I hereby give notice that an ordinary meeting of the Great Barrier Local Board will be held on:

**Date:** Tuesday, 11 December 2018  
**Time:** 1.00pm  
**Meeting Room:** Claris Conference Centre  
**Venue:** 19 Whangaparapara Road  
**Claris**  
**Great Barrier Island**

---

Great Barrier Local Board  
OPEN AGENDA

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**MEMBERSHIP**

Chairperson: Izzy Fordham  
Deputy Chairperson: Luke Coles  
Members: Jeff Cleave  
Susan Daly  
Shirley Johnson

(Quorum 3 members)

Guia Nonoy  
Democracy Advisor

3 December 2018

Contact Telephone: (09) 301 0101  
Email guia.nonoy@aucklandcouncil.govt.nz  
Website: www.aucklandcouncil.govt.nz

---

**Note:** The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. Should Members require further information relating to any reports, please contact the relevant manager, Chairperson or Deputy Chairperson.
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<td>18</td>
<td>Environmental agency and community group reports</td>
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<td>19</td>
<td>Great Barrier Local Board Workshop Proceedings</td>
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<tr>
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<td>Consideration of Extraordinary Items</td>
<td></td>
</tr>
</tbody>
</table>
1 Welcome

Chairperson IM Fordham will open the meeting and welcome everyone in attendance. Member J Cleave will lead a karakia.

2 Apologies

At the close of the agenda no apologies had been received.

3 Declaration of Interest

Members are reminded of the need to be vigilant to stand aside from decision making when a conflict arises between their role as a member and any private or other external interest they might have.

4 Confirmation of Minutes

That the Great Barrier Local Board:

a) confirm the ordinary minutes of its meeting, held on Tuesday, 20 November 2018, as true and correct.

5 Leave of Absence

At the close of the agenda no requests for leave of absence had been received.

6 Acknowledgements

At the close of the agenda no requests for acknowledgements had been received.

7 Petitions

At the close of the agenda no requests to present petitions had been received.

8 Deputations

Standing Order 7.7 provides for deputations. Those applying for deputations are required to give seven working days notice of subject matter and applications are approved by the Chairperson of the Great Barrier Local Board. This means that details relating to deputations can be included in the published agenda. Total speaking time per deputation is ten minutes or as resolved by the meeting.

At the close of the agenda no requests for deputations had been received.
9 Public Forum

A period of time (approximately 30 minutes) is set aside for members of the public to address the meeting on matters within its delegated authority. A maximum of 3 minutes per item is allowed, following which there may be questions from members.

At the close of the agenda no requests for public forum had been received.

10 Extraordinary Business

Section 46A(7) of the Local Government Official Information and Meetings Act 1987 (as amended) states:

"An item that is not on the agenda for a meeting may be dealt with at that meeting if—

(a) The local authority by resolution so decides; and

(b) The presiding member explains at the meeting, at a time when it is open to the public,—

(i) The reason why the item is not on the agenda; and

(ii) The reason why the discussion of the item cannot be delayed until a subsequent meeting."

Section 46A(7A) of the Local Government Official Information and Meetings Act 1987 (as amended) states:

"Where an item is not on the agenda for a meeting,—

(a) That item may be discussed at that meeting if—

(i) That item is a minor matter relating to the general business of the local authority; and

(ii) the presiding member explains at the beginning of the meeting, at a time when it is open to the public, that the item will be discussed at the meeting; but

(b) no resolution, decision or recommendation may be made in respect of that item except to refer that item to a subsequent meeting of the local authority for further discussion."
Great Barrier Local Grants 2018/2019 grant allocation

Te take mō te pūrongo / Purpose of the report
1. To fund, part-fund or decline one deferred grant application from Local Grants Round One 2018/2019 and one “out of round” grant application.

Whakarāpopototanga matua / Executive summary
2. This report presents one deferred application received in Great Barrier Local Grants Round One 2018/2019 and one “out of round” grant application (refer to Attachment B).
3. The Great Barrier Local Board adopted the Great Barrier Local Grants Programme 2018/2019 on 19 April 2018 (refer to Attachment A). The document sets application guidelines for contestable capital and local grants submitted to the local board.
4. The local board has set a total local grants budget of $115,000.00 for the 2018/2019 financial year.
5. A total of $33,059.50 has been allocated in the first local grants round in 2018/2019. The local board has $81,940.50 remaining to be allocated.
6. One application from AoteaOra Community Trust (LG1904-102) was deferred from the local grant round one, as further information was requested from the applicant.
7. The applicant is requesting funding for the operation of Aotea Upcycle and Education Centre. The local board was seeking clarification from the waste solutions team on the amount of funding given in an operational grant to the applicant and why the applicant was requesting further funding through the contestable process.
8. The applicant has confirmed that the extra funding is requested to cover temporary coordinator costs. This need has arisen, in addition, to the operational grant for this financial year and is a one-off request.
9. An additional application from Aotea Community Radio Trust (LG1904-130), is also to be considered by Great Barrier Local Board. The request is for funding for an event which occurs before the next local grant round is decided. This event will celebrate the 10 year anniversary of the community radio. The event will be a one day of celebration on the island including talks, a photo exhibition, music workshops and an outdoor concert with New Zealand musicians. The trust is requesting funding towards the cost of the musicians at the outdoor concert.

Ngā tūtohunga / Recommendation
That the Great Barrier Local Board:

a) fund, part-fund or decline one application received for Great Barrier Local Grants Round One 2018/2019 and one “out of round” grant application listed in table one below.

Table one: Great Barrier Local Grants 2018/2019 grant applications

<table>
<thead>
<tr>
<th>Application ID</th>
<th>Applicant</th>
<th>Main focus</th>
<th>Requesting funding for</th>
<th>Amount requested</th>
<th>Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG1904-102</td>
<td>AoteaOra Community Trust</td>
<td>Environment</td>
<td>Towards costs to operate the Aotea Upcycle and Education Centre.</td>
<td>$6,060.00</td>
<td>Eligible</td>
</tr>
<tr>
<td>LG1904</td>
<td>Aotea Community Radio Trust</td>
<td>Community</td>
<td>Towards the cost to produce an event to celebrate the 10-year anniversary of the community radio on 20 April 2019.</td>
<td>$3,500</td>
<td>Eligible</td>
</tr>
</tbody>
</table>

**Ngā tāpirihanga / Attachments**

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Great Barrier Grant Programme 2018/2019</td>
<td>9</td>
</tr>
<tr>
<td>B</td>
<td>Great Barrier Local Grant 2018/2019 grant applications</td>
<td>13</td>
</tr>
</tbody>
</table>

**Ngā kaihaina / Signatories**

<table>
<thead>
<tr>
<th>Author</th>
<th>Marion Davies - Grant Operations Manager</th>
</tr>
</thead>
</table>
| Authorisers | Shane King - Head of Operations Support  
               Helgard Wagener – Relationship Manager - Great Barrier and Waiheke |
Great Barrier Local Board

Local Grants Programme 2018/19

Our Local Grants Programme aims to provide contestable and discretionary community grants to local communities.

