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1st April 2011

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Re: Review of Auckland Council Waste Assessment

Dear Ms. Sood

1. Thank you for consulting the Medical Officer of Health on Auckland Council's Waste Assessment, as part of the process by which Auckland Council will implement the requirements of the Waste Minimisation Act 2008.
2. The documentation you supplied has been reviewed by a number of technical staff within Auckland Regional Public Health Service (ARPHS) who have provided me with comment. As the Medical Officer of Health, with the portfolio responsibility for solid waste issues, I am pleased to be able to respond to your consultation.
3. Council's waste assessment appears to have been thoroughly researched. It is well written, has a logical layout, contains an impressive amount of information and is easy to comprehend. I am also happy to see that Council has acknowledged the ability of the appropriate Minister to give a ministerial direction if Council does not make satisfactory progress in achieving the goals of its new Waste Management and Minimisation Plan (WMMP), or in meeting Health Act requirements.
4. I welcome seeing "ensure public health and safety" on page 2 of the Overview Section is presented as one of the drivers of the assessment. I look forward to seeing a continuing emphasis on public health in Council's solid waste plans and activities.

5. Sanitary collection and disposal of solid waste is essential for reasons of:
 - Human disease control (e.g. pathogenic wastes, and reducing attraction to and harbourage of human disease vectors including rats {and their fleas} and mosquitoes).
 - Control of nuisance from dust, odour, and pest species (e.g. wasps, flies, cockroaches).
 - Public safety - in the sense of uncluttered thoroughfares.
 - Direct health risks from hazardous wastes - like asbestos.

6. The remainder of this letter broadly follows the layout of Council's waste assessment.

Chapter 2: Legislative and Strategic Context

7. I note the comments made about the Climate Change Response (Emissions Trading) Amendment Act 2008 and its potential impacts for greenhouse gases emanating from landfill. ARPHS is aware that the issue of incineration was considered back in the 1990s, with a proposal to use the old Meremere power station. This proposal did not proceed for a variety of reasons. ARPHS believes that any waste assessment, that is used to inform a waste minimisation plan with a long term time horizon, should give consideration to the issue of waste incineration. Given the current state of incineration technology, emission control issues and foreseeable costs (capital, operational and ETS liabilities) it may never be a viable option, however the option does need to periodically be reviewed and considered as a possible alternative to landfill, especially since waste to energy schemes are attracting new attention as a means of dealing with intractable wastes.

8. The final costs to the region of it's waste production will be a combination of:
 - Volume able to be diverted / recycled.
 - Monetary value able to be extracted from the materials diverted / recycled.
 - Final volume to landfill.
 - Costs associated with such landfill, e.g. greenhouse gas liabilities, cost of controlling leachate, transport of waste, etc.

From the public health perspective there are risks and costs with whichever approach is taken. It is only when all practical options have been explored that a rigorous assessment against a range of parameters (including protecting public health) can be undertaken to inform the final waste minimisation plan.

Chapter 3 The Waste Problem

9. ARPHS supports the principles of reduction and recycling as a way of minimising the 'legacy' effect of landfill.

10. If Council is to meet its obligations under the Waste Minimisation Act 2008 it needs to reduce the proportion of waste being landfilled. The waste assessment covers both the composition of the waste stream and also outlines some of the potential uses for diverted materials. Separating and diverting waste is, to a certain extent, a pointless exercise unless there is strong demand for diverted and recycled materials. ARPHS believes that further work should be undertaken in the assessment to better understand issues such as:
 - What market there is for recycled / reclaimed or new products resulting from waste? For example is there a market for 80,000 tonnes¹ of compost?
 - What can Auckland Council do to support markets in recycled or reclaimed products? For example could Council's procurement policies be used to stimulate demand for products made from recycled materials? For example, could Council's underground utility infrastructure be manufactured from recycled plastics?

