish per capita disposal rates.
28. The results are shown in the table below, from lowest to highest per capita disposal rate.

Table 1: Per capita refuse disposal in four sample areas of Auckland

Comparison of funding models for kerbside rubbish	Rubbish funding model	Kg per capita per annum disposal rate
Urban sample areas in Contract Area 2 - Legacy North Shore City	PAYT	115 kg/capita/annum
Urban sample areas in Contract Area 4 - Legacy Auckland City West	Rates-funded	151 kg/capita/annum
Urban sample areas in Contract Area 3 - Legacy Waitākere City	PAYT	164 kg/capita/annum
Urban sample areas in Contract Area 6 - Legacy Manukau City	Rates-funded	172 kg/capita/annum

29. The analysis has not shown a direct correlation between the funding model used for kerbside rubbish collections and the per capita disposal rate of kerbside rubbish. While the PAYT-funded Contract Area 2 sample is associated with the lowest per capita disposal rate, the rates-funded sample Contract Area 4 is lower than the PAYT-funded sample Contract Area 3. The lower per capita disposal rate in sample Contract Area 2 may be attributed to the higher use of bags in this area compared to other areas.
30. Waste Not Ltd also provided a comparison of disposal rates in these sample areas with disposal rates in other cities and districts, noting their collection model (Table 2). There appears to be no direct correlation between funding models and per capita disposal rates for kerbside rubbish elsewhere in New Zealand. It is noted, however, that at the time of doing each study, in four of the five territorial authorities with the lowest per capita disposal rate, private waste operators provide services to a smaller proportion of the customers.
31. A study of contamination levels in kerbside recycling bins in two PAYT and two rates-funded areas at the end of May 2021 showed almost no difference in the relative levels of contamination between the two charging systems.
32. Quality diversion services with easy access, community education and restricting refuse volumes appear to be the larger drivers of waste minimisation, whether the refuse is collected under either PAYT or rates-funded models.

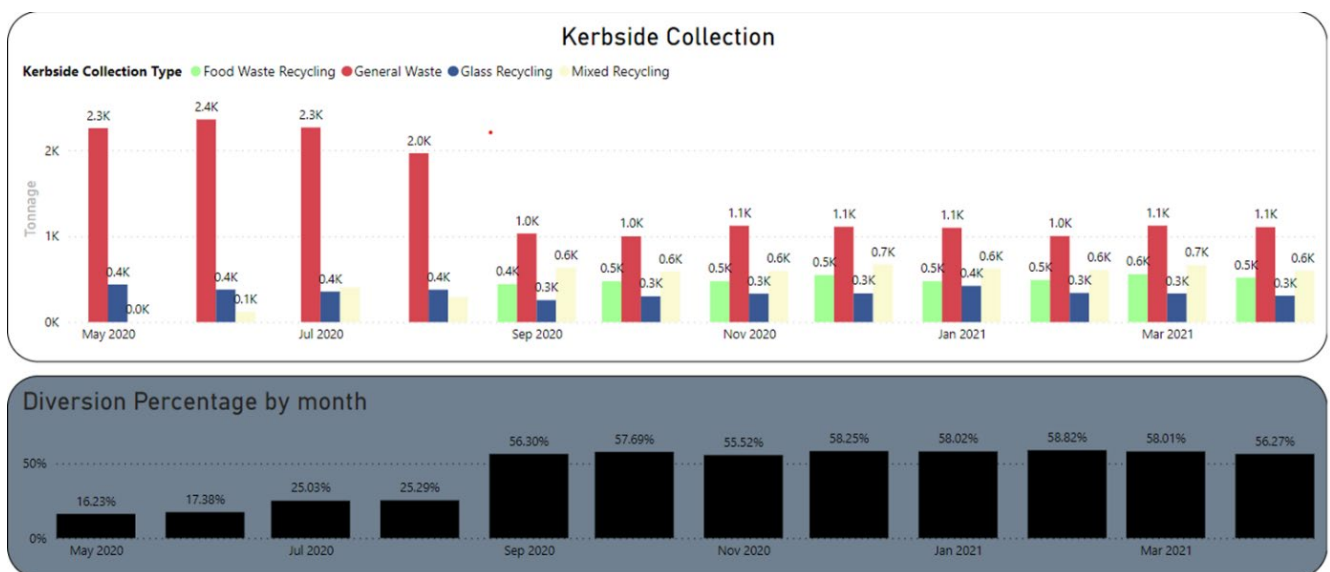
Table 2: Per capita refuse disposal in a sample of territorial authorities in Aotearoa/New Zealand

