**Komiti Taiao ā-Hapori Hoki / Environment and Community Committee**

**OPEN MINUTE ITEM ATTACHMENTS**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TABLE OF CONTENTS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>Public Input : Study by Ngai Tai ki Tamaki and NIWA re sediment discharging effects form Wairoa river into the Tamaki straight</td>
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<tr>
<td></td>
<td>A. 12 February 2019, Environment and Community Committee: Item 5.1 - Public Input : Study by Ngai Tai ki Tamaki and NIWA re sediment discharging effects form Wairoa river into the Tamaki straight, Presentation</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Waikumete Cemetery: initial public engagement on potential development zones</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A. 12 February 2019, Environment and Community Committee: Item 8 - Waikumete Cemetery: initial public engagement on potential development zones, Presentation</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>B. 12 February 2019, Environment and Community Committee: Item 8 - Waikumete Cemetery: initial public engagement on potential development zones, Waitakere Ranges Local Board letter supporting the recommended approach.</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>C. 12 February 2019, Environment and Community Committee: Item 8 - Waikumete Cemetery: proposed Public engagement plan for the Feasibility Study</td>
<td>31</td>
</tr>
<tr>
<td>9</td>
<td>Natural environment targeted rate update - Quarter two 2018/2019</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A. 12 February 2019, Environment and Community Committee: Item 9 - Natural environment targeted rate update - Quarter two 2018/2019</td>
<td>33</td>
</tr>
</tbody>
</table>

**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.
10 Water quality targeted rate update - Quarter two 2018/2019
A. 12 February 2019, Environment and Community Committee: Item 10 - Water quality targeted rate update - Quarter two 2018/2019

11 Submission on New Zealand's possible accession to IMO Treaty MARPOL Annex VI: Prevention of Air Pollution from Ships
A. 12 February 2019, Environment and Community Committee: Item 11 - Submission on New Zealand’s possible accession to IMO Treaty MARPOL Annex VI: Prevention of Air Pollution from Ships

13 Approval of a discussion document for informal public consultation on inter-regional marine pest pathway management
A. 12 February 2019, Environment and Community Committee: Item 13 - Approval of a discussion document for informal public consultation on inter-regional marine pest pathway management
Item 5.1

Public Input: Study by Ngai Tai ki Tamaki and NIWA re sediment discharging from Wairoa river into the Tamaki strait

Manage Mud

Science to preserve NZ's aquatic environments by limiting catchment fine-sediment loads

NIWA - Ngai Tai presentation

Auckland Council Environment & Community Committee

12 February 2019

Andrew.Swailes@niwa.co.nz
laurie.beamish@ngaitakiti-tamaki.co.nz

Talk Outline

- Summarise NIWA's Managing Mud “source-to-sink” sediment research programme
- Identify links to Auckland Council plans, programmes & research priorities
- Enhance collaborations & outcomes (NIWA/ Ngai Tai /AC)
Soil erosion – a “double whammy”

- **loss of productive soil** (1000s of yrs in the making – “mining the land”)
- **major effects** of fine sediment on freshwater & marine receiving environments
  (shift - sand to mud habitats, reduced water clarity, estuary sedimentation x 10 increase, loss of sensitive/keystone species)
- **Fine-sediments** transport/interact with other contaminants
  (e.g., microbes, nutrients)
- **economic impacts**: reduced productivity (land & sea), soil con & infrastructure

Long-term effects – mangroves

- Eroded catchment soils deposit on sand flats (1960s –)
- Mangroves colonise these new mudflats
- **Today** – sandflat buried under 2 m of mud and 1100 ha mangrove forest has developed
Managing Mud
Science to preserve NZ's aquatic environments by limiting catchment fine-sediment loads

**Objective:** Develop tools & models to link catchment FS sources to estuaries using new knowledge to predict FS behaviour, fate & effects (various time scales).

**Outcomes:** Improved management of fine sediments, inform load limits.

**Approach:** Catchment to Estuary (C2E)

**Tasks:**
1. FS transport & properties – rivers
2. Tracing sediment sources – catchments
3. FS behaviour, fate & effects in estuaries
4. Estuary evolution (decades – centuries >>> climate change, sea level, sediment supply)
5. Ngāi Tāi: co-development & capacity building (integrated across tasks)

**Study sites:** Wairoa*, Firth of Thames, Oreti (Southland), Manawatu*, Whanganui*.

* Landcare: Smarter Targeting of Erosion Control Programme*

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Wairoa Catchment
Storm - 29 August 2018
Wairoa sediment issues

- Hillslope & river-bank erosion
- Flooding
- Suspended sediments (water clarity & sedimentation)
- Mauri of Wairoa River adversely affected
- Adverse ecological effects – river, estuary, coastal
- Estuary has filled with eroded soil – exporting fine sediment to the CMA

Fine sediment fate & effects?

River plumes, winds & tides can transport fine sediment 10s km before depositing

Ecological effects can occur far from sources
What have we been doing?

Hydrometric - Sediment Station – Aroaro (Ness) Valley

Sediment source tracing methods (+ Landcare)

Ngāi Tai
Identify sediment source "hot spots"
Knowledge of historical environmental change (interviews)

Marine Instrument Deployments - calibrate C2E Model

Catchment to Estuary Model
C2E model: 100-yr ARI

Wairoa River flood - sediment plume simulation

ARI: Average Return Interval

Flow (m³/s)

SSC (kg/m³)

Time (days)

Evidence
Sediment cores show rapid sedimentation in Te Matuku Bay (6 mm/yr)
Likely source: Wairoa River

Auckland Council
Sediment Research – Links to AC Drivers, Priorities & Programmes

Auckland Plan – "protect & care for natural environment"

• Sediment – major contaminant causing decline in freshwater & estuaries.
• NPS-FM changes - better protection for wetlands & estuaries.