11. ARPHS also believes that a whole of life and systems perspective needs to be taken to the issue of waste minimisation. At one level it is desirable to have a polluter pays approach and to charge both industry and the private citizen the full cost of waste disposal as a way of creating an incentive to minimise the amount of material that goes to landfill. This approach also brings with it the risk of increased fly tipping and dumping. Such illegal dumping imposes a direct cost on Council to collect and investigate it; such cost may be relatively easy to estimate. Such illegal dumping may also bring with it risks to human health from either disease or hazardous materials such as asbestos. These risks are more difficult to quantify, aren't faced directly by Council, but do impose costs on the wider community.

12. In ARPHS experience there are a number of issues with current practices from the public health perspective.
 - Recycling - processing facilities. Many facilities have, in the past, tended to be set up in temporary accommodation. This has meant that they are often not purpose-designed and have design failings that increase the risk of nuisance conditions developing.
 - Haz-mobile – ARPHS welcomes the current haz-mobile service provision. It is, however, an intermittent service and it may be that making the service more readily available would decrease the amount of hazardous material unlawfully disposed of elsewhere.

13. ARPHS notes that the waste assessment makes no reference to polystyrene. Polystyrene is used as a packing material to protect other goods. It is a high volume waste for its weight and depending on how Council chooses to charge for waste disposal there is a risk that it won't be disposed of appropriately.
14. Should 'waste owners' decide to burn polystyrene it produces polycyclic aromatic hydrocarbons that are carcinogenic. It also produces flaming sticky drops that can stick to many surfaces and may present a risk of personal injury or fire spread. ARPHS believes that polystyrene is recyclable and should be given specific consideration within the waste assessment.

Chapter 4 Existing Services and Facilities

15. ARPHS supports the proposed region-wide waste operator licensing scheme. This will provide better and more reliable information from which to make policy choices.
16. ARPHS supports the proposal to have tighter Resource Management planning controls for cleanfill sites. Contaminants in soils erroneously dumped at cleanfills can have adverse implications for potable water - via aquifers - and for natural watercourses. The contamination of water in aquifers and natural watercourses brings with it a potential risk to human health.
17. ARPHS believes the waste assessment needs to give more scrutiny to the issue of construction and demolition recycling. Much demolished older property contains hazardous materials such as asbestos. There is also a risk from properties used as P-labs and possibly detrimental materials such as mouldy materials from leaky buildings. The impact on workers involved in these issues is the responsibility of the Department of Labour. The impact on the public from depot emissions and the transportation of unenclosed loads from the community needs further thought.
18. ARPHS supports the elimination of organic material from landfills, as it will help reduce greenhouse gas methane emissions. Should Council bring in a scheme to separate organic material, there are a range of nuisance principles that will need careful consideration. ARPHS would welcome being consulted at an early stage around issues such as: container design, frequency of emptying, plans to keep containers clean and resistant to domestic pets, wild animals, vermin and pest insects.
19. ARPHS believes that it may be unwise to rely upon the principle that reducing the volume of council collected residential waste will result in cost savings at the landfill. Commercial operations build pricing structures based on a number of issues such as capital invested,

¹ Estimate taken from page 176 of the Waste Assessment Report

finance costs, operational overheads and profit. With what is largely a duopoly around waste disposal there is a risk that there will be an increased cost of disposal per unit to compensate for reduced volume. Council's own partial ownership of a landfill may not provide sufficient competitive pressure to restrain price per unit volume increases.