Kerbside rubbish - Annual per capita disposal rate	Kg per capita per annum	Primary kerbside rubbish collection services
Undisclosed territorial authority	Confidential	Fortnightly council rates-funded 140-litre wheelie bins (with weekly organic collection)
Ashburton District 2015	93	Weekly council PAYT rubbish bags + PAYT private wheelie bins
Urban sample areas in Contract Area 2	115	Weekly council PAYT wheelie bins + PAYT private wheelie bins
Christchurch City 2011	110	Fortnightly council rates-funded 140-litre wheelie bins (with weekly organic collection)
Gisborne District 2017	122	Weekly council PAYT rubbish bags
Mackenzie District 2020	138	Fortnightly council rates-funded 140-litre wheelie bins
Urban sample areas in Contract Area 4	151	Weekly council rates-funded 120-litre wheelie bins
Whangarei District 2017	153	Weekly council PAYT rubbish bags + PAYT private wheelie bins

Kerbside rubbish - Annual per capita disposal rate	Kg per capita per annum	Primary kerbside rubbish collection services
Auckland Council 2016	156	Weekly council PAYT MBGs + council rates-funded wheelie bins + private PAYT wheelie bins + PAYT rubbish bags
Urban sample areas in Contract Area 3	164	Weekly council PAYT wheelie bins + PAYT private wheelie bins
Urban sample areas in Contract Area 6	172	Weekly council rates-funded 140-litre wheelie bins
Matamata-Piako District 2020	183	Weekly council PAYT rubbish bags + PAYT private wheelie bins
Dunedin City 2018	187	Weekly council PAYT rubbish bags + PAYT private wheelie bins
Tauranga and WBOP District 2019	192	Weekly council PAYT rubbish bags + PAYT private wheelie bins
Hamilton City 2017	197	Weekly council rates-funded bags (2 per h/h max)
Palmerston North 2017	201	Weekly council PAYT rubbish bags + PAYT private wheelie bins
Hastings District/Napier City 2019	221	Weekly council rates-funded bags (2 bags h/h max) + PAYT rubbish bags + PAYT private wheelie bins
Kāpiti Coast District 2017	230	Weekly private PAYT rubbish bags + PAYT private MGBs.

33. In addition to overseas examples, this is evidenced in Hamilton (Figure 2) where, following the introduction of a weekly food scraps collection, improved recycling collection and a reduction to fortnightly refuse, the region has achieved a 55 per cent participation rate in the food scraps service, and an overall reduction in household refuse generation. The increased diversion services were implemented in September 2020.

Figure 2: Change in Hamilton tonnages per service by improving diversion services



Cost effectiveness – is the service cost-effective and sustainable from a cost-to-serve perspective? Is the service cost-effective from a household cost perspective?

34. In terms of cost-effectiveness, when comparing rates funded with PAYT models, the Morrison Low study concluded:

- the rates-funded option provides greater cost-effectiveness than both the current hybrid model and the PAYT option
- the rates-funded model has a lower overall cost to the council and the community.

35. This was based on:

- *cost*: results of financial modelling commissioned by the council by specialist independent environmental consultants Eunomia Consulting, using existing parameters and the weekly PAYT service, show that the cost of delivering a rates-funded service is similar, but costs the community significantly less overall when all service costs, including private collection costs, are included.
- *cost sustainability*: an estimated variation in cost per pickup based on the number of customers serviced by Auckland Council which shows that the cost of operating the council service increases sharply below when the council is servicing less than 30 per cent of the community. At 30 per cent, it is approximately double the cost per pickup compared to 80 per cent.

36. Further analysis of costs is being carried out by council staff as part of this discovery phase.

Further factors

37. The Morrison Low report also draws preliminary conclusions on the following lines of inquiry:

Equity / Access – is the service accessible for all regardless of socio-economic circumstances?