Aligned to key council programmes
• Strategic Approach to Sediment Management: addressing knowledge gaps & inform source-to-sink monitoring
• MIU evidence strategy: long-term effects of sedimentation (streams & estuaries), Mātauranga Māori to enhance management & support Kaikākāanga
• Freshwater Management Tool (FWMT): to set catchment load limits including sediment for NPS-FM.

Researching key knowledge gaps to inform modeling, limit setting & management
Transport & fate of fine sediment: inform development & refinement of FWMT
Sediment Source tracing: (1) improved tools & spatial resolution to quantify contributions of sediment sources by land use & erosion process; (2) inform models & resource management.
Ecological effects: link fine sediments to ecological effects (e.g., see grass), builds on previous investment by Council

SoE: Event-Based Sediment Monitoring, Marine Ecology & Marine Contaminant Monitoring Programmes
Science – Kaitiakitanga – Management

- Incorporate Ngāi Tai māturanga of long-term environmental change to provide context

- **Capacity building** - environmental monitoring
  (Wairoa river & estuary – Ngāi Tai)

- Greater involvement of AC scientists will ensure work is relevant for council. Research findings & new knowledge feed directly into council activities

- Knowledge & skill transfer benefits all involved

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Ngāi Tai perspectives

- Ancient iwi of Tamaki Makaurau.

- Ngāi Tai have witnessed **massive changes in the Wairoa River**, from a clean navigable river (a main port of early Auckland) to the heavily silted & polluted backwater it is today, encumbered by mangroves & subject to erosion that covers our shellfish beds with sediment & at the same time exposes our Urupa.

- **Post-settlement era** relationships with Crown, Crown agents & their authorities (inc. AC)

- **Priority to restore cultural redress sites** - all heavily impacted by pest animals & plants:
  - Waiokopa ki Uta & Waiokopa ki Tai
  - Motukaraka Island
  - Wairoa River

- These landscapes, although Ngāi Tai owned, are surrounded by Tikapa Moana, which remains in the authority of AC (inc. Wairoa River).

- Managing Mud Pong first introduced to Auckland Council family at a **Ngāi Tai Waananga** in 2017 (Urupuia) – attended by Franklin Local Board.

- This presentation serves to introduce our collaboration, shared objectives & desired outcomes.
Thank You
Waikumete Cemetery development project:

Timeline

- **March 2019**: Public engagement starts
- **Mid 2019**: Complete feasibility study
- **Early 2020**: Master plan
- **2021**: Resource consent application
- **2021**: Developed design
- **2021**: Concept design of development areas
- **2 April 2019**: Public engagement closes
- **ECC approval of way forward**

**Item 8**
Waikumete Cemetery: initial public engagement on potential development zones

**Attachment A**
12 February 2019, Environment and Community Committee: Item 8 - Waikumete Cemetery: initial public engagement on potential development zones, Presentation
Potential Development Zones

- **Zone 1**: This zone has been identified as the lowest risk for continued development of the cemetery.
- A large majority of these areas fall within the Significant Ecological Areas (SEA) as identified in the Unitary Plan, so their development is still constrained.
- Requires relocation of the operations depot (OD).
- The central area (a) may be more intensively developed as a public memorial.
- Most areas are served by existing infrastructure.
- Identified as a site for expanding the existing cemetery.

- **Zone 2**: This zone has been identified as a greater risk for continued development of the cemetery.
- Most areas were considered critical to being protected by the heritage experts.
- Most areas are served by existing infrastructure.

- **Zone 3**: These zones were considered the greatest risk. Development of these areas is strongly discouraged.
- All areas are not served well by existing infrastructure.

- **Zone 4**: There are plots within the heritage area of the cemetery that are not suitable for development due to the age of the area or the nearby buildings.
- The potential plots in this area are smaller than standard plots and are void of significant buildings.
- The area is void of significant buildings.

- **Zone 5**: It is highly impractical and strongly discouraged to develop within the following areas:
- Active watercourses with a 30m offset due to steep topography, risk of flooding, cost, regulatory constraints, and ecological value. Please note that the exact watercourse extent will need to be confirmed onsite.
- The northern patch of bush would be extremely costly and difficult to develop due to access constraints as it is bordered by watercourses, has steep topography and is a significant ecological area.

**Additional notes:**
- All zones, including Zone 1, which is identified as low risk, may have operational constraints which may exclude these areas from development or result in reduced plot density. Operational constraints may include, but are not limited to, access, maintenance, health and safety, soil conditions, and cost.
This zone has been identified as a greater risk for continued development of the cemetery. Most areas were considered critically challenging by the Botanical expert. If developed, significant mitigation would be required. Most areas are served by existing infrastructure. Areas may have operational constraints which may exclude those areas from development or result in reduced plot yield. Operational constraints may include but are not limited to access, maintenance, health and safety, soil condition, and cost.
Potential Development Zone 3

- These zones were considered the greatest risk, it is strongly discouraged that these areas are developed.
- Zones are not served well by existing infrastructure.
- Areas may have operational constraints which may exclude these areas from development or limit in-placed yield. Operational constraints may include but are not limited to access, maintenance, health and safety, soil conditions, and cost.
There are plots within the heritage area of the cemetery that are thought to be empty, but due to the age of the area it is not certain. Ground penetrating radar (GPR) has been carried out across the site, but this can only be guaranteed 100% accurate.