20. ARPHS notes the reference to incorporating sewage biosolids into compost products. Before any such incorporation can occur, a reliable and effective method of removing trade waste residues, particularly heavy metals, needs to be in place to ensure that any such compost products do not present a danger to human health or the environment.
21. The commentary around management of closed landfills is noted. ARPHS believes that most closed landfills would benefit from better management and monitoring. ARPHS has been consulted in the past in situations where material from landfill has been dug up in gardens or during construction work. Anything that Council can do to encourage better record keeping around landfills would be supported.
22. ARPHS notes the comments around transport inefficiencies and the potential for their reduction to bring health gains in the areas of air quality and public safety, with some associated economic gains through reduced congestion. ARPHS believes further work would be worthwhile to quantify the extent of the gains for public health from increasing transport efficiencies and to better understand the increased risks (if any) from greater use of local transfer stations and the potential 'double handling' of waste. From the public health perspective it will be important to ensure that any waste being transported across the region is enclosed so that there is no risk to the public from insecure loads, dusty loads, mouldy demolition materials, hazardous materials, spillage or catastrophic accident.
23. ARPHS notes the comments around Hampden Downs and the possibility that rail could be used to transport waste. ARPHS hopes that this issue will be further explored as part of the development of the waste minimisation plan.

Chapter 5 Future Demands

24. The popularity of inorganic collections confirms that many residents wish to dispose of their rubbish responsibly, but balk at the cost of a trip to a transfer station. ARPHS believes that pre-existing inorganic collections can be seen as a public good issue as they remove much of the incentive to dump waste for those unable or unwilling, to pay tip fees. Although scavenging causes untidiness, it also provides the opportunity for a substantial proportion of such waste to be reclaimed and recycled. A 'collection on demand' service could reduce untidiness issues associated with current inorganic collections, but unless facilities and procedures at transfer stations are geared up for reclaiming and recycling material being dumped they will do little to reduce the amount of material going to landfill.

25. The comments on 'projected diverted materials' mirror ARPHS own views about the need for an identified end use and market for material diverted from the waste stream. As noted previously ARPHS believes that Council and its Council Controlled Organisations procurement polices need to consider what role Council can have in stimulating or creating a market for recycled or reused material. This may need to extend to seed investments to stimulate demand and innovation.

Chapter 6 Future Planning Framework

26. Council has identified priority waste streams as:
- Organic waste.
 - Construction and demolition waste.
 - Recyclables and packaging.
 - Hazardous waste.
 - Inorganic / special wastes.
 - Illegal dumping and litter.

ARPHS supports this list, but from the public health perspective the order should be:

- Hazardous.
 - Organic.
 - Construction and demolition.
 - Illegal dumping and litter.
 - Recyclables and packaging.
 - Inorganic/special wastes.
27. ARPHS supports the proposal to move towards the collection of hazardous waste at drop-off facilities in transfer stations, provided that there are sufficient transfer stations to provide good regional coverage. The ability to drop off hazardous wastes at transfer stations should be more attractive than the Haz-mobile facility - due to the greater convenience and extended opening hours that transfer stations will provide. From the public health perspective ARPHS believes that it is important that the domestic hazardous waste service remains 'free' as this is likely to maximise the proportion of hazardous waste that is removed from community circulation and is a 'public good' issue.
28. ARPHS notes the bag vs. bin discussion for Council refuse collection. The clear public health preference is for bins due to the much better:
- Isolation of refuse from interference by domestic and wild animals.
 - Control of odour and dust.
 - Isolation of refuse from insect pest species e.g. flies and wasps.

ARPHS accepts that the use of bins can lead to increased waste volumes, but believes that this can be mitigated through careful selection of bin size and the charging mechanism for additional waste quantities.

29. ARPHS does not support any moves to a fortnightly collection of refuse that includes putrescibles, due to the extent to which such waste deteriorate over time and the consequential increased health risk.
30. ARPHS is disappointed at the level of explicit discussion around any possible zero waste approach contained in the waste assessment. The waste assessment notes that all of the previous councils waste minimisation plans had "...taken note of moving 'towards zero waste'..." but there is little discussion in the document as to the possible benefits and challenges from attempting to advance zero waste objectives. Becoming a zero waste region may be an aspirational goal, but ARPHS believes that zero waste objectives should have a key place in the region's waste minimisation and management plan. For some components of the waste stream a zero waste approach is likely to have the potential for considerable impact.