- It is essential that every household is provided with a service that is affordable to them.
- At a household level, no service in particular is better for all household sizes and compositions.
- The PAYT option places the charge with the waste producer rather than the homeowner, who may have little control over refuse production in a rental situation.
- The rates-funded option splits costs evenly among all households, resulting in maximum access and equity for all households across Auckland, regardless of location, size or economic position.

Household responsibility / accountability

- PAYT is promoted overseas as fulfilling the “Polluter Pays Principle”, that the people who produce the waste are the ones who should pay for its safe disposal.
- The PAYT option encourages personal responsibility by creating a direct link between the waste generator and the disposal costs, particularly in rental situations where the occupant is not the ratepayer.
- However, in the NZ context, this personal responsibility has not resulted in less refuse produced per capita, largely due to easy access to additional refuse volumes. Similar ranges of refuse per capita rates are produced in both PAYT and rates-funded areas (see waste minimisation section above).

Climate change impact / Health and safety / Amenity

- The PAYT option will result in a higher number of trucks on the road and/or more truck kilometres travelled per year on residential streets.
- The more truck kilometres travelled per year to deliver the service, the worse outcomes for the vehicle emissions, road wear, street amenity, health and safety and traffic congestion will be.
- The rates-funded option is preferred due to the reduced total truck kilometres travelled from a sole supplier of the service, the ability to specify the truck requirements through the procurement process and less visual pollution through streetscape clutter caused by collections by multiple providers on multiple days.

Reputation for council

- Customers are generally happy with whichever system they are used to.
- There is slightly more support for the rates-funded option and even more so in the 2020 Emergency Budget Consultation (68 per cent of submitters).
- Rates-funded is an opportunity to simplify issue resolution and improve customer experiences, creating positive interactions with the council.

Customer experience

38. Council staff also commissioned Colmar Brunton to run focus groups with community members that have first-hand customer experience of both PAYT and rates-funded charging models. These took place at the end of May and early June 2021. The final report became available in the week commencing 5 July 2021 and so these results have not yet been included within the review by Morrison Low. The following are headline points from the results of the focus groups:

- PAYT options are not a strong lever for behaviour change. It forces people to manage waste rather than reduce waste, for example, putting waste in neighbour's bin, piling up waste at home. The money savings are negligible, and it does not provide a strong motivation to reduce waste.
- People's main desire is convenience and ease when it comes to payment options. A 'pay and forget' (monthly or top up) option is most preferred and in line with peoples' experiences of other utilities e.g. internet.
- Some participants expressed a desire for online payment options or through an app, and to have money automatically deducted on bin day. PAYT bin tags add a number of steps to the process and can 'catch people out' if they forget to buy them.
- The council needs to force/encourage behaviour change through other methods to meet the Waste Management and Minimisation Plan 2018 aspiration of zero waste by 2040. The three-bin system (food scraps, recycling and refuse) is one way to accomplish this. Rebates for people who recycle more, and ongoing education are other options.

Next steps

39. In addition to the above, the following studies are currently underway:

- radio-frequency identification (RFID) trial to show whether this service will be able to be operated at scale, with a sufficiently low error rate to be considered feasible in Auckland
- detailed analysis of costs of all options
- investigation, supported by RIMU, of the social impacts of the three options.

40. The results of these studies will conclude the desk-based discovery phase and will inform the final evaluation of options by Morrison Low for the analysis of options by staff.
41. Staff are currently engaging with elected members, local boards, industry and community groups, prior to developing options and recommendations to take to the Environment and Climate Change Committee for a decision in October 2021. A template to guide local board feedback has been provided in Attachment B.
42. A more detailed analysis of the potential impact of rates-funded versus user pays options on each local board area is being prepared in anticipation of individual workshops with each local board. This includes an analysis of household size, proportion of home ownership vs renters and social deprivation.
43. If the decision is taken to deviate from current Waste Management and Minimisation Plan policy, the current proposal is to engage more widely on options through a special consultative procedure as part of the Annual Plan 2022/2023 process.
44. Local boards will be consulted on the preferred option, which will include a more detailed analysis of the timings of any changes to service, during that process.