Great Barrier Island is unique in the Auckland region and its needs are different to elsewhere. Almost all of the on-island community facilities and services that would on the mainland be operated by Auckland Council are, on Great Barrier, privately provided by local groups. The result of this is that the local board, through its discretionary grant budgets, is a key funder of many community facilities and services on Great Barrier Island.

Outcomes and our priorities for grants

Our grants programme will be targeted towards supporting the outcomes outlined in our 2017 local board plan. The Great Barrier Local Board welcomes grant applications that align with the following local board plan priorities:

- Our people thrive and life is good
  - We support our community groups to do their good work
  - We celebrate and look after our island’s culture and heritage
  - We recognise and celebrate the uniqueness of our local communities
  - We support life-long learning

- Our environment is protected and enhanced
  - We lead our region in ecological health
  - We will continue to support the island to achieve off the grid self-sufficiency and invest in infrastructure that safeguards us
  - We continue to reduce, reuse and recycle on our pathway to zero waste
  - We will work towards marine protection around our coastline
  - All our freshwater streams will be healthy

- Our infrastructure is future-proofed
  - We can get around our island in a safe and enjoyable way
  - We will work to improve freight and transport affordability and efficiency
  - Our communities will have cellphone and internet coverage
  - Smarter housing opportunities will be explored

- Our economy is sustainable and prosperous
  - We will continue to work for local jobs for local people
  - Our beautiful island is a desired destination
  - More goods and services are promoted and supplied locally
  - Local employment and business opportunities will be increased
Higher priority

- Projects or activities which have zero-waste messages and practices.

Lower priorities

We will also consider applications for other services, projects, events and activities which may be considered a lower priority on a case by case basis.

The Great Barrier Local Board has identified the following activities as lower priorities:

- activities which are inconsistent with the direction signaled in the Aotea Great Barrier Local Board Plan.
- applications from groups not based on Great Barrier unless the proposal has a significant and/or direct benefit to the island community.

The Great Barrier Local Board will take into account if a group has a substantial cash surplus (relative to the amount applied for), unless the surplus has a specific purpose, which means it can’t be used as a contribution to the project.

Exclusions

In addition to the eligibility criteria outlined the Community Grants Policy, the Great Barrier Local Board will not fund:

- Retrospective costs. It is important groups plan for funding needs wherever possible.
- GST will not be funded, if the community group or individual is GST registered.
- Insurance costs.

Note: The Great Barrier Local Board may on a case by case basis, support community organisations providing primary health care or core educational services, where these services are delivered on the island by community organisations.

Capital grants specific

Continuing to provide capital grants to community and marae groups operating facilities which meet a need in our community and which are open to and regularly used by the community.

Investment approach

The Great Barrier Local Board has allocated budgets to support the local grants programme as follows:

- Local Grants
- Capital Grants (Capital Grants Guidelines follow below)

Application dates

Grant rounds for 2018/19 will be as follows:

<table>
<thead>
<tr>
<th>Capital and Local Grant Round One</th>
<th>16 July 2018</th>
<th>24 August 2018</th>
<th>16 October 2018</th>
<th>1 November 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital and Local Grant Round Two</td>
<td>11 February 2019</td>
<td>22 March 2019</td>
<td>21 May 2019</td>
<td>1 June 2019</td>
</tr>
</tbody>
</table>
Accountability measures

The Great Barrier Local Board encourages all successful applicants to report back to the local board in a meeting (once the accountability form has been completed). A local board representative will be allocated to liaise with the applicant and ensure the project has been completed, as per their application.

Assessment and prioritisation

The Great Barrier Local Board expects all groups applying for a grant to submit a copy of the most recent Annual General Meeting (AGM) financial statements and resolutions unless a good reason for not supplying these is provided.

The local board also expects the group’s grant applicant(s) to attend the business meeting where the application is being considered to speak in a public forum and answer questions unless a good reason for not attending is provided.
Capital Grants Guidelines

Great Barrier Local Board recognises the vital role that local community facilities play in developing a strong, vibrant and engaged community and has established a capital grants fund to support capital projects associated with community facilities on Great Barrier Island.

Applicants will need to read the Aotea Great Barrier Local Board Plan before submitting an application. This can be viewed online at www.aucklandcouncil.govt.nz/localboardplans, picked up from the Auckland Council service centre, or ordered from the call centre on 09 301 0101.

Criteria for Great Barrier Local Board Capital Grants

The Great Barrier Local Board will allocate grants based on, but not necessarily limited to, the following:

- Applications will only be accepted for projects which result in the creation or improvement of a capital asset at or associated with a community facility on Great Barrier Island that is available for community use. Examples of eligible projects include but are not limited to the following:
  - Buildings, structures, plant, services, infrastructure or equipment
  - Upgrades or refurbishments to existing facilities
  - New or upgraded alternative power systems, low energy appliances and equipment, rainwater collection systems etc.

- Applications must provide evidence that the facility for which a grant is sought is available for use by the community and a record of such use over the preceding 12 months unless the facility hasn’t been operating during that period.

- Applicants must demonstrate alignment with the outcomes in the Aotea Great Barrier Local Board Plan 2017 and the amount granted may reflect the extent to which the project aligns with the local board plan.

- Applicants must hold (or be able to obtain) insurance for the asset being applied for.

- Where a building or resource consent is needed this must also be obtained prior to the grant being released although advance funding to enable this can be provided if specified in the application.

- Where paid project management assistance is required the amount of this must be included in the application.

- Applicants must contribute a percentage of the project cost in cash, labour or materials, with the percentage increasing as the cost of the project increases as follows:
  - Up to $5000 = 5 percent
  - $5001-$10,000 = 7.5 percent
  - Over $10,001 = 10 percent

- Grants of up to $50,000 only may be approved. More than one application per group can be made.

- Where a grant over $10,000 is approved this may be paid in stages with later payment amounts based on the project meeting agreed milestones.

- Projects or activities which have zero-waste messages and practices will be given higher priority.

Application deadlines: Please refer to the application dates table above in the Local Grants Programme, or Auckland Council’s website www.aucklandcouncil.govt.nz/funding.
Aotea FM

**Legal status:** Charitable Trust  
**Activity focus:** Events  
**Conflicts of interest:** None identified

**Project:** Aotea FM 10th year anniversary celebration

<table>
<thead>
<tr>
<th>Location:</th>
<th>Claris Club - Claris, Great Barrier Island</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary:</strong></td>
<td>2019 marks 10 years since Aotea FM first went to air. We plan to celebrate this milestone with a day of activities, including talks, a photo exhibition and music-related workshops during the day, and culminating in an outdoor concert featuring some of NZ’s best musicians.</td>
</tr>
<tr>
<td><strong>Dates:</strong></td>
<td>20/04/2019 - 20/04/2019</td>
</tr>
<tr>
<td><strong>People delivering:</strong></td>
<td>6</td>
</tr>
<tr>
<td><strong>People reached:</strong></td>
<td>150</td>
</tr>
<tr>
<td>% of participants from Local Board</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Rain dates:</strong></td>
<td>20/04/2019 - 20/10/2018</td>
</tr>
<tr>
<td><strong>Promotion:</strong></td>
<td>We will absolutely promote this - everywhere from the local radio station and Barrier Bulletin, to posters, to gig guides in Auckland, to event listings online, to the back seats of all the planes, and in places like Time Out (the Herald)</td>
</tr>
</tbody>
</table>

**Community benefits**

**Identified need:**

Concerts are few and far between on the Barrier, and people love going out and dancing. Having a major gig in the centre of the island on a busy holiday weekend (Easter Weekend) will also provide entertainment for visitors to the Barrier. As well, Aotea FM will never be 10 years old again. If we’re going to celebrate a decade of being on air, it’s 2019 or never.