The potential plots in this area are smaller than a standard plot and excavation between existing historic burials is extremely risky, as only double plots can be developed.

Gravels within the wildflower sanctuary cannot be explored due to its protected status.

Bulbs in this area would not be able to have a headstone due to heritage restrictions, so all new gravel plots would need to be unmarked.

Despite these constraints, there are only 6 burial plots that could be developed in this area. So we strongly discourage this option due to the high cost.

Areas may have operational constraints which may exclude these areas from development or use.

In reduced plot yield, operational constraints may include but are not limited to access, maintenance, health and safety, soil conditions, and cost.
Potential Development Zone 5

- Active streams/riparian within 10m offset due to steep topography, risk of soil erosion, cost, regulatory constraints and ecological value.
- The Northern Pohutukawa bush would be extremely costly and difficult to develop due to access constraints as it is bordered by water courses. The steep topography and is an ecologically significant patch of vegetation.
- Areas meet technical operational constraints which may exclude these areas from development or result in reduced plot yield. Operational constraints may include but are not limited to access, maintenance, health and safety, soil conditions, and cost.

Zone areas are indicative only
Heritage and infrastructure
<table>
<thead>
<tr>
<th>Reference Letter</th>
<th>Predominant Discipline Affected in this Area</th>
<th>Critical Challenges</th>
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<tbody>
<tr>
<td>A</td>
<td>Transport</td>
<td>• The entrance/exit points by Gates 10B &amp; 11 (Avana Rd) have an interior link road. The use of this area, directly adjacent to the gates, may impact the use of these gates for special occasions/events, and may result in the need to permanently close the gates.</td>
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<tr>
<td>B</td>
<td>Transport</td>
<td>• This area is directly adjacent to the main gate and is essential for access to/from the cemetery. Currently, the cemetery's main parking facilities are located by Chapel 1 and Chapel 2. If any portion of this parking space is taken away for extra burial, without any mitigation, this will impact the operation of this cemetery. This access road is also critical for access around the cemetery areas. Any decrease to this main road will significantly impact the access and circulation around the cemetery, and, at worst, results in loss of access to certain isolated parts of the cemetery.</td>
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<td>C</td>
<td>Landscape Architecture</td>
<td>• The gallery is a natural landscape feature, an expression of biophysical processes that shape the land and give it life. They represent an important part of the open space network that links to the wider open space network - both existing and potential.</td>
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<td>• Areas of the gallery system feature mature native trees including rimu, kahikatea and karaka, which contribute to the distinctive landscape character of this cemetery.</td>
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<td>• No burials into single plots due to the risk of side collapse and lack of space for berthing. Only burials with two or more empty plots adjacent to each other are being considered.</td>
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<td>• There is a high potential to damage remains that may not be strictly within the boundary of the marked grave site.</td>
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<td>• NZE authority constraints. Constraints are specific to individual authority conditions.</td>
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<td>• Legal risks: If accidental finds are discovered (local planning - Not consistent with the current Reserve Management Plan); therefore, this must be allowed to remain in situ. Unlikely to get resource consent from Auckland Council without strict restrictions and guidelines. Public health concern if remains are exhumed, the governing department must also be notified. If remains are encountered, under the HPHA, the NZ Police, local police, wharenui and Heritage NZ must be notified. If this is the pre-1900 area, theburials are not covered by an active authority from Heritage NZ and the remains are pre-1900, this is a prosecutable offence under the HPHA.</td>
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<td>• This area contains recorded archaeological site R11.301.7 (Hilltops Chapel in the Park, Seabrook House, Foreman's House, Wharenui Memorial Street) and the wildflower area, as well as the location of the original entrance to the Cemetery. This area is considered to be highly significant and integral to the heritage landscape of the entire cemetery; therefore, any development in this area will directly impact these values. Any works within this area will require an Archaeological Authority (within site boundaries) which will be notified by Heritage NZ, as well as consideration of further heritage values through a heritage impact assessment. The current boundaries of recorded archaeological site R11.301.7 are indicative only and do not represent the true extent of the pre-1900 portion of the cemetery.</td>
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<td>• All graves must be hand dug in this area which will double the cost of burial.</td>
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<td>• Disturbance to wildflower sanctuary. This area is internationally recognised for the wildflowers that festoon the heritage part of the site and create a stunning display and attraction for local and overseas visitors, contributing to the identity and attraction of the city on an international scale.</td>
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<td>• There is a high potential to disturb historic monuments if work is done in this area which would likely result in damage to these monuments. New interments must not occur within close proximity of high-risk monuments or grave adornments. Any damage to historic monuments must be mitigated through responsible/egalitarian conservation. Graves in this area will be more difficult to access due to existing tightly packed interments.</td>
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<tr>
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<td>• Graves in this area will be more difficult to access due to existing tightly packed interments. Access is limited further by the closeness of grave plinths and limited width pathways between the existing graves.</td>