Attachments

Attachment A: Summary of current refuse services and impact of options by local board area

Attachment B: Template for local board feedback

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Attachment A: Summary of current refuse services and impact of options by local board area

General Area	Local Board	Current domestic refuse services offered by council			Impact of future service options																																																																																							
		Rates-Funded	PAYT	Services	Option 1: Full PAYT	Option 2: Hybrid	Option 3: Full rates-funded																																																																																					
North	Rodney		✓*	Tagged bins (80L / 120L / 240L) * no council refuse service yet in Legacy Rodney area	Remain PAYT for refuse. <i>Transition to fortnightly refuse collections after roll-out of weekly food scraps, as per WMMP 2018.</i>	Remain PAYT for refuse. <i>Transition to fortnightly refuse collections after roll-out of weekly food scraps, as per WMMP 2018.</i>	Transition to a rates-funded refuse service. <i>Transition to fortnightly refuse collections after roll-out of weekly food scraps, as per WMMP 2018.</i>																																																																																					
	Hibiscus and Bays		✓*					North Shore	Upper Harbour		✓	Kaipātiki		✓	Devonport-Takapuna		✓	West	Henderson-Massey		✓	Waitākere Ranges		✓	Central west	Whau	✓	✓	Bins (120L / 240L)	Homes currently PAYT (as above) / homes currently rates-funded (as below)			Albert-Eden	✓		Transition to a PAYT refuse service.	Remain rates-funded for refuse.	Remain rates-funded for refuse.	Puketāpapa	✓		<i>Transition to fortnightly refuse collections after roll-out of weekly food scraps, as per WMMP 2018.</i>	<i>Transition to fortnightly refuse collections after roll-out of weekly food scraps, as per WMMP 2018.</i>	<i>Transition to fortnightly refuse collections after roll-out of weekly food scraps, as per WMMP 2018.</i>	Waitematā	✓		Central east	Ōrākei	✓		Maungakiekie-Tāmaki	✓		South	Howick	✓		Māngere-Ōtāhuhu	✓		Ōtara-Papatoetoe	✓		Manurewa	✓		Papakura		✓	Tagged bins (80L / 120L / 240L)	Remain PAYT for refuse. <i>Transition to fortnightly refuse collections in urban areas with weekly food scraps service.</i>	Remain PAYT for refuse. <i>Transition to fortnightly refuse collections in urban areas with weekly food scraps service.</i>	Transition to rates-funded refuse service. <i>Transition to fortnightly collections in urban areas with weekly food-scrap service.</i>		Franklin		✓	Bags	<i>Retain weekly refuse collection in rural areas with no food scraps service.</i>	<i>Retain weekly refuse collection in rural areas with no food scraps service.</i>	<i>Retain weekly refuse collection in rural areas with no food scraps service.</i>	Hauraki Gulf Islands	Aotea Great Barrier	✓		Bins (80L)	Transition to PAYT for refuse services	Remain rates-funded for refuse	Remain rates-funded for refuse	Waiheke	✓
North Shore	Upper Harbour		✓																																																																																									
	Kaipātiki		✓																																																																																									
	Devonport-Takapuna		✓																																																																																									
West	Henderson-Massey		✓																																																																																									
	Waitākere Ranges		✓																																																																																									
Central west	Whau	✓	✓	Bins (120L / 240L)	Homes currently PAYT (as above) / homes currently rates-funded (as below)																																																																																							
	Albert-Eden	✓			Transition to a PAYT refuse service.	Remain rates-funded for refuse.	Remain rates-funded for refuse.																																																																																					
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	Waiheke	✓																																																																																										

Attachment B: Template for local board feedback

Question 1:

Based on council policies, such as the WMMP 2018 and Te-Tāruke-Ā-Tāwhiri/Auckland’s Climate Plan, the key priorities when considering how to charge for waste collection services are:

1. Waste minimisation – minimises waste to landfill
2. Cost – both to the council and to the consumer
3. Equity – providing a service that is accessible for everyone regardless of income and location
4. Climate change – has lowest impact on Auckland’s greenhouse gas emissions

Do you agree with these priorities?

- Agree Disagree Other

Please tell us why:

Question 2:

We would like to understand how your local board residents feel about the way they currently pay for their domestic kerbside rubbish to be collected.

(a) What do your local board area residents like BEST about the way they currently pay for their rubbish collected?

(b) What do your local board area residents like LEAST about the way they currently pay for their rubbish collected?

Question 3: Are there any other considerations that we should we take into account?
