Date: Wednesday 4 September 2019  
Time: 9.30am  
 Meeting Room: Room 1, Level 26  
Venue: 135 Albert Street Auckland

Komiti Mahi Āta Torotoro Rawa / Strategic Procurement Committee

OPEN MINUTE ITEM ATTACHMENTS

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Note: The attachments contained within this document are for consideration and should not be construed as Council policy unless and until adopted. Should Councillors require further information relating to any reports, please contact the relevant manager, Chairperson or Deputy Chairperson.
13 Summary of Strategic Procurement Committee information memoranda and briefings, including the Forward Work Programme - 4 September 2019

A. 4 September 2019, Strategic Procurement Committee - Item 13 - Strategic Procurement Committee Group Source Highlights - presentation
Today you might think I am being unreasonable. But we are in a Climate Change Emergency and it requires us all to start being unreasonable. So today on behalf of the next generation today I am asking that you stop the procurement of the Anaerobic Digester.

It is not consistent with any of the outcomes of the Climate Change Action Plan. I note you have made a direct correlation between the kerbside food collection and Key Move 11. growing a low-carbon, resilient food system. For the Love of Bees and the newly formed Urban Farmers Alliance, a member of the newly formed Auckland Compost Network say this current plan to use food scraps is in no way a pathway to a low carbon food future for Auckland but in fact stands in the very way of us being able to accomplish this and other Climate Change Mitigation Measures for Auckland.

We have in good faith participated in every public consultation to date on this issue and at every opportunity articulated this. It has become evident we have not made ourselves clear. I now only have 5 mins to try and convince you to use your power to not sign us up for a 20 year contract that will have a direct impact on our capacity as a city to become Climate change ready or at the very least delay the vote until your commissioned Climate Change Action Plan has been fully costed and independently investigated.

This 700 million dollar investment over 20 years will take less than 1/3 of Auckland’s current food scraps out of landfill.

This vast sum of money will use trucks to take our vital tool (food scraps) out of local ecosystems by moving them across the city to burn the very carbon we need over the same period to rebuild soil systems, restore biodiversity, embed local food and nutrition security, create stable and useful employment in communities, contribute to community wellbeing, connection and optimism.

This investment treats food scraps as a waste. Which makes sense as it has been developed by a waste team whose primary concern is getting waste out of landfill.

We declare now Food Scraps are not a waste. In a climate change emergency a sum of money like this should be used to develop solutions that are multi-pronged, cost efficient and community generated. To invest in an operation that only offers 1/3 of a solution while removing so many other opportunities is fool hardy and could become a terrible embarrassment in the very near future.

Communities are taking action and have been trialling systems that are hyper local. Around NZ they have proved they are commercially sustainable. Kai Cycle in Wellington are on track to process 50 tonnes of food waste this year collected on e-bikes and processed in 18 x 1 cubic meter bins.

At OMG we launch tomorrow a Central Government funded community compost hub at the top of Symonds Street alongside an urban farm. In less than 6 months soil tests show that farming on this site has sequestered over 10 tonnes of carbon. Together this is what the future of Climate Change ready infrastructure looks like. This is what a low carbon resilient future food system looks like.
During the procurement phase our communities faced the potential of a new bylaw that would have made community composting near on illegal. Why? Because this Anaerobic Digester will require access to 50,000 tonnes of food scraps per annum. This situation puts community composting and urban farms into direct conflict with this Anaerobic Digester. Successful scaled out community composting would impact on the Anaerobic Digester securing access to the 50,000 tonnes per annum it requires. Should the Anaerobic Digester not secure this tonnage rate-payers would likely pay a penalty for not delivering our food scraps for incineration.

Only a few Auckland Local Boards have done any research on an alternative hyper local compost solution. These local board support a decentralised compost solution.

Imagining Auckland as a low carbon food bowl is dependent on being able to imagine Auckland with a scaled out community run decentralised compost hub network alongside urban farms delivering 11 climate change ready measures.

If you can’t imagine this at the moment, it is not an indication of if it’s possible, but an indication of a lack of research investment in this potential. Which is why we have taken it upon ourselves to model it for you at our OMG site and created a platform to help develop this research as quickly as possible. We want to collaborate with you and be part of a team working towards a truly transformational city wide solution that will enable us to be safe. Not fighting you to stop a solution that requires a huge city investment that offers no climate change resilience.