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<td>• There is a potential lack of market for graves that are likely to be difficult, expensive and unable to have a headstone.</td>
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<td>• Impact to the landscape heritage character must be considered so that the overall heritage fabric and significance of the Cemetery is not diminished.</td>
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<td>E</td>
<td>Transport</td>
<td>• This road is critical for access throughout the cemetery. Any decrease to this main road will significantly impact the access and circulation around the cemetery and, at worst, results in loss of access to certain isolated parts of the cemetery.</td>
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<tr>
<td>Reference Letter</td>
<td>Predominant Discipline Affected in this Area</td>
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<tr>
<td>F</td>
<td>Chill</td>
<td>- No development permitted within the Manukau Harbour Park.</td>
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<tr>
<td>G</td>
<td>Ecology, Botanical</td>
<td>- The predominant ecosystem type in this area is manuka/kahikatea scrub, a subset of the gumland classification, and is critically endangered. Consideration should be given to reducing fragmentation and maintaining areas of continuous forest.</td>
</tr>
<tr>
<td>H</td>
<td>Ecology, Botanical</td>
<td>- The predominant ecosystem type in this area is gumland heath which is considered a critically endangered ecosystem type in Auckland. This area is edge by manuka/kahikatea scrub which is a subset of the gumland classification and is also critically endangered. Consideration should be given to reducing fragmentation and maintaining areas of continuous forest.</td>
</tr>
<tr>
<td>I</td>
<td>Ecology, Botanical</td>
<td>- The predominant ecosystem type in this area is gumland heath which is considered a critically endangered ecosystem type in Auckland. This area is edge by manuka/kahikatea scrub which is a subset of the gumland classification and is critically endangered. Consideration should be given to reducing fragmentation and maintaining areas of continuous forest.</td>
</tr>
<tr>
<td>J</td>
<td>Transport</td>
<td>- This access road is critical for access around the cemetery area. Any sewerage to this main road will significantly impact the access and circulation around the cemetery, and at worst, would result in loss of access to certain isolated parts of the cemetery.</td>
</tr>
<tr>
<td>K</td>
<td>Ecology, Botanical</td>
<td>- The predominant ecosystem type in this area is gumland heath which is considered a critically endangered ecosystem type in Auckland. This area is edge by manuka/kahikatea scrub which is a subset of the gumland classification and is also critically endangered. Consideration should be given to reducing fragmentation and maintaining areas of continuous forest.</td>
</tr>
<tr>
<td>L</td>
<td>Ecology, Botanical</td>
<td>- This area is manuka/kahikatea scrub which is a subset of the gumland classification and is critically endangered. Consideration should be given to reducing fragmentation and maintaining areas of continuous forest.</td>
</tr>
<tr>
<td>M</td>
<td>Ecology, Botanical</td>
<td>- The predominant ecosystem type in this area is gumland heath which is considered a critically endangered ecosystem type in Auckland. This area is edge by manuka/kahikatea scrub which is a subset of the gumland classification and is critically endangered. Consideration should be given to reducing fragmentation and maintaining areas of continuous forest.</td>
</tr>
<tr>
<td>N</td>
<td>Ecology, Botanical</td>
<td>- This area is manuka/kahikatea scrub which is a subset of the gumland classification and is critically endangered. Consideration should be given to reducing fragmentation and maintaining areas of continuous forest.</td>
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<td>O</td>
<td>Ecology, Botanical</td>
<td>- The predominant ecosystem type in this area is manuka/kahikatea scrub which is a subset of the gumland classification and is critically endangered. Consideration should be given to reducing fragmentation and maintaining areas of continuous forest. - This area is edge by gumland heath, which is considered a critically endangered ecosystem type in Auckland.</td>
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<tr>
<td>P</td>
<td>Landscape Architecture</td>
<td>- The gully area is a natural landscape feature, an expression of biophysical processes that shape the land and give it life. They represent an important part of the open space network that links to the wider open space network - both existing and potential. - Areas of the gully system feature native trees including rimu, kahikatea and tawa which contribute to the distinctive landscape character of the cemetery. - These native trees feature predominantly canopy cover and hold significant biotic and visual landscape value. - All rivers/streams have aquatic value which contributes to biodiversity and landscape quality.</td>
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<td>Q</td>
<td>Ecology, Botanical</td>
<td>- This area is manuka/kahikatea scrub which is a subset of the gumland classification and is critically endangered. Consideration should be given to reducing fragmentation and maintaining areas of continuous forest.</td>
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<tr>
<td>R</td>
<td>Ecology, Botanical</td>
<td>- This area is manuka/kahikatea scrub which is a subset of the gumland classification and is critically endangered. Consideration should be given to reducing fragmentation and maintaining areas of continuous forest.</td>
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<td>S</td>
<td>Ecology, Botanical</td>
<td>- This area is manuka/kahikatea scrub which is a subset of the gumland classification and is critically endangered. Consideration should be given to reducing fragmentation and maintaining areas of continuous forest. - The other half of this area is gumland heath which is considered a critically endangered ecosystem type in Auckland.</td>
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**Sensitivity to Change - Critically Challenging Zones Table**
Lawn Interment

The cemetery currently offers for around 400 lawn burials per annum. In an effort to make more efficient use of burial land, the idea of dual plots (two interments per plot) is actively encouraged.

Prior to 1923, when the first crematorium opened, the cemetery catered exclusively for burials. Lawn burials need relatively flat land and can only be achieved on stable slopes up to a 1:3 gradient with only minor earthworks and retaining structures.

There is limited available space for this type of burial on the site due to the remaining steep topography.

Existing and future underground vaults, including drainage, may restrict interment yield.