**Identified community outcomes:**

An amazing concert and day of festivities and activities that will bring the community together. A chance for the incredible story of Aotea FM to be told, and for the people who founded it to get recognition to celebrate and to be honoured for their achievement. Hopefully new presenters recruited on the day, and, should we exceed projected ticket sales and make a profit over and above our expenses, all the money will go towards Aotea FM, its ongoing projects, and the services it provides to the community.

**Alignment with local board priorities:**

*We recognise and celebrate the uniqueness of our local communities*

Aotea FM is wholly unique in New Zealand. It is the country’s only fully solar powered radio station. The station is the community - from the people who run the Trust, to the presenters who host the shows, to the community notices we run, to our support of local businesses, community groups and events. Every day, Aotea FM itself celebrates the uniqueness of our Barrier community. By supporting it, the Local Board does the same.

<table>
<thead>
<tr>
<th>Collaborating organisation/individual</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our 22+ volunteer radio presenters</td>
<td>help with set up and running on the day of the event</td>
</tr>
</tbody>
</table>
Local musicians | Leading workshops and possibly opening for the main act
The Claris Sports and Social Club | venue
Local food providers/ producers | Will provide food for the event

Demographics
Māori outcomes:

Accessible to people with disabilities | Yes - The event will be held at the Claris Sports and Social Club, which has accessibility policies and is accessible to people with disabilities. The main concert will be held on flat ground, easily accessed by, for example, those in a wheelchair.
Target ethnic groups: | All/everyone
Promoting SmokeFree: | We will hold our event at the Claris Sports and Social Club, which has its own smoke (free) policies, which we will adhere to.
Zero waste minimisation | The Claris Sports and Social Club recycles all plastic, glass, aluminium and paper. We will put in place a zero waste policy in the outdoors space where we hold the concert.

<table>
<thead>
<tr>
<th>Percentage of males targeted</th>
<th>Percentage of females targeted</th>
<th>All - not targeted male/female</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>0-5 years</th>
<th>&lt; 15 years</th>
<th>15-24 years</th>
<th>25-44 years</th>
<th>45-64 years</th>
<th>&gt;65 years</th>
<th>All ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Financial information

Amount requested: | $3500.00

Requesting grant for: | A portion of the fee charged by the main (concert) act.

If part funded, how would you make up the difference:

Cost of participation: | We will be selling tickets to the event for $20 each

<table>
<thead>
<tr>
<th>Total expenditure</th>
<th>Total income</th>
<th>Other grants approved</th>
<th>Applicant contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>$7,335</td>
<td>$2,400</td>
<td>$0</td>
<td>$3,835</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenditure item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band fee</td>
<td>$5,000</td>
</tr>
<tr>
<td>Band van on ferry plus 2 passengers</td>
<td>$835</td>
</tr>
<tr>
<td>Sound gear hire</td>
<td>$500</td>
</tr>
<tr>
<td>Promotional materials plus incidentals</td>
<td>$1,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 tickets sales @ $20 each</td>
<td>$2,400</td>
</tr>
</tbody>
</table>
### Other funding sources

<table>
<thead>
<tr>
<th>Other funding sources</th>
<th>Amount</th>
<th>Current Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

### Donated materials

<table>
<thead>
<tr>
<th>Donated materials</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>$</td>
</tr>
</tbody>
</table>

### Total number volunteer hours

<table>
<thead>
<tr>
<th>Total number volunteer hours</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>15</td>
</tr>
</tbody>
</table>

### Funding history

<table>
<thead>
<tr>
<th>Application ID</th>
<th>Project title</th>
<th>Decision Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG1904-130</td>
<td>Aotea FM 10th year anniversary celebration</td>
<td>Undecided $0.00</td>
</tr>
<tr>
<td>LG1804-121</td>
<td>Remote Start Generators</td>
<td>Approved $12,899.00</td>
</tr>
<tr>
<td>LG1604-215</td>
<td>Relocation and expansion of Aotea FM</td>
<td>Approved $21,336.00</td>
</tr>
<tr>
<td>GBI1415_1000</td>
<td>Aotea Community Radio Station systems upgrade (Storage shed at Radio Station/ New exciter for 104FM)</td>
<td>Approved $2,598.00</td>
</tr>
<tr>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CG14_2034</td>
<td>Audio processing enhancement for Aotea FM</td>
<td>Declined $0.00</td>
</tr>
<tr>
<td>GB14-2001</td>
<td>Upgrade of solar power system Station Rock transmitter site, Great Barrier Island</td>
<td>Approved $3,283.25</td>
</tr>
<tr>
<td></td>
<td>LB - Great Barrier Local Board Community Grant - Round 2 2013/2014 - Acquitted</td>
<td></td>
</tr>
</tbody>
</table>
AoteaOra Community Trust

Legal status: Charitable Trust  Activity focus: Environment
Conflicts of interest: None identified

Project: Operation of Aotea Upcycle and Education Centre

Location: 10 Gray Rd Claris Great Barrier Island

Summary: Inspiring our community in zero waste initiatives with encouragement and education
By embracing the community and providing a facility for them to pass on unwanted goods and materials for reuse
By upcycling unwanted materials into useable goods
Providing employment for locals

Dates: 01/11/2018 - 30/06/2019  Rain dates: -

People delivering: 5  People reached: 1000

% of participants from Local Board 100%

Promotion:
- Signage
- Radio Advertising
- Barrier Bulletin
- Word of Mouth
- Flyers
- Barrier ChitChat
- Posters
- Flyers
- Word of Mouth

Community benefits

Identified need:
The project has been established for close to two years and has enormous community support.
During this time we have diverted in excess of 20,000 kgs from the landfill, we have had over 5000 visitors

Identified community outcomes:
To lead the community in zero waste initiatives
Reduce waste going to landfill by providing a yard where the community can drop off unwanted goods for reuse and repurposing
Provide inspiration for the community to reuse, repurpose and remodel goods
Provide a space where the local community can sell upcycled goods on commission - thus reducing the need to import goods from the mainland

Alignment with local board priorities:
we continue to reduce, reuse and recycle on our pathway to zero waste

By educating our local community on ways to reuse materials
By diverting goods from the landfill and recycling them back into the community
By upcycling materials that would otherwise be dumped and creating a product that is useful
By holding workshops teaching skills to reuse materials
By reusing plant pots to grow seedlings and cuttings
By visiting builders and other contractors to encourage them to divert waste from the landfill

<table>
<thead>
<tr>
<th>Collaborating organisation/individual</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>St Johns Church Op Shop</td>
<td>mutual passing on of goods dropped off</td>
</tr>
<tr>
<td>Mulberry Grove School</td>
<td>waste education and projects including building a community cupboard</td>
</tr>
<tr>
<td>Claris Landfill</td>
<td>mutual passing on of goods dropped off</td>
</tr>
<tr>
<td>Aotea Community Art Gallery</td>
<td>Room rental</td>
</tr>
<tr>
<td>Envirokwi Limited</td>
<td>Co-operation in educating the community</td>
</tr>
<tr>
<td>Okiwi School</td>
<td>waste education and projects including building a community cupboard</td>
</tr>
</tbody>
</table>

Demographics

Māori outcomes:

Accessible to people with disabilities: Yes - it is a flat site but also it is drive in and we already have elderly and infirm arrive in vehicles which are parked inside the compound and goods are taken to them to peruse

Target ethnic groups: All/Everyone

Promoting SmokeFree: No smoking is allowed in yard.