It might be hard to stop a procurement in process, but it won’t be as hard as stopping climate change and part of our future is going to have to be about being good at stopping, reassessing and looking at multi-pronged options. Those who vote on this procurement need to have been presented with all options by innovative independent consultants who have more than a more of the same approach that serves up a safe now, not safe later solution which serves businesses who truck food scraps or process them in landfills. We ask you look to a different operation that includes true 21 century equity, transport solutions and food security.
Figure 2: Evolution of food and fuel prices, 2000 to 2009
Beat rising cost of fertiliser and extreme weather by using digestate and compost

The British climate presents farmers with challenges throughout the growing season and sustainable soil organic matter management is fundamental to mitigating the impact of extreme weather and maintaining optimum yields. Farmers and growers can also help to lessen the impact of rising fertiliser prices by using quality digestate and compost. In Bulletin 2, we discuss the evidence in support of using these materials to enhance soil nutrient supply and organic matter levels.

New evidence from field experiments

Recent data from the Digestate & Compost in Agriculture field experiments is substantiating the claim that the fertiliser replacement value of digestate and compost can make a significant contribution to reducing costs, particularly when compared with other commonly applied organic materials. Digestate is a particularly valuable source of readily available nitrogen whereas compost, in addition to the already proven benefits which the organic matter brings to soils, provides phosphorus and potassium. All organic materials used for the Digestate & Compost in Agriculture field experiments have been fully analysed and the data collated. This analysis will form the basis of a data library on the nutrient content of digestate and compost, which will be an invaluable reference and resource.

The table below summarises the nutrient content of 15 digestate samples analysed as part of the field experiments, (with the range in values found indicated in brackets), as well as giving typical values for green and green/food compost:

<table>
<thead>
<tr>
<th>Nitrogen (N)(kg/l)</th>
<th>Phosphate (P₂O₅)(kg/l)</th>
<th>Potash (K₂O)(kg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>Readily Available</td>
<td>Total</td>
</tr>
<tr>
<td>Whole Digestate</td>
<td>5.0</td>
<td>4.0 (80%)</td>
</tr>
<tr>
<td></td>
<td>(2.5 - 6.0)</td>
<td></td>
</tr>
<tr>
<td>Green Compost*</td>
<td>7.5</td>
<td>&lt;0.2 (&lt;2%)</td>
</tr>
<tr>
<td></td>
<td>(6.0 - 8.0)</td>
<td></td>
</tr>
<tr>
<td>Green/food Compost*</td>
<td>11.0</td>
<td>0.6 (5%)</td>
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* Source Defra "Fertiliser Manual (RB309)"

Analysis has shown that an impressive 80% of the total N in food-based digestate is present as readily available nitrogen, compared with around 70% for pig slurry and 45% for cattle slurry. This high level of availability means that digestate can be used as a direct replacement for 'bagged' nitrogen fertiliser. Current guidance is that 60% of this readily available nitrogen may become available to the crop in the year of application, assuming spring band spread application (using pig slurry as a proxy).
In contrast, compost has the majority of its nitrogen present in an organic form (3.95%), which will slowly become available over a period of months or years.

**Phosphate (P2O5) and Potash (K2O)**

The Distamate & Compost in Agriculture field experiments have confirmed that 80% of the total potash from a range of digestates and composts can be considered crop available. As a general rule, 50% of the total phosphate in compost is crop available.

**Extractable potash at % of total potash**

<table>
<thead>
<tr>
<th>Food-based digestate</th>
<th>Manure-based digestate</th>
<th>Livestock slurry</th>
<th>Green compost</th>
<th>Green/food compost</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>80%</td>
<td>60%</td>
<td>40%</td>
<td>20%</td>
</tr>
</tbody>
</table>

**Calculate the potential savings**

For a quick way to calculate the financial value of the N, P and K in compost, visit [www.vraps.org.uk/compostcalculator](http://www.vraps.org.uk/compostcalculator)

The online calculator uses current market prices for fertiliser and typical nutrient content figures for compost and digestate. Based on fertilizer replacement values alone for the farmer, these materials are worth:

- \( \leq \text{£5.50/tonne of green compost; } \)
- \( \leq \text{£8.00/tonne of green/food compost; } \)
- and typically, whole digestate is worth \( \leq \text{£4.50/m³} \)

*Note:* taking into account nutrient lost during processing. The percentage lost is based on the NR209 figures for pig slurry (2% dry matter), although the field experiments will be generating accurate figures for digestates

**Soil organic matter focus**

This spring was the second driest across England and Wales since 1910, and the driest since 1990, with just 88.5mm of rain (45% of the long-term average). In contrast, parts of the north and west of Scotland have had to cope with a wet season, with Angus having recording 578mm of rain, well above the long-term average of 422mm.

Compost is an excellent source of organic matter.Using it will improve soil organic matter (OM) levels, help retain water during dry spells and improve infiltration during periods of heavy rainfall. Application rates for BSI PAS 100 compost will vary according to the total nitrogen content, but a typical green/food compost application at around 20t/ha (to comply with NVZ requirements) will supply 5t/ha of OM. Green compost tends to have lower nitrogen contents and typically can be applied at 30t/ha. This means that, although it usually has a lower OM content, it will still supply between 4 and 5t/ha of OM.