Vault Interment

For areas deemed too steep, unstable or unsuitable for lawn burial methods and layout, the modular vault retaining method is considered suitable. The modular vault is based on the type utilised at the Auckland Memorial Park. The vault method comprises a series of underground interment vaults constructed in concrete. A layer of cream over the concrete lid of the crypts. This system is more efficient use of land than a standard 'traditional' burial.

Dual plots can also be installed using this method. This method can be used in areas where the traditional burial process is difficult or impossible, e.g., steep slopes, rocky areas, where there is a high unsuitable or in sandy soil. Sections of existing parts of cemeteries once thought unsuitable for burial can be considered using this method.

Vault burial requires specific operations equipment. Ground conditions, cost of development, ongoing maintenance and potential leads to the number of interments per plot may result in this being a cost prohibitive option.

Natural Burial Interment

A natural burial (no-burial) provides for an unembalmed interment into a grave which is unmarked, apart from the planting of a native tree. The body is either buried in a coffin which is constructed from sustainably sourced or untreated timber or wrapped in a biodegradable shroud.

This is the most environmentally sustainable option, but takes a larger amount of space due to the size of the tree planted on top.
Private mausolea

The private mausolea are clustered at Waitakere near the top of the site. They make efficient use of land per interment and can utilise steep areas that would not be suitable for lawn burials.

The first mausoleum was built by the Gatenby Family in 1954, and the most recent is currently under construction.

Each family is responsible for the construction of the mausoleum, so costs can vary greatly depending on size and ornamentation.

They range in size with the largest currently holding thirty-six caskets.

There are currently 80-100 mausoleum interments per year.

Large public mausolea

The uptake of pre-purchased chambers within the 2 public mausolea has been very strong. The first of these was built in 1959 by Stoney Mausoleums and contains 24 chambers, which are all full. The second built in 2010 accommodates 96 chambers.

Mausolea have a relatively low built footprint and are able to be sited on the land that is too steep for conventional lawn burial.

A public mausoleum may be suitable within the steeper central area of the site, similar to the Igualada Cemetery in Spain.

The core is lined with repeatably concrete modules forming retaining walls. This form of burial is the most efficient use of space.

Ash interment and Ash scattering

More than half of the ashes from cremations are taken away by family to be scattered (in private) outside the cemetery. Nonetheless, as a core function Waitakere Cemetery provides ash plots, memorial garden, Niches, niches-wall, as well as lanes for scattering as options for the interment of ashes.

A relatively small percentage of cremated remains are interred in ash plots or niche wall. However, in terms of land-use, this form of interment is very space efficient, as the amount of land required is almost negligible. Ash plots cater for two sets of ashes per plot and may be marked by a small plaque on the bench.

The burial space required for both ash interments is significantly less than that required for lawn burial and can utilise smaller sections of land not suitable for body burial.

Interment types
<table>
<thead>
<tr>
<th>Zones</th>
<th>Lawn Interm</th>
<th>Vault Interm</th>
<th>Natural Burial Interm</th>
<th>Private Mausoleum</th>
<th>Large Public Mausoleum</th>
<th>Ash Interm and Ash Scattering</th>
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</tr>
</tbody>
</table>

NOTE: Areas within which different interment typologies are more suited based on an analysis of risk and sensitivity.

Interment types availability table
Cr Penny Hulse
Chair
Environment & Community Committee
Auckland Council

By email – Penny.Hulse@aucklandcouncil.govt.nz

Dear Penny,

The Waitakere Ranges Local Board would like to support the approach recommended in Item 8 of the agenda of the Environment and Community Committee, 12 February 2019, Waikumete Cemetery Initial Public Engagement on Potential Development Zones.

The Waikumete Cemetery is entirely within the boundaries of our local board although governance rests with the Governing Body.

We are cognisant of the limited life remaining for burials in the cemetery unless further land is made available. We believe it is essential to extend the life of the cemetery to serve the people of Auckland and because closed cemeteries prove very hard to fund and maintain. This is a very large cemetery (the largest in New Zealand) within a growing residential area. It is critical it remains a safe area for visitors and surrounding communities.

We support the recommendation to consult on Options 1 and 2 which propose development in lower value ecological areas. We believe it is the correct approach to exclude Zones 3-5 because of the higher ecological values and the historic values of this cemetery. The entire cemetery is a Schedule A Historic Heritage site and is highly valued to the stories it can tell us about the foundation and growth of Auckland. The historic parts also constitute important heritage landscapes which can be enjoyed by visitors and the community.

We would appreciate this letter is tabled at the meeting so councillors know the recommendations have the support of the Waitakere Ranges Local Board.