Chapter 7 Options Assessment

31. As the only option that is within sight of compliance with legislative goals, ARPHS supports Direct Strategic Option 3, provided that there is no consequent detrimental effect on public health. It would be a perverse outcome if, for example, increased production and use of compost led to increased risk to manufacturing staff, people in the vicinity and end users due to the risk of its contamination with *legionella* bacteria.
32. It is unclear from the comments on Community Based Social Marketing (CBSM) as to what future role such programmes will have in Council's WMMP. The last paragraph of the section on CBSM programmes suggests that national coordination is desirable and that Council should not undertake any activity in this area in its own right. ARPHS does not agree with this sentiment. Council is sufficiently large to develop and run appropriate CBSM tied to its own WMMP. Any such CBSM has a similar role to a health promotion programme addressing a particular health issue. It will not be the whole solution, but can play an important part in addressing an issue. For Council's WMMP any CBSM will support Council's objectives, but can only succeed if Council is able to find realistic and sustainable markets for diverted waste materials.
33. ARPHS notes the discussion around regulatory approaches. Any regulatory approach will need both an effective enforcement mechanism and the political will to support effective enforcement.

34. A regulatory approach also needs public support. Bylaws banning green waste from refuse bins are likely to be unpopular and potentially unenforceable. They may only be viable and publicly supported if a free green waste collection is also provided. Any bylaw that is unpopular is likely to result in an increase in fly-tipping, concealment and dumping in skips and street bins - to get around any restrictions. In deciding what regulatory approach to take Council needs to ensure that regulation will be successful in addressing problems and not just displace activity elsewhere.
35. In addition to regulation, Council should also consider what policy levers it has available to it to incentivise the desired behaviours around waste management for the community, business and the waste management industry.
36. ARPHS does not support the use of the term “waste value chain” as used in the discussion of options. The term waste value chain implies that there is value throughout the waste stream. This is correct for elements of the chain, but is not the case throughout the vertical chain from production to eventual reuse or landfill. ARPHS believes that the term waste stream is a more neutral and readily understood descriptor.

Chapter 8 Preferred Options to Meet Waste Minimisation Targets

37. From the public health perspective any decisions around waste should be governed by the overriding principle that control of refuse is essentially a public health measure to address human disease and nuisance risks around vector control, odour, dust, hazardous wastes and vermin. ARPHS believes that the current key objectives in figure 8.1.1 should be amended to ensure that the reduction of harm from waste becomes an overarching ‘super’ objective that shapes and informs decision making for all other aspects of Council’s waste management activities.

Chapter 9 Statement of Proposal

38. ARPHS questions the appropriateness of the timeframes in the statements of proposal. While there may be merit in aligning the review of the strategy to the same timeframe as the long term council plan, ARPHS believes that the 10 year planning horizon is too short and should be extended to 20 or 30 years. While the longer timeframe suggested is too long for any meaningful financial modelling, it would align better with other timeframes for long term planning - such as the spatial plan or regional land transport strategy.

Other Issues

39. The waste assessment contains little in the way of discussion around the role of local boards. The only time local boards are mentioned is in connection with possible licensing and tenders for services. The Draft Annual Plan document - in its section outlining the differing roles of the governing body and local boards on environmental management, protection and enhancement - describes local boards as having the following decision-making and oversight responsibilities:
- Input into regional education programmes to improve...minimise waste, and tailoring regional programmes to local circumstances.
 - ...local waste management plans and projects within regional parameters.
 - Variations to region-wide service levels for the local area such as refuse and recycling services.
40. ARPHS believes that the waste assessment needs to give further consideration of the role of the local boards and their role in the final WMMP.
41. In a similar manner the waste assessment is silent on the role of council controlled organisations (CCOs) in supporting the final WMMP. How the CCOs are allowed to operate has the potential to either support or hinder Council's WMMP through their roles as generators of waste and potential customers for recycled products. This issue should be further considered as part of the waste assessment, the final WMMP and in the statements of intent that Council will use to control the CCOs.
42. The former Auckland councils operated a regional Waste Officers' Forum. Should such a body be contemplated to involve stakeholders with an interest in waste management issues, ARPHS would like to be included in such an initiative.