Zero waste minimisation: The project is 100% about waste minimization

<table>
<thead>
<tr>
<th>Percentage of males targeted</th>
<th>Percentage of females targeted</th>
<th>All - not targeted male/female</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>0-5 years</th>
<th>&lt; 15 years</th>
<th>15-24 years</th>
<th>25-44 years</th>
<th>45-64 years</th>
<th>&gt;65 years</th>
<th>All ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Financial information

Amount requested: $6060.00

Requesting grant for: Operating the Upcycle Centre (Tip Shop) including the TopShop Gallery on Great Barrier Island

If part funded, how would you make up the difference:
We have pared back all expenses as much as possible while keeping health and safety issues to the forefront.
If we don’t receive the funding we will have to cut back the hours the yard is open or reduce other services.

**Cost of participation:** No - other than workshops as itemised.

<table>
<thead>
<tr>
<th>Total expenditure</th>
<th>Total income</th>
<th>Other grants approved</th>
<th>Applicant contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>$60,768.52</td>
<td>$54,704</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenditure item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xero @ $47.44 pm</td>
<td>$379.52</td>
</tr>
<tr>
<td>Insurance</td>
<td>$1,100</td>
</tr>
<tr>
<td>Advertising @132 pm</td>
<td>$528</td>
</tr>
<tr>
<td>Provision for Holiday Pay</td>
<td>$4,800</td>
</tr>
<tr>
<td>Management Fees @ $250 pm</td>
<td>$2,000</td>
</tr>
<tr>
<td>Miscellaneous Materials - prov $50pm</td>
<td>$400</td>
</tr>
<tr>
<td>Power</td>
<td>$120</td>
</tr>
<tr>
<td>Project Management 15 hrs pw @ $30ph</td>
<td>$13,545</td>
</tr>
<tr>
<td>Rent @ $483 pm</td>
<td>$3,864</td>
</tr>
<tr>
<td>Stationery, Post and Printing</td>
<td>$90</td>
</tr>
<tr>
<td>Telephone and Internet @ $79 pm</td>
<td>$632</td>
</tr>
<tr>
<td>Tool Small - Provision</td>
<td>$600</td>
</tr>
<tr>
<td>Training 1st Aid and National Hui</td>
<td>$1,510</td>
</tr>
<tr>
<td>Upcycle Materials - provision</td>
<td>$480</td>
</tr>
<tr>
<td>Volunteers Expenses @ $40 pw</td>
<td>$1,280</td>
</tr>
<tr>
<td>Wages - Yard</td>
<td>$29,440</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Income description</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Auckland Council</td>
<td>$40,000</td>
</tr>
<tr>
<td>Sales</td>
<td>$13,464</td>
</tr>
<tr>
<td>Commissions</td>
<td>$480</td>
</tr>
<tr>
<td>Workshops</td>
<td>$750</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other funding sources</th>
<th>Amount</th>
<th>Current Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Donated materials</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>All goods sold</td>
<td>$13,464</td>
</tr>
</tbody>
</table>
Total number volunteer hours | Total number specialised volunteer hours | Amount
---|---|---
15 per week | | $

### Funding history

<table>
<thead>
<tr>
<th>Application ID</th>
<th>Project title</th>
<th>Decision Allocation</th>
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<tbody>
<tr>
<td>WMIF1802-139</td>
<td>&quot;Let's Make It&quot; WMIF September 2018 - 2b. Panelist Review - Waste Solutions</td>
<td>Undecided $0.00</td>
</tr>
<tr>
<td>CCS18_2_016</td>
<td>Fortnightly Creative Re-purposing workshops Creative Communities Scheme 18_2 - Central 18_2</td>
<td>Approved $2,185.00</td>
</tr>
<tr>
<td>WMIF1702-027</td>
<td>Polystyrene Compaction and Recycling WMIF September 2017 - 5a. Declined</td>
<td>Declined $0.00</td>
</tr>
<tr>
<td>LG1804-132</td>
<td>Aotears Ecological Footprint Project 2017/2018 Great Barrier Island Local Grants, Round One - Project in progress</td>
<td>Approved $5,000.00</td>
</tr>
<tr>
<td>NC17-C001</td>
<td>Off the Grid Event 2016/2017 CGP non-contestable Central - Acquitted</td>
<td>Approved $18,150.00</td>
</tr>
<tr>
<td>WMIF1602-34</td>
<td>Great Barrier Island Upcycle Centre WMIF September 2016 - 3a. Awaiting signed funding agreement</td>
<td>Approved $2,300.00</td>
</tr>
<tr>
<td>CCS17_1_111</td>
<td>Monthly Creative Re-purposing Workshops Creative Communities Scheme 2017_1 - Central Assessment Committee Round 1 2017</td>
<td>Approved $2,505.00</td>
</tr>
<tr>
<td>WMIF15162037</td>
<td>Papercrake Project Prototype Shed WMIF April 2016 - 5a. Declined</td>
<td>Undecided $0.00</td>
</tr>
<tr>
<td>LG1604-203</td>
<td>Cardboard-Compost- Community, recovering the organic matter from cardboard and paper to earth 2019/2016 Great Barrier Local Grants, Round Two - Grant not uplifted</td>
<td>Approved $2,688.00</td>
</tr>
</tbody>
</table>

Applications prior to the 2015/2016 financial year have all been accounted for and omitted from this summary.
**Annual Budget 2019/2020 consultation**

**File No.: CP2018/23771**

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**Te take mō te pūrongo / Purpose of the report**

1. To agree a local engagement event and adopt local content and supporting information for consultation as part of the Annual Budget 2019/2020 process.

**Whakarāpopototanga matua / Executive summary**

2. Auckland Council is required to have a local board agreement (as agreed between the Governing Body and the relevant local board) for each local board area for each financial year. The local board agreement will be included in the Council’s Annual Budget 2019/2020.

3. Consultation on the Annual Budget 2019/2020 will take place from 17 February – 17 March 2019. Local boards will be consulting on their areas of focus for their 2019/2020 local board agreement.

4. In December, the Governing Body will consider whether to consult on a proposal to transfer legal ownership of waterfront land and related assets to the council parent. If the Governing Body decides to consult on that proposal, the consultation would take place at the same time as the consultation on the Annual Budget 2019/2020. As a result, the consultation on the Annual Budget 2019/2020 would require the use of the special consultative procedure.

5. There will also be concurrent consultation on the Auckland Water Strategy discussion document. A report will be going to the Environment and Community Committee on 4 December 2018 to approve the discussion document for public consultation.