Regards,

Greg Presland
Chairperson
Waitakere Ranges Local Board
### Waikumete Cemetery: Proposed public engagement plan for the Feasibility Study

<table>
<thead>
<tr>
<th>Target</th>
<th>Action</th>
<th>Description</th>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECC</td>
<td>Decision</td>
<td>ECC Business Report seeks approval of information for public consultation.</td>
<td>Tuesday 12 February 2019</td>
<td></td>
</tr>
<tr>
<td>Local boards</td>
<td>Engage</td>
<td>Workshop with Waitakere Ranges, Whau and Henderson Massey Local Boards for feedback.</td>
<td>Thursday 21 February 2019</td>
<td>Local boards AC staff WSPO</td>
</tr>
<tr>
<td>Public</td>
<td>Inform</td>
<td>Auckland Council informs public that the development feasibility project has started, and there will be an opportunity for the public to comment on the potential development zones and preferred interment types</td>
<td>Friday 22 February 2019</td>
<td>AC 'Have Your Say' website</td>
</tr>
<tr>
<td>Public</td>
<td>Inform</td>
<td>Media releases to inform public of project, public consultation and opportunities to be involved.</td>
<td>Monday 4 March 2019</td>
<td>AC 'Our Story' Local and national newspapers Local board Facebook pages</td>
</tr>
<tr>
<td>Public</td>
<td>Inform</td>
<td>Public consultation commences</td>
<td>Tuesday 5 March 2019</td>
<td>'Have your Say' online feedback form Flyers in libraries, service centres etc.</td>
</tr>
</tbody>
</table>
| Public          | Engage | World Café forum  
Inform and receive feedback from identified stakeholder groups including:  
- National RSA  
- Western District RSA  
- New Zealand Muslim Association  
- West Auckland Mosque  
- Working Together Group (Muslim)  
- Auckland Hebrew Chevra Kadisha  
- Beth Shalom  
- Funeral Directors Association NZ (FDANZ)  
- NZ Independent Funeral Homes  
- Auckland Botanical Society | Thursday 7 March 2019  
Kelston Community Centre  
Depending on numbers another forum may be required Wednesday 13 March 2019 | AC to invite stakeholder groups via an email to each identified contact person  
Elected members will be invited.  
WSPO to provide material and facilitate the event with AC |
<table>
<thead>
<tr>
<th>Public</th>
<th>Engage</th>
<th>Drop in sessions at Kelston Community Centre</th>
<th>Saturday 9 March 2019 12 – 2pm Wednesday 20 March 2019 3.30–7.30pm</th>
<th>WSPO to provide material and facilitate the event with AC. Elected members will be invited.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mana whenua</td>
<td>Engage</td>
<td>North-West Mana Whenua Group/ Urupa Komiti site visit and workshop.</td>
<td>March 2019 Waikumete Cemetery</td>
<td>AC to arrange site visit. WSPO to provide material and facilitate the event with AC. Elected members will be invited.</td>
</tr>
<tr>
<td>External Stakeholders</td>
<td>Engage</td>
<td>Meetings with statutory bodies and requiring authorities • DOC • HNZPT • KiwiRail • Auckland Transport • Gas • Watercare</td>
<td>March 2019</td>
<td>AC WSPO</td>
</tr>
<tr>
<td>Public</td>
<td></td>
<td>Public consultation period ends</td>
<td>2 April 2019</td>
<td>AC to provide online responses to WSPO in CSV file format.</td>
</tr>
<tr>
<td>Public</td>
<td>Inform</td>
<td>Consultation feedback uploaded to various platforms</td>
<td>May 2019</td>
<td>AC</td>
</tr>
</tbody>
</table>
Natural environment targeted rate | Achieving Pest-free Auckland 2050

- **Approximately 50** new or upscaled natural environment projects are now underway

- **Spend** represents a two to six-fold increase in some programmes. Staff are delivering more environmental activity short-term, while recruiting and scoping a detailed 10-year programme of work

- **Driving key priorities:**
  - Integrate Māori outcomes
  - Accelerate track upgrades
  - Finalise Regional Pest Management Plan
  - Raise awareness of Aucklanders of the expanded programme
Natural environment targeted rate | Keeping our kauri healthy and protecting our parks

- Four tracks around Kitekite Falls upgraded to kauri safe standard and re-opened to the public
- Over 50 kauri dieback ambassadors deployed over the summer to educate Aucklanders on being kauri-safe
- Upscaled animal pest control in regional parks: feral pigs in Waitākere Ranges and Hunua; rats on Waitāke Island and Waitākere Ranges; stoat and ferret control in Hunua

- 1980 programme in Hunua Ranges expanded into ‘buffer’ zone of public and private land to reduce reinvasison pressure
- Upscaled pest plant control at Waitāpuru, Muruwiwi, Waitāke and Motuakorea, Browns Islands, Mahurangi East, Te Muri and Waitāwa Regional Parks, Atkinson Reserve, Lion Rock and Connells

Natural environment targeted rate | Protecting our islands and marine environment

- The Pest-Free Warrant scheme on track to issue 10 new warrants to commercial businesses this year
- New inspector and pest detection dog team at departure points for Hauraki Gulf Islands

- Nine ambassadors stationed at the waterfront over summer to provide public education, aiming to reduce the risk of spreading pests and pathogens to the gulf islands.

- Doubling Argentine and Darwin’s ant treatment and monitoring on Aotea/Great Barrier

- A joint Auckland Council and Department of Conservation stoat incursion response at Aotea/Great Barrier in January 2019. The stoat sighting was unconfirmed.
Natural environment targeted rate | Expanding community action

- Additional $200,000 for 29 community-led conservation projects in Regional Environment and Natural Heritage grant.
- Working with representatives from community groups to design:
  - a new region-wide funding strategy
  - research into best practice behaviour change to grow Aucklanders' awareness and action
- A new community environmental grant valued in December 2018 to support co-ordination and facilitation with a total value of $300,000 per annum.
- $105,000 for Trees for Survival programme to fund conservation planting with school students - eight new schools enrolled in late 2018.
- $120,000 of pest control tools and nursery supplies distributed to six community conservations groups (including two iwi).

Natural environment targeted rate | Integrating Māori outcomes – what can we do to deliver shared environmental outcomes?

- Kaitiaki take part in executive and advisory discussion.
- Māori-led scope and delivery of projects.
- Project level co-delivery within roles.
- Structured programme for Māori to develop capacity and capability to support and deliver shared outcomes.
- Develop key performance measures that reflect matūranga Māori.
Natural environment targeted rate | Managing risk and enabling projects as we scale up our work

<table>
<thead>
<tr>
<th>Risks</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delays is dependent on participation by a range of departments across council.</td>
<td>The governance structure enables efficiency across key departments of council.</td>
</tr>
<tr>
<td>Ineffective coordination with external partners such as mana whenua and the Department of Conservation, and with stakeholders such as environmental community groups.</td>
<td>An Executive Advisory Group including key partners is being established. A co-design approach to projects will enable high levels of community participation and ownership.</td>
</tr>
<tr>
<td>Insufficient staff capacity to deliver upscaled work programme (approx. 300 per cent larger than previous years).</td>
<td>22 new staff recruited in initial phase and future needs are being confirmed.</td>
</tr>
<tr>
<td>Limited market capacity to deliver capital works (such as track upgrades or hygiene stations).</td>
<td>Staff are developing training and best practice procedures to build capability of contractors to deliver these works.</td>
</tr>
</tbody>
</table>

Key “enabling” projects will support delivery now and in the future including a biodatabase, a monitoring and evaluation framework, a CRM and a volunteer management system, with Department of Conservation as partners.

Next steps

- Re-phase track upgrades in regional parks as we work through the park specific for kauri dieback management in local parks
- Rollout further communications to increase awareness of targeted rate spend
- Work to integrate Māori outcomes into planning and delivery
- Staff are shortlisting projects put forward for targeted rate funding from informal local board feedback
Water quality targeted rate | Progress to date

- Programmes on track with major infrastructure upgrade projects at St Mary’s Bay and Masefield Beach, Picton Street and Daldy Street.

- A pilot programme has completed detailed inspections of onsite wastewater systems in the Pihe South Lagoon.

- An additional $200,000 has been allocated to the Waterways Protection Fund to support projects in the Wairoa and Papakura catchments.

- Council and Watercare continuing investigations through the safe networks programme to identify sources of pollution at popular recreational swimming beaches and resolve these.
Water quality targeted rate | Major infrastructure upgrade - Western isthmus water quality improvement programme

**What are we doing?**
Building new stormwater assets for aging infrastructure.

**How are we working?**
Collaborating with Auckland Council, Watercare, Auckland Transport and other members of the council family.

**The big picture**
Simultaneously, Watercare is starting work on its Central Interceptor project.

**America’s Cup**
Projects to improve water quality in the city centre before AC 36 are currently on track pending consenting and procurement.

**Working with mana whenua**
Working in the spirit of partnership to integrate Māori outcomes such as formal mana whenua project working groups for St Mary’s Bay and Mission Beach project to integrate mana whenua aspirations.

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Water quality targeted rate | Reducing contaminants, rehabilitating streams, onsite wastewater compliance and investigation work

**Urban and rural stream rehabilitation programme**
$200,000 added for the Waterways Protection Fund to support landowners in Wairoa and Papakura catchments.

**Contamination reduction programme**
Regional modelling tool to identify priority ‘hotspots’ will deliver first draft list in March 2019.

**Safe Networks**
- Sampling has identified Safeswarm sites with elevated health risk – signage installed.
- Significant progress in identifying source and solutions for poor water quality at Glen Innes, Takapuna, Red Beach, Piha, Meadowbank and Langhohl.

**Septic tank and onsite wastewater programme**
- 40,000 properties identified and captured in a database.
- Targeted education material to be sent to coastal septic tank residents in early 2019.
- Pilot programme was launched in Piha South Lagoon in 2018 – results due in quarter four.
- Pilot initiative to begin in Little Oneroa, Waiheke in February 2019.
- Online app being developed for contractors for onsite wastewater inspections.
Water quality targeted rate | Integrating Māori outcomes – what can we do to deliver shared outcomes?

- Kaitiaki take part in executive and advisory discussion
- Māori-led scope and delivery of projects
- Project level co-delivery within rohe
- Structured programme for Māori to develop capacity and capability to support and deliver shared outcomes
- Develop key performance measures that reflect matauranga Māori

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Water quality targeted rate | Managing risk

<table>
<thead>
<tr>
<th>Risks</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective collaboration between Auckland Council, Watercare, Auckland Transport and other members of the council family</td>
<td>Work closely with Watercare to progress delivery of water quality targeted rate projects. Healthy Waters is also collaborating with Auckland Transport, Panuku and other council teams</td>
</tr>
<tr>
<td>Compressed timeline for delivery before the America's Cup. Regulatory and consenting processes may cause delays to project delivery</td>
<td>Council is prioritising delivery of these infrastructure projects. Design, consenting and procurement processes are being progressed with urgency</td>
</tr>
<tr>
<td>Limited contractor capacity to deliver major capital works projects</td>
<td>Early engagement with contractors and use of strategic procurement approach to encourage participation in tenders. Procurement of some works will be bundled together to reduce barriers to tendering and give contractors certainty of supply</td>
</tr>
</tbody>
</table>
Next steps

- Compile first draft of contaminant hot spots
- Undertake the onsite wastewater compliance and monitoring pilot in Little Oneroa, Waiheke and develop an online app for wastewater inspections
- Continue engagement with local boards and community groups to confirm programme of stream restoration projects to be delivered across the region
Submission on New Zealand’s possible accession to MARPOL Annex VI
February 2019

Issue and local context

Global challenge:
- Ships burning low grade fuel oil produce significant air pollutant and carbon emissions

Auckland context:
- In Auckland, cruise and freight terminals are immediately adjacent to the city centre, exposing a large resident and working population to high levels of pollution
- Concentrations of sulphur dioxide from ships exceeding health standards have been measured
- Ships contribute approximately 77,000 tonnes of GHG’s annually

Auckland’s commitments:
- Auckland Council has a regulatory responsibility to protect human health
- Auckland Council has endorsed development of Auckland’s Climate Action Plan and associated target of limiting temperature increase to 1.5°C
What is being considered

- Ministry of Transport are considering accession to MARPOL Annex VI
- The International Maritime Organisation (IMO) treaty - International Convention for the prevention of Pollution from ships (MARPOL)
- MARPOL contains 6 Annexes – New Zealand has acceded to all but Annexes IV and VI
- This discussion pertains to Annex VI only – Prevention of Air Pollution from Ships
- Annex VI seeks to:
  - Limit emissions of sulphur and nitrogen oxides from ship exhausts
  - Prohibit emissions of ozone depleting substances
  - Reduce GHG emissions by implementing energy efficiency measures
- Annex VI will require ships over 400 gross tonnes to transition from fuel containing 3.5% Sulphur to low sulphur fuel containing less than 0.5% sulphur from 2020.
- Annex VI currently has 59 member states including many of our trading partners and pacific neighbours

Implications of MARPOL accession

Benefits

- Improved air quality and health outcomes
- Influence global decisions that impact our climate goals, trade and reputation
- Create an even playing field for ports
- Support our “clean green image”
- Mandate compliance monitoring

Note: Some benefits and risks and will be realised to some degree even if New Zealand does not accede to Annex VI.

Risks

- Increased fuel costs
- Uncertainty around fuel sourcing
Recommendation

- Endorse an Auckland Council submission in support of New Zealand’s accession to MARPOL Annex VI
Approval of a discussion document for informal public consultation on inter-regional marine pest pathway management

Back up slides
**Timeline**

2016
- Establishment Top of North Marine Biosecurity Partnership (ToN)

2017
- Development operational framework including communications, monitoring and surveillance, eradication and control, pathway management
- Upper North Island Strategic Alliance endorse development of a discussion document for a potential inter-regional marine pest pathway management plan
- Informal conversations with Great Barrier, Waiheke and Rodney Local Boards
- 10 November 2017: introduction proposed initiative to mana whenua

2018
- 31 May 2018: Information memo to E&C Committee (advise Auckland Council’s participation, need to address marine pests, statutory responsibilities)
- Increased funding for AC’s marine biosecurity program under NETR
- Consultation proposed Regional Pest Management Plan (including marine biosecurity)
- November & December 2018: Information memo to all Local Boards, mana whenua, E&C Committee and MATB members (update and opportunities for feedback)

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**Request today**

That the Environment and Community Committee:

a) approve the discussion document for informal consultation on inter-regional marine pest pathway management

b) Note that the analysis of feedback received through the consultation process and recommended next steps will be presented to the Environment and Community in July 2019

Biosecurity and NES staff support contents and release of document for informal consultation:

- It will increase stakeholder and community understanding of issues around the spread of marine pests, options to address these issues and potential future responsibilities
- It will help Auckland Council understand public and key stakeholders views on how to prevent the introduction and spread of marine pests
- The development of a pathway management approach for marine pests is consistent with:
  - Auckland’s proposed RPMP
  - Auckland Council’s marine biosecurity program under the NETR
  - Auckland Council’s response to the SeaChange
Need to address threat of marine pests

- Wide range of economic, ecological, recreational, social, cultural and human health impacts. Identified as one the most important coastal pressures on coastal and marine habitats in ‘Our marine environment’ 2018 MfE and Stats NZ report.
- Examples of negative impacts:
  - Fouling of structures used in aquaculture practices increases time and costs for harvesting, transporting and factory processing. Costs of presence of the clubbed tunicate to aquaculture industry in Auckland and Waikato estimated between $18.3 and $171.2 million.
  - Competition for food and space with native species e.g. Asian paddle crabs outcompeting New Zealand paddle crabs in the Waitemata Harbour.
  - Reducing local biodiversity and changing habitat structures influencing hydrological processes and coastal values (e.g. Asian date mussels).
  - Presence of pests affect the aesthetic value of coastal areas (e.g. Australian droplet tunicate).
Statutory responsibilities

- Central government: prevention of marine pests arriving in New Zealand and developing and implementing eradication programs if a new species is first detected (e.g. IHIS for Ballast water and ORMS for biofouling on international vessels).
- Regional and Unitary Councils: managing marine biosecurity risks arising from intra-regional specific movements of vectors (e.g. vessels, structure and equipment) and risks associated with development and maintenance of structures in coastal and marine environments.
- Biosecurity Act 1993 provides for development of pest management plans to control identified pests and pathway management plans to regulate activities that can introduce or spread species.
- Auckland’s Unitary Plan includes marine biosecurity provisions related to the level and cleaning of hull fouling on boat, and links other biosecurity considerations to the provision and management of aquaculture, marinas and other activities controlled under the RMA.