The organic matter supplied by compost contains high levels of lignin, which is a more stable, long-lasting form. The figure below shows the analysis results of the range of materials being used in the field experiments and demonstrates that BSI PAS 100 green/food and green compost contain more lignin than other materials, including farmyard manure. This will result in a more long-lasting improvement to soil structure, whilst providing an important carbon store which can assist in mitigating climate change.

**Lignin carbon as% of total carbon**

<table>
<thead>
<tr>
<th>Food-based digestate</th>
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**Using compost to improve drought tolerance**

A number of recent field trials have evaluated the benefits of regularly applying BSI PAS 100 compost to agricultural land. Results show that repeated applications of quality compost over a 2 to 16 year period increased soil organic matter levels by an average of 12%, when compared with soils receiving no compost. The current Distamate & Compost in Agriculture project is monitoring new sites, as well as continuing with sites from previous studies (e.g. Terrington and Harper Adams, formerly Soil-QC experiment sites) to continue to measure longer-term effects.

Previous trials also demonstrated increases in plant available water capacity (AWC) across the different projects of between 1-13% following regular incorporation of compost, with an average increase of 5%. This will improve the ability of crops to withstand short periods of drought and reduce irrigation requirements. Warwick Hill monitored soil moisture in trials with cauliflowers and, as the following graph shows, found an improvement in soil moisture content in the plots treated with compost, with the greatest difference observed in the critical drier periods.

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1. [VRAP-funded soil health trials (project OH223-010) (Wallace, 2008)](https://www.aucklandcouncil.govt.nz/)
2. [Defra-funded Soil-C trial studies (project D0058) (Hoyle et al., 2009)](https://www.aucklandcouncil.govt.nz/)
3. [AAS composting research project (Whelp & Chambers, 2009)](https://www.aucklandcouncil.govt.nz/)
UNCTAD Trade & Environment Review 2013: Wake Up Before It’s Too Late

To summarize, high oil prices contribute to soaring food prices. Our modern global food system is highly oil-dependent, but petroleum is becoming less and less affordable. Extreme weather events also contribute to high food prices, and, to the extent that such events result from anthropogenic global warming, they are also ultimately fuel-related. Thus there is no solution to the world’s worsening food crisis within current energy and agricultural systems.

What is needed is a major redesigning of both food and energy systems. The goal of managers of the global food system should be to reduce its dependence on fossil energy inputs while also reducing GHG emissions from land-use activities. Achieving this goal will require increasing local food self-sufficiency and promoting less fuel- and petrochemical-intensive methods of production.
Given the degree to which the modern food system has become dependent on fossil fuels, many proposals for delinking food and fossil fuels may seem radical. However, efforts to this end must be judged not by the degree to which they support the existing imperatives of the global food system, but by their ability to solve the fundamental challenge that faces us: the need to feed a global population of seven billion (and counting) with a diminishing supply of fuels available to fertilize, plough and irrigate fields, and to harvest and transport crops. Farmers need to reduce their dependence on fossil fuels in order to build resilience against future resource scarcity and price volatility.

Transition, economic, transport and energy policies. The transition to a post-petroleum food system will need to be comprehensive. In its scale and required speed it promises to be one of the greatest challenges in human history. But the challenge will only grow the longer it is postponed.
Retrofit Your Home

Delivers the following interventions:

- insulation
- mechanical extraction
- solar panels
- heat pump water heating
- energy storage batteries
- solar pump
- clean heating
- LED lighting
- solar water heating
- type 2 Electric Vehicle chargers
- double layered curtains
- water storage and low flow devices

Retrofit Your Home Programme overview

- Supplier panel – 20 suppliers
- Council pays supplier, then collects repayments over 9 years
- 2,500 - 3,000 applications received per year
- Over 23,700 homes have had insulation or heating retrofit works
- Up to $9 million per year, within a $35 million debt cap
- Total applications 2018/2019 - $6.073,000
- Total programme debt as at 30 June 2019 is $31.9 million
- Defaults negligible
- Additional voluntary repayments – current rate is 6 per cent
Retrofit Your Home demographics 2018/2019

Current geographic distribution

Recommended decisions

- Approve procurement plan for supplier panel
- Single-stage, open Request for Proposals
- Panel refreshed annually
- Encourages competition, new suppliers
- No minimum value to contracts – suppliers paid for what they deliver
- Managed within $27 million budget over three years
- Performance of suppliers tracked through auditing
Update on Healthy Waters procurement of operations and maintenance contracts

4th September 2019

Current Situation

- Healthy Waters is responsible for:
- Managing and improving the health of Auckland’s harbors and waterways
- Operating and maintaining the stormwater network
- Stormwater Conveyance
- Providing flood response