6. This report seeks agreement from local boards on the Have Your Say event that will be held in their local board area during the consultation period, to give Aucklanders an opportunity to provide face-to-face feedback. It also seeks approval of their local content and supporting information for consultation.

7. The Governing Body and local boards will agree regional and local items respectively for consultation by December 13. The regional and local consultation items will then be incorporated into the annual budget consultation document and supporting information, which will be approved by the Governing Body on 13 February 2019.

**Ngā tūtohunga / Recommendations**

That the Great Barrier Local Board:

a) agree, subject to approval by the Governing Body, to hold the following informal engagements in the local board area during the Annual Budget 2019/2020 consultation period:
   i) *dates, times and locations to be confirmed at the meeting.*

b) delegate to the following elected members and staff the power and responsibility to hear from the public through “spoken (or New Zealand sign language) interaction” in relation to the local board agreement at the council’s public engagement events during the consultation period for the Annual Budget 2019/2020.
   i) local board members and chairperson
   ii) General Manager Local Board Services, Local Board Relationship Manager, Local Board Senior Advisor
   iii) any additional staff approved by the General Manager Local Board Services or the Chief Financial Officer.
c) adopt Attachment A: local content for consultation and Attachment B: local supporting information (of the agenda report) for consultation.

d) delegate authority to the local board chair to approve any final changes required following review by the council’s legal team of the consultation content of the Annual Budget 2019/2020 prior to publication, including online consultation content.

Horopaki / Context

8. Auckland Council is required to have a local board agreement (as agreed between the Governing Body and the relevant local board) for each local board area for each financial year. The local board agreement will be included in the Council’s Annual Budget 2019/2020.

9. Local Board agreements set out (among other things) how the council will, in the year to which the agreement relates, reflect the priorities and preferences in the local board’s plan in respect of the local activities to be provided in the local board area.

10. For the purposes of consulting on each local board agreement to be included in the council’s Annual Budget, the consultation document for the Annual Budget must include content relating to each agreement.


12. In December, the Governing Body will consider whether to consult on a proposal to transfer legal ownership of waterfront land and related assets to the council parent. If the Governing Body decides to consult on that proposal, the consultation would take place at the same time as the consultation on the Annual Budget 2019/2020. As a result, the consultation on the Annual Budget 2019/2020 would require the use of the special consultative procedure, as a decision to proceed with the proposal would require an amendment to the council’s long-term plan. Where an amendment to the long-term plan is being consulted on at the same time as consultation on the Annual Budget, the Local Government Act 2002 requires the council to use the special consultative procedure in relation to both matters.

13. There will also be concurrent consultation on the Auckland Water Strategy discussion document. A report will be going to the Environment and Community Committee on 4 December 2018 to approve the discussion document for public consultation.

14. Aucklanders will be able to provide feedback during the consultation process through a variety of channels which include verbal (or face-to-face), written and social media.

Tātaritanga me ngā tohutohu / Analysis and advice

15. The special consultative procedure requires the council to provide an opportunity for people to present their views to the council in a manner that enables “spoken (or New Zealand sign language) interaction” between the person and the council’s decision-makers, or their official delegates. The council provides for this through its ‘Have Your Say’ events where people can have a face-to-face dialogue with elected members or other council representatives with an appropriate delegation. The recommendation is not to hold one Have Your Say event in the Great Barrier Local Board area, but a series of informal engagements held at various locations across the island.

16. Local boards held workshops during October and November 2018 to determine their key activities for their 2019/2020 local board agreement. Boards are now requested to agree their local content and supporting information for consultation, as attached in Attachment A and B.

17. Any new local BID targeted rates must be consulted on before they can be implemented. Local boards are therefore also requested to agree any new proposals for consultation.
Ngā whakaaweawe ā-rohe me ngā tirohanga a te poari ā-rohe / Local impacts and local board views

18. Local boards will have further opportunities to provide information and views as the council progresses through the Annual Budget 2019/2020 process.

19. Aucklanders will have the opportunity to give feedback on regional and local proposals contained in the Annual Budget 2019/2020. All feedback received from submitters residing in the local board area will be analysed by staff and made available for consideration by the board, prior to finalising their local board agreement.

Tauākī whakaaweawe Māori / Māori impact statement

20. Many local board decisions are of importance to and impact on Māori. Local board agreements and the annual budget are important tools that enable and can demonstrate the council’s responsiveness to Māori. Local board plans, which were adopted in September and October of 2017, form the basis for local priorities.

21. The approach to Māori engagement for the Annual Budget will be finalised once consultation topics are confirmed, including development of bespoke materials subject to interest level of topics and confirmation of budget.

22. Regionally supported local Māori engagement in the South and West will be provided subject to interest level of topics and confirmation of budget, this will be integrated with Water Strategy engagement.

23. Mana Whenua engagement on the Water Strategy is already underway, and will run throughout the March consultation period, annual budget discussions will be integrated with this process.

24. There is a need to continue to build relationships between local boards and iwi, and where relevant the wider Māori community. Ongoing conversations will assist local boards and Māori to understand each other’s priorities and issues. This in turn can influence and encourage Māori participation in the council’s decision-making processes.

Ngā ritenga ā-pūtea / Financial implications

25. Event associated costs include venue hire and catering.

Ngā raru tūpono / Risks

26. Local boards must agree their local consultation content and supporting information by 13 December 2018, in order for it to be formatted and reviewed in time to be incorporated into the Annual Budget 2019/2020 consultation document and supporting information.

Ngā koringa ā-muri / Next steps


28. Following consultation, the Governing Body and local boards will make decisions on the Annual Budget 2019/2020 and Local Board Agreements 2019/2020 respectively.
Ngā tāpirihanga / Attachments

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Local content for consultation</td>
<td>25</td>
</tr>
<tr>
<td>B</td>
<td>Local supporting information for consultation</td>
<td>27</td>
</tr>
</tbody>
</table>

Ngā kaihaina / Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Authorisers</th>
</tr>
</thead>
</table>
| Beth Corlett - Strategic Project Advisor | Anna Bray - Policy and Planning Manager - Local Boards  
Louise Mason – General Manager Local Board Services  
Helgard Wagener – Relationship Manager - Great Barrier and Waiheke |
Consultation document

Local boards

This section sets out the key proposed activities for each local board area for 2019/2020. We are seeking your feedback on whether we have got the focus right.

For more information relating to your local area, please see section xx of the supporting information for this consultation document.

<table>
<thead>
<tr>
<th>Local Board</th>
<th>Key focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actea Great Barrier</td>
<td>In 2019/2020, we plan to invest $776,000 to renew and develop assets and $2.6 million to maintain and operate assets as well as provide local programmes and initiatives. We will continue to deliver the projects you have already identified as being local priorities through the 2017 Local Board Plan, and we are not proposing major changes to existing budgets or work programmes for 2019/2020. During 2018, we delivered grant funding to support our health, welfare, education and other community groups and supported alternative energy systems through capital grants funding and the Claris council building upgrade. We completed the Visitor Strategy and a connectivity report for the island and will be implementing the strategy and advocating for better internet service. We have upgraded our wharf infrastructure and sealed Sandhills Road and will continue to investigate a viewing platform at Windy Canyon and cemetery sites for the north and centre of the island. During every consultation you’ve told us how important the environment is to you, so we will continue to deliver our environmental programmes for pest control, hold Ecology Vision workshops, improve water quality in our streams and will look to protect our waters from marine pests and pollution. Over the next few years we will also look to address some of the problems surrounding our housing issues of affordability and availability.</td>
</tr>
</tbody>
</table>

Auckland Council’s Annual Budget 2019/2020
Supporting information – Great Barrier Local Board

Each year we deliver activities and services in your local board area. These are based on our 2017 Local Board Plan, which sets our three-year direction for the local board.

3.1 Great Barrier Local Board

Message from the chair

Auckland Council’s 10-year Budget was signed off in 2018 and included a targeted natural environment rate that provides more funding towards biosecurity on Aotea and the Hauraki Gulf Islands. We were also recognised for our unique situation as an off-the-grid island in the outer gulf and received exemption from the regional fuel tax.

Our focus for 2019/2020 is to continue to deliver on our 2017 Local Board Plan initiatives and we are proposing no major changes. These initiatives include: grants funding for our health, welfare, education and other community groups; implementation of the visitor strategy; compliance funding for our Dark Sky Sanctuary; continued investigation into cemeteries in the north and centre of the island; upgrading of our wharf and airport infrastructure; sealing of our roads; investigation of a viewing platform at Windy Canyon and investigation of an education and research centre. We will also continue to advocate for better connectivity, better council procurement systems, political support for Sea Change Tai Timu Tai Pari and climate change mitigation.

Last year, environment was high in the community consciousness with Rakitu and the submission on the CRL dumping. Conversations must continue as we endeavour for the best outcome for our island through collaboration and new methodologies. In 2019/2020, we will continue to support the Ecology Vision, environmental programmes and freshwater stream monitoring. We will also continue our investment in alternate energy systems that will safeguard us into the future, such as the solar upgrade of our Claris council offices and grants funding for our community facilities.

A couple of new initiatives we would like to specifically focus on for 2019/2020 are housing and marine pests and pollution. Housing is tricky as it covers a broad spectrum from affordability concerns, absence of social housing and a lack of rental availability. The board is currently working on an Area Plan which will assist in the transition from the Hauraki Gulf Island District Plan into the Unitary Plan and we will be looking at a variety of other ways to address some of the issues.

Marine pests and pollution are another gnarly issue and will involve working with iwi, Department of Conservation, other regional councils, private businesses and individuals. We will look at ways this can be addressed through policy and education.

It’s always important to hear from you to enable us to make the best decisions for our community. Please send in your feedback or join us at the Have Your Say meeting.

Ngā mihi nui,

[Signature]

Auckland Council’s Annual Plan 2019/2020
Izzy Fordham  
Chair – Aotea Great Barrier Local Board

**What we propose in your local board area in 2019/2020**

In 2019/2020 we plan to invest $776,000 to renew and develop assets and $2.6 million to maintain and operate assets as well as provide local programmes and initiatives. The budget in the local area is allocated as follows:

<table>
<thead>
<tr>
<th>Key areas of spend</th>
<th>Capital spend 2019/2020</th>
<th>Operating spend 2019/2020</th>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Services</td>
<td>$776,000</td>
<td>$1.2m</td>
<td>Renewals Parks maintenance</td>
</tr>
<tr>
<td>Environmental Services</td>
<td>-</td>
<td>$0.2m</td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>-</td>
<td>$46,000</td>
<td></td>
</tr>
<tr>
<td>Governance</td>
<td>-</td>
<td>$1.1m</td>
<td></td>
</tr>
</tbody>
</table>

Note: the final budgets are subject to change as the council reviews the detailed costs and timing of delivering planned services and investment.

**What do you think?**

Do you have any feedback?
Aotea Great Barrier education and research centre business case funding approval

File No.: CP2018/23027

Te take mō te pūrongo / Purpose of the report
1. To approve local improvements projects (LIPs) budget to enable the business case for the proposed Glenfern education and research centre to progress.

Whakarāpopototanga matua / Executive summary
2. In June 2017, the board approved the allocation of $20,000 of their 2017/2018 locally driven initiatives operational expenditure towards a project supporting marine protection initiatives.

3. At a workshop in March 2018 the board discussed with the Glenfern Sanctuary Management Trust, council staff and representatives from Envirostrat the scope of a feasibility study of a marine and terrestrial research centre on Aotea Great Barrier. The board agreed to allocate the marine project budget to support this feasibility study.

4. In June 2018, Envirostrat completed the education and research centre feasibility study report and discussed the report recommendations with the board at a workshop in July 2018. This report is appended to this report as Attachment A.

5. The report states that an education and research centre at Glenfern Sanctuary is feasible, although it will require several parties to work constructively in a manner that aligns collective aspirations. The report has not determined the actual capital costs of building a centre but has provided a broad cost estimate of between $4.5 million and $6.5 million.

6. Glenfern Sanctuary is part of Auckland Council’s regional park network. Decision making responsibility for the development of regional parks is allocated to the council’s governing body.

7. In October 2018, a report was submitted to the Environment and Community Committee to provide an update on the feasibility assessment and seek approval to progress to the business case stage.

8. The business case was approved to proceed. Staff are required to report back to the Environment and Community Committee once the business plan has been completed.

9. This report seeks approval for the allocation of $80,000 LIPs capital funding to enable the engagement of Glenfern Sanctuary Management Trust to progress the business case.

Ngā tūtohunga / Recommendations
That the Great Barrier Local Board:

a) rescind resolution GBI/2018/93 from the board’s ordinary meeting of Tuesday 21 August 2018, item 12 clause c) approve stage two funding of up to $80,000 for the business case of the Aotea Great Barrier education and research centre from the Local Improvement Projects budget line once the Envirostrat quote is received.

b) approve stage two funding of up to $80,000 from the Local Improvement Projects budget line to Glenfern Sanctuary Management Trust to deliver a business case for an Aotea Great Barrier education and research centre.
Horopaki / Context

10. In 2016, Glenfern Sanctuary was purchased as a regional park by Auckland Council with support from funding partners.

11. On 1 April 2017, the Glenfern Sanctuary Management Trust was established and is responsible for the day to day management and administration of the Glenfern Sanctuary. The trust operates under a license agreement which requires biannual reporting to the council against agreed Key Performance Indicators.

12. At its 21 September 2016 meeting, the Parks, Recreation and Sport Committee through resolution PAR/2016/80 supported the commencement of an expression of interest process for the establishment of an environmental education camp at Glenfern Sanctuary.

13. Following subsequent discussions between the Glenfern Sanctuary Management Trust and Aotea Great Barrier Local Board, the local board funded a feasibility study for an island-based education/research centre to ensure any investment in such a facility would maximise opportunities to increase the visitation and growth of Aotea Great Barrier Island while creating a unique education opportunity for tertiary and school aged children.

14. The first stage of the feasibility study was to identify potential users’ groups and suitable locations that could accommodate the size and scale of such a facility. After considering several locations, following this first stage, Glenfern Sanctuary has been identified as the preferred location.

15. It is now the intention of the trust to complete a business case for the education and research centre based on the recommendations set out in the feasibility study. The business case will provide an in-depth investigation of the centre design and curriculum elements, funding models, benefits to the local community and significant restraints and risks.

16. The Aotea Great Barrier Local Board wish to provide support for the progression of a business plan through the approval of $80,000 LIPs capital budget.

Decision-making authority

17. Glenfern Sanctuary is part of Auckland Council’s regional park network. Decision making responsibility with regard to the regional parks is allocated to the council’s governing body.

18. The local board can choose to support development within the regional park network at its discretion.

Tātaritanga me ngā tohutohu / Analysis and advice

19. In June 2017, the local board approved the allocation of $20,000 of their 2017/2018 locally driven initiatives operational expenditure towards a project supporting marine protection initiatives.

20. At a workshop in March 2018 the local board allocated their marine project budget to progress the feasibility study.

21. In June 2018, Envirostrat completed the education and research centre feasibility study report and presented the report with recommendations to the board at a workshop in July 2018. This report is appended to this report as Attachment A.

22. In August 2018, the local board approved the allocation of up to $80,000 for the business case of the Aotea Great Barrier education and research centre from the Local Improvement Projects budget line once the Envirostrat quote is received.

23. This report is to rescind this resolution and subsequently support the trust to undertake the business case for the education and research centre based on the recommendations set out in the feasibility study, by approving stage two funding of up to $80,000 from the Local Improvement Projects budget line.
24. The business case will provide an in-depth investigation of the centre design and curriculum elements, funding models, benefits to the local community and significant restraints and risks.

25. The business case will provide detail on how the local board aspirations and measures for success, as set out by the feasibility study, will be met ongoing.

26. In October 2018, a report was submitted to the Environment and Community Committee to provide an update on the feasibility assessment and seek approval to progress to the business case stage.

27. The business case was approved to proceed requiring council staffs to report back to the Environment and Community Committee once the business plan has been completed.

**Ngā whakaaweawe ā-rohe me ngā tirohanga a te poari ā-rohe / Local impacts and local board views**

28. The Aotea Great Barrier Local Board have identified the following aspirations for the centre:
   a) to promote the unique elements of Aotea Great Barrier Island including endemic species, the predator free status of Glenfern Sanctuary, and the Dark Sky Sanctuary status of the area
   b) a ki uta ki tai ‘Ridge to Reef’ focus on education, promoting a holistic set of life-long learnings that encompasses astronomy, terrestrial and aquatic ecology, the natural environment and ‘off-grid’ living
   c) a ‘citizen science’ aspect where users are given the opportunity to observe, participate in and contribute to science in action
   d) to provide a laboratory facility suitable for university students / researchers, should demand exist for such a facility.

29. The success criteria agreed that would be used to measure the success of the centre if established:
   a) to grow the profile of the island and its unique environment – promoting sustainability and ecology learnings
   b) contribute to a better-informed community, including visitors, getting people to “get it” about why we protect things and limit our impact on the environment
   c) to be utilised consistently; available to less affluent users as well those who can afford it
   d) to achieve financial self-sufficiency with a user pays system
   e) to grow the ‘astronomy economy’ for the island.

**Tauākī whakaaweawe Māori / Māori impact statement**

30. Ngāti Rehua-Ngātiwai ki Aotea are an important partner in the establishment of the research and education centre.

31. Hillary Outdoors already works with both marae at the northern end of the Island and Okiwi school, providing economic benefit to the local community and cultural benefit to visitors.

32. The engagement with Ngāti Rehua-Ngātiwai ki Aotea will continue through the business case stage.

**Ngā ritenga ā-pūtea / Financial implications**

33. The feasibility report states that an education and research centre at Glenfern Sanctuary is feasible, although it will require several parties to work constructively in a manner that aligns collective aspirations.
34. The report has not determined the actual capital costs of building a centre, inclusive of three buildings, but has provided a broad cost estimate of between $4.5 million and $6.5 million.

35. The approval of the $80,000 from the Local Improvement Projects capital budget to progress the business case will enable the estimated costs to be further refined and for the identification of potential internal and external funding mechanisms.

Ngā raru tūpono / Risks
36. Identified project risks include:
   a) delay in the progression of the business case stage will potentially delay the overall long term process to establish the education and research centre.

Ngā koringa ā-muri / Next steps
37. Once the Local Improvement Projects capital budget has been approved, the Glenfern Sanctuary Management Trust can be engaged under a professional services contract to undertake the formal business case report.

38. The local board will be kept informed and engaged with throughout the business case stage by the Glenfern Sanctuary Management Trust.

39. Council staff will report back to the Environment and Community Committee on the outcome of the business case for the education/research centre once this has been completed.

Ngā tāpirihanga / Attachments

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<tr>
<td>A</td>
<td>Aotea Great Barrier Island Education/ Research Centre Feasibility Study</td>
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Ngā kaihaina / Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Katrina Morgan - Senior Project Manager</th>
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</thead>
<tbody>
<tr>
<td>Authorisers</td>
<td>Rod Sheridan - General Manager Community Facilities</td>
</tr>
<tr>
<td></td>
<td>Helgard Wagener – Relationship Manager - Great Barrier and Waiheke</td>
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Auckland Council

Aotea Great Barrier Island Education / Research Centre Feasibility Study

Prepared by Envirostrat Ltd

Final Report
June, 2018
Executive Summary

This study into the feasibility of an education / research centre at Glenfern Sanctuary, Aotea Great Barrier Island was commissioned by Auckland Council on behalf of the Great Barrier Local Board. In addition to the contribution of the Local Board, other stakeholders that were integral to the feasibility study were the Glenfern Sanctuary Trust, the Park Services Group of Auckland Council, and Hillary Outdoors.

This feasibility study focuses on Local Board aspirations and builds upon considerable previous work on the concept of a centre at Aotea undertaken by the Glenfern Sanctuary Trust, Hillary Outdoors, and Kristin School. Each organisation has its particular goals, scope and language; however the overlap and alignment between them is significant. Although this study refers to a "centre", it would comprise a number of buildings including residential facilities, a separate accommodation block for Glenfern volunteers and Hillary Outdoors staff, and a visitor centre / research centre available to the local community.

Aspirations
The main aspirations identified by the Local Board for a potential centre were:

- To promote the unique elements Aotea Great Barrier Island, including endemic species, the predator free status of Glenfern Sanctuary, and Dark Sky Sanctuary status of the area.
- A ki uta ki tā ‘Ridge to Reef’ focus on education, promoting a holistic set of life-long learnings that encompasses astronomy, terrestrial and aquatic ecology, the natural environment and ‘off-grid’ living.
- A ‘citizen science’ element where users are given the opportunity to observe, participate in and contribute to science in action.
- A laboratory facility suitable for university students/researchers, should demand exist for such a facility.

Recommendations
The study has determined that a centre is feasible, although it will require several parties to work constructively in a manner that aligns their collective aspirations for future development of Glenfern Sanctuary. A high quality laboratory facility is not feasible due to a lack of demand, although a basic wet lab would provide some benefits. The operating model for an education / research centre at Glenfern would need to incorporate a range of organisations, each with different roles and responsibilities. The diagram below provides an overview of a suggested operating model based on our analysis of the likely role and contribution of different stakeholders.
Next Steps

Provided the Local Board is willing to progress the development of the centre concept, we recommend the next practical steps should include:

1. The ‘consolidation of the coalition’ of different organisations with key roles to play.
2. Develop a detailed business case.
3. Provisional commitment.
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Introduction

Purpose
This report assesses the feasibility of establishing an education/research centre in the northern end of Aotea Great Barrier Island. The purpose of the report is to:

1. Clarify the likely scope, components and operating model of such a centre.
2. Provide information on the strategic and operational feasibility of such a centre.
3. Support discussions among important stakeholders on whether to co-operate further on the idea.
4. Provide the necessary background information for any further work to progress the centre idea.

The primary audience for this report is the Great Barrier Local Board. Other intended audiences are the Glenfern Sanctuary Trust and Auckland Council (Customer & Community, Park Services, Community Facilities). Other recommended audiences for this report are Hillary Outdoors, local Iwi (Ngāti Rehua - Ngātiwai ki Aotea) and Kristin School.

Background
This study into the feasibility of an environmental education/research centre was commissioned by Auckland Council on behalf of the Great Barrier Local Board. In addition to the contribution of the Local Board, other stakeholders that were integral to the feasibility study were the Glenfern Sanctuary Trust, the Park Services Group of Auckland Council, and Hillary Outdoors.

It is important to acknowledge that this feasibility study was built upon considerable previous work on the concept of a centre at Aotea undertaken by the Glenfern Sanctuary Trust, Hillary Outdoors, and Kristin School (in alignment with Auckland Council). Each organisation has its particular goals, scope and language; however the overlap and alignment between them is significant.

Although this study refers to a “centre”, it would comprise a number of buildings. Probable component buildings include school residential facilities (i.e. bunkrooms, kitchen, bathrooms), a separate accommodation block for Glenfern volunteers and Hillary Outdoors staff, and a visitor centre/research centre available to the local community. Each of these is described and expanded upon further within this report.

Approach
At a high level, this feasibility study involved four stages; kick-off, research and consultation, feasibility analysis, and reporting.

The kick-off stage centred upon confirming the expectations of critical stakeholders such as the Local Board, Auckland Council and Glenfern Sanctuary Trust. Early meetings were held to discuss the centre concept including the expected scope of operations, success criteria and location. The results from this phase along with a more detailed approach were summarised into an Expectations document that guided the rest of the feasibility study.

The research and consultation stage comprised parallel work streams of research into other centres with similar characteristics, and consultation with different stakeholder groups. The other centres researched include 4 main categories: public access research facilities; public education facilities; school owned camps; and independently owned camps.

The main stakeholder types consulted were: potential centre owners; potential centre operators; and, potential centre users (paying customers). We met with representatives from Glenfern Trust, Hillary Outdoors, Auckland Council Park Services, Kristin School, St Peters School, Trident School, and Auckland University.

Attempts were made to engage with local Iwi (under guidance from Auckland Council) but this was not possible within our project timeframes. Local businesses and potential (capital) funders were not approached directly as the core scope and concept were not sufficiently developed and agreed upon to begin wider engagement. It is expected that these groups would be consulted as part of any subsequent phase.
The **feasibility analysis stage** brought together the results of centre comparisons and stakeholder engagement. The core concept, scope and operating model for a centre were defined more clearly based upon what had succeeded elsewhere, and what stakeholders believed would be successful from their perspective at Aotea Great Barrier Island. Initial findings were presented to the Great Barrier Local Board and Glenfern Trust for feedback.

**Feasibility Study Approach**

- **Kick-off**
  - Initial engagement with Local Board and Council staff
  - Summarise expectations and approach

- **Research & Consultation**
  - Shortlist similar centres and conduct initial research
  - Consult with main stakeholder groups
  - Summarise best option(s) for feasibility analysis
  - Follow-up consultation on option(s) with key stakeholders

- **Feasibility Analysis**
  - Analyse the consultation and research findings
  - Assess the concept against feasibility categories

- **Report & Present**
  - Write-up the feasibility assessment, including risks, high-level costs, assumptions, next steps
  - Present findings
Centre Concept

Local Board Aspirations

The main aspirations identified by the Local Board for a potential centre were:

- To promote the unique elements of Aotea Great Barrier Island including endemic species, the predator free status of Glenfern Sanctuary, and the Dark Sky Sanctuary status of the area.
- A ki uta ki tai ‘Ridge to Reef’ focus on education, promoting a holistic set of life-long learnings that encompasses astronomy, terrestrial and aquatic ecology, the natural environment and ‘off-grid’ living.
- A ‘citizen science’ aspect where users are given the opportunity to observe, participate in and contribute to science in action.
- To provide a laboratory facility suitable for university students / researchers, should demand exist for such a facility.

Success Criteria

The Great Barrier Local Board identified success criteria that would be used to measure the success of the centre if established:

- To grow the profile of the Island and its unique environment – promoting sustainability and ecology learnings.
- Contribute to a better-informed community, including visitors, getting people to “get it” about why we protect things and limit our impact on the environment.
- To be utilised consistently; available to less affluent users as well as those who could afford it.
- To achieve financial self-sufficiency with a user pays system.
- To grow the ‘astronomy economy’ for the Island.

Core Stakeholders

There are a number of stakeholders that are crucial to the concept of an education / research centre in the northern half of Aotea Great Barrier Island. The interest of each in a centre is described below.

Local Board

The Great Barrier Local Board is democratically elected to advance the interests and aspirations of the local community. The concept of an education / research centre is listed within the Local Board’s strategic plan, and they are an important advocate and driving force for the concept.

Glenfern Trust is responsible for coordinating the protection and promotion of the Glenfern Sanctuary located at Fitzroy, on the the north western coast of Aotea Great Barrier Island. The Trust has developed a site plan for development of the sanctuary that includes a visitor / research centre able to be accessed by the community and Glenfern visitors, accommodation for volunteers, and accommodation for students.

Auckland Council Park Services is part of Auckland Council, the landowner of Glenfern Sanctuary as part of its the Auckland regional parks network. The concept of an education centre located at Glenfern is consistent with the long term strategic intent of the Park Services Group, and it supported previous work on the idea put forward by Kristin School.

Hillary Outdoors provides youth learning through adventure and currently operates programmes at its Tongariro Centre, and from the Orama Christian Camp on Aotea Great Barrier. Hillary Outdoors is seeking new centres due to significant growth in demand in recent years to support adventure learning and, increasingly environmental learning. It has previously identified Glenfern Sanctuary as providing the best location for expansion upon Aotea Great Barrier Island and worked closely with Kristin School in developing a previous concept.
Mana Whenua

Ngāti Rehua–Ngātiwai ki Aotea were identified as an important stakeholder in this feasibility study. Both Auckland Council and Envirostrat have attempted to engage with Ngāti Rehua through appropriate channels, without success. Hillary Outdoors already works with both marae at the northern end of the Island and Okiwi school, providing economic benefit to the local community and cultural benefit to visitors.

Kristin School has previously (2016 / 2017) undertaken considerable feasibility work on an education centre at Glenfern. They see considerable benefit for year 10 students participating in 4-5 week stays that provide environmental and outdoor education based learning through immersion in a natural setting.

Analysis & Findings

Comparison with other facilities

A comparative analysis of other facilities that shared characteristics