Conclusion

43. As noted previously, Council's waste assessment appears to have been thoroughly researched. It is well written, has a logical layout, contains an impressive amount of information and is easy to comprehend. I hope my comments will add to the utility of the waste assessment and be helpful in formulating a waste management and minimisation plan that will enable Council to deliver on the objectives that the Act requires of it and at the same time will ensure that public health is protected.

Yours sincerely

A handwritten signature in black ink, appearing to be 'SB', written in a cursive style.

Dr Simon Baker

Medical Officer of Health

Auckland Regional Public Health Service



26 April 2011

Dr. Simon Baker
 Medical Officer of Health
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 AUCKLAND

Dear Dr. Baker

REVIEW OF AUCKLAND COUNCIL WASTE ASSESSMENT

This is further to our meeting on 15 April 2011 regarding your feedback on the waste assessment undertaken by Auckland Council. At the outset we would like to thank you for your encouraging comments and feedback.

As discussed at the meeting we would like to make comment on some of the points raised in your feedback and would request you to reconsider the below mentioned issues:

1. **Chapter 3, Point 11** : Auckland Council would ask ARPHS to consider the whole of life systems perspective was evaluated in the relevant legislation covering Waste Minimisation when the Waste Minimisation Act became law in 2008. Section 46 (2) of this Act provides direction and guidelines for Funding of waste management & minimisation plans;

46 (2) Without limiting subsection (1), a territorial authority may charge fees for a particular service or facility provided by the territorial authority that is higher or lower than required to recover the costs of the service or facility, or provide a service or facility free of charge, if—

- (a) it is satisfied that the charge or lack of charge will provide an incentive or disincentive that will promote the objectives of its waste management and minimisation plan; and*
- (b) the plan provides for charges to be set in this manner.*

In addition Section 25 (b) of the Waste Minimisation Act 2008 states;

The purpose of this Part is to enable a levy to be imposed on waste disposed of to—

- (a) raise revenue for promoting and achieving waste minimisation; and*
- (b) increase the cost of waste disposal to recognise that disposal imposes costs on the environment, society, and the economy*

Two of the former Auckland councils have introduced 'User Pays' since 2000 of which neither council experienced any degree of, or increase in 'fly tipping and dumping' post introduction.

Whilst Council recognises the risks raised by ARPHS, regarding any association between User Pays and fly tipping and dumping, it is confident that past experiences put this risk into a minor degree.

2. **Chapter 3, Point 12** : Auckland Council would ask ARPHS to consider Hazardous waste disposal in context of council adopted "Strategic Direction Option 3" and council's proposal to influence the entire waste stream via the Refuse Transfer Station (RTS) market. The Hazmobile service was introduced in six of the seven former council areas as those councils had no access to the private

refuse transfer stations. Should council be able to specify RTS services, (as proposed in strategic direction option 3) then Hazardous Waste disposal would be facilitated at the regions 17 refuse transfer stations throughout the year, as opposed to once or twice a year through the current Hazmobile service. Auckland Council acknowledges this has been recognised in your point 27.

3. **Chapter 3, Point 13** : Auckland Council would ask ARPHS to consider that 'polystyrene' is not currently a waste stream that Auckland Council directly manages, and charging for its disposal is undertaken by the private refuse transfer stations in the region. We accept that the average per tonne price currently charged for polystyrene at those RTS facilities is considerably higher than other waste types due to its handling difficulties. The issue of 'packaging materials' is addressed in Chapter 5 of the Waste Assessment under "Product Stewardship" and government remedies are available in Section 9 (2) (a)(i) of the Waste Minimisation Act 2008 "Product Stewardship, Declaration of priority products"
4. **Chapter 3, Point 19** : Auckland Council would ask ARPHS to consider that Central Government policy is intended to increase the cost of disposal, not reduce it. This is borne out by government's policy analysis behind the introduction of a Waste Levy. Section 25 (b) of the Waste Minimisation Act 2008 states;

The purpose of this Part is to enable a levy to be imposed on waste disposed of to—

- (a) raise revenue for promoting and achieving waste minimisation; and*
- (b) increase the cost of waste disposal to recognise that disposal imposes costs on the environment, society, and the economy*

5. **Chapter 3, Point 24** : Auckland Council would ask ARPHS to reconsider its view that Inorganic collections are seen as a public good (and) as free collections remove much of the incentive to dump waste for those unable or unwilling, to pay tip fees.

Auckland Council cannot support any "public good" view, or alternatively question public health implications in the context of;

- Analysis has determined that Auckland's legacy inorganic collections is contrary to Part 2 of the Waste Minimisation Act 2008 (Product Stewardship)
- Section 25 (b) of the Waste Minimisation Act 2008 clearly intends a direct financial consequence on the disposer of waste.
- Commercial scavenging of inorganic piles creates considerable public health and safety risks where items such as fridges, CRT TV's, Aluminium windows are smashed to salvage precious metals.
- As more direct supervision of kerbside inorganic is cost prohibitive given the long period of advertising and lengthy period of time residents place it out on the kerbside these waste piles attract large volumes of hazardous and/or chemical waste being both illegally dumped, or incorrectly placed out for collection by residents. This is usually in insecure containers that attract the interest of both scavengers and sometimes curious children.
- Polystyrene packaging is often incorrectly placed out on the kerbside during collection and inevitably will attract the interest of children. This leads to significant volumes of broken polystyrene cells blown about in the road corridor, and ending up in the storm water system.
- Commercial scavenging of fridges, air conditioners and dehumidifiers from inorganic piles creates other environmental concerns, as chlorofluorocarbon (CFC), hydro chlorofluorocarbon (HCFC) and hydro fluorocarbon (HFC) that are often released into the atmosphere where scavengers remove precious metals at the roadside.
- Sections 15-19 of the Health and Safety Act *Other Duties*; potentially places current council inorganic collection practises at risk, as it places duties on employers, employees and contractors to ensure that their work activities do not harm themselves or other people.

"Other people" include site visitors, people passing or around the waste-collection operation, and the general public who may be in the vicinity of an operation. The Health & safety Act requires that any person in control of a place of work (e.g. a principal, contractor or subcontractor) shall take all practicable steps to ensure that people are not harmed by any hazard resulting from work activities. "In the vicinity of" now means that all duty holders are required to consider not just the actual workplace but also where a person passes through or close to the place of work or where the workplace is moving e.g. members of the public close to waste collection points and company-owned or controlled vehicles and transport will be included.

Auckland Council welcomes the commentary from ARPHS on issues outside of scope of Public Health such as;

- Use of recycled plastics as underground infrastructure for council use. (Chapter 3, point 10 (b))
- Public safety with respect to burn injury by the risk of incinerating polystyrene (Chapter 3, point 14)
- Potential Council Waste Minimisation Plan coordination with Council Spatial Plan or regional land transport strategy.(Chapter 9 point 38)
- Defining the roles and consultative process of the local Boards.(Chapter 9 point 39 & 40)

These comments are noted and will be considered further in the drafting of the waste management and minimisation plan.

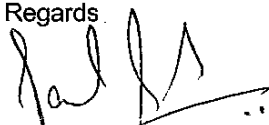
We would appreciate ARPHS views on the below mentioned issues, whilst recognising the ARPHS remit of public health;

1. Auckland Council welcomes ARPHS supporting the elimination of organic material from landfill and note your concerns regarding methodology of production and use of compost due to risk of its contamination with *legionella* bacteria.
 - **We therefore request further comment from ARPHS on the methodology considered safest for the production of compost, specifically, and as discussed at our meeting of April 15, 2011, ARPHS views on "Open-air Windrow Composting versus Managed In-Vessel Composting"?**
 - **Also, whether ARPHS has views on risk of *legionella* bacteria contamination being greater in the composting feedstock of greenwaste only versus greenwaste and foodwaste combined?**
2. Health and safety aspects of refuse and recycling collection services are of prime importance to Auckland Council.
 - **We therefore request ARPHS comments on automated versus manual refuse and recycling collections from a health and safety point of view?**

As you are aware the waste assessment, including your feedback will be notified with the draft Waste Management and Minimisation Plan for public consultation later on in the year. As discussed we will recommend that all queries regarding your feedback be sent to council for consolidation and review.

Look forward to your response.

Regards



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2nd May 2011

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Re: Review of Auckland Council Waste Assessment

Dear Ms. Sood

Thank you for considering the Medical officer of Health comments on Auckland Council's Waste Assessment.

This is further to our meeting on 15th April 2011 and letter dated 29th April 2011 regarding your request to make comments on some of the points raised in our feedback.

Chapter 3, Point 11

- ARPHHS believes this is a political decision for the Auckland Council to make. Whether or not past experience of illegal dumping in two of the amalgamated former councils matches future trends remains to be seen. We simply flag the possibility that compliance with a new regime may not match prior expectations.

Chapter 3, Point 12

- ARPHS has already agreed that hazardous waste disposal at transfer stations is preferable to the Hazmobile service. Our main point is that free removal of hazardous materials from the community is a public good issue to be commended.

Chapter 3, Point 13

- Auckland Council does control the collection and disposal of polystyrene waste originating from residential properties. We see the recycling of that percentage of the polystyrene waste stream as setting a useful precedent for handling of the commercial quantities arising via private collection. Establishment of a polystyrene recycling facility would be a good initiative for Auckland Council to consider.

Chapter 3, Point 19

- ARPHS does not disagree about the position of central government as described.

Chapter 3, Point 24,

- We remain of the opinion that patronage of inorganic collections repeatedly shows that there is a demand for effective removal of unwanted, bulky materials from the community. That amalgamating councils chose to conduct such collections for many years, endorses this view. We appreciate that kerbside collection has been shown to have demerits but these could easily be overridden by a free or reasonably-priced on demand collection service, as discussed.

➤ Composting and Legionella risks

- In principle, ARPHS favours in-vessel composting due to several reasons that includes:
 - speed of process,
 - control of odour and dust,
 - the ability to inject compressed air to maintain aerobic conditions,
 - the ability to inject steam as a tertiary sterilisation technique,
 - accurate temperature monitoring to ensure that pasteurisation temperature and time combinations have been achieved,
 - the more efficient use of land, and
 - less planning concerns that enable siting of plant closer to locations where raw materials are generated and therefore reduction in road haulage costs and emissions.
- Regarding the risks of Legionella from different feedstock sources, we suggest that is not the important issue. Provided that the composting process is properly controlled to ensure effective pasteurisation, the nature of source material is academic. A combination of greenwaste and foodwaste has potentially greater downstream nutritional value for plants than greenwaste alone.

➤ **Health and safety aspects of collection**

- ARPHS has a previously-stated, clear position (point 28 of our submission) that bin collection is preferable to bag collection on public health grounds. Comment upon the health and safety aspects of different collection methods needs to be sourced from the Department of Labour, as the only regulatory agency for workplace safety issues.

Yours sincerely

A handwritten signature in black ink, appearing to be 'S. Baker', written in a cursive style.

Dr Simon Baker

Medical Officer of Health

Auckland Regional Public Health Service