Current Contracts:

- One each for North, Central (incl Waiheke), West and South.
- These contracts are due to expire between June 2020 and June 2025.
The Contract Strategy Will:

- Align contract areas
- Build resilience into the scope to better respond to the impacts of storms and climate change
- Build strength and diversity to maintain a healthy supplier market and supply chain
- Embed sustainable outcomes as business as usual in contract delivery
- Ensure a more consistent approach to catch pit planning and the management of treatment works
- Initiative to improve outcomes for Auckland’s water sensitive infrastructure
- Each unit will consist of two workers, tools and a ute
- Large emphasis on sustainable outcomes
- Local employment
- Employment of disadvantaged groups
- Upskilling of workers
- Promote joint ownership and pride in achieving water quality outcomes
- To begin in Rodney, Whaukere, Franklin and Manukau PAs’ year
Waiheke resource recovery & waste services – Supplier recommendation report
Strategic Procurement Committee
4 September 2019

Context
- Waste Management & Minimisation Plan 2018
- Tiakapa Moana Hauraki Gulf Islands Waste Plan 2018
- Existing contract expiry
Local Board pilot

- Decision-making pilot
- Workshops
- Endorsement

Procurement approach

- Single stage Request for Proposals
- Three service bundles
  - Bundle 1: Refuse and recycling collections, illegal dumping services, throw & go bins, bin maintenance, bin & bag supply
  - Bundle 2: Resource recovery park, waste haulage, community education and support services
  - Bundle 3: Inorganic collection
- Contract term 7 vs 10 yrs
Procurement cont.

- Assessment criteria

<table>
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<tr>
<th>Criteria</th>
<th>Weighting</th>
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<tr>
<td>Health and Safety</td>
<td>Pass/fail</td>
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<tr>
<td>Methodology</td>
<td>20%</td>
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<tr>
<td>Capability</td>
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<td>Sustainable procurement</td>
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<tr>
<td>Future-focus</td>
<td>10%</td>
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<tr>
<td>Price</td>
<td>30%</td>
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Scope changes

- Fortnightly recycling collection
- Resource Recovery Park
- Community engagement and education

Attachment A
Auckland Food Scraps Processing Procurement

Parul Sood, General Manager Waste Solutions
Strategic Procurement Committee
4 September 2019

Food scraps service

- Key deliverable of Auckland Council’s first Waste Management and Minimisation Plan in 2012

- Support for this collection service was reaffirmed by the Environment and Community Committee in June 2018 as part of the Waste Management and Minimisation Plan 2018.

- In May 2018 the Governing Body through the Long-term Plan 2018-2028 decision making process approved the introduction of a targeted rate of approximately $67 per household to fund the collection service.

- In July 2018 the Strategic Procurement Committee approved the food scrap processing procurement strategy.
Food scraps processing solution

- Waste Management and Minimisation Plan - diversion of food scraps from landfill
- Commences October 2021
- 50,000 tonnes residential food scraps per annum (out of 100,000 tonnes available)
  - increasing to 75,000 tonnes over time
- Staged volume roll-out
  (Year 1 = 18,500 tonnes, Year 3 = 50,000)
- Will also process commercial food scraps

What are we looking for?

- Preferred technology is wet anaerobic digestion:
  - effective removal of contaminants
    (e.g., plastic, glass, batteries, etc)
  - no requirement for green waste or wood waste bulking agent
  - odour control
- Auckland Council was open to alternative proven technologies
- Modular and scalable
- Proven track record
- Secure markets for end products
Strategic Procurement Committee: Procurement highlights

Achievements 2016-2019

Trying new ways of doing things:
- Facility Management Contracts (P17)
- Multi Cloud
- Food Scraps Processing

Creating world class events and facilities for Aucklanders:
- Te Manawa Westgate
- Te Auauniga Awa
- Wynyard Edge Alliance (AC36)

Delivering value for money:
- Over $300M of benefits across the group accomplished
- $31.4M annualised Opex Cost Savings confirmed (FY18-FY19)
- Streetscapes
Achievements 2016-2019

**Better planning:**
- Category Strategies:
  - Horizontal Infrastructure and Vertical Construction
  - Hardware and Software
- Regular Capex reporting on initiatives over $5M
- Group Procurement Policy and Strategy
- Sustainable Procurement Framework (Group)
- Section 17a – Value for Money Review

**Working better together:**
- Electricity
- AoG Recruitment
- Downtown Programme

**Working better with industry:**
- Capex Forward Works programme shared with the market
- Infrastructure Procurement Survey Results:
  - AC has steadily improved over 2016-2019
  - AC excels at providing post tender debriefs and reducing bid costs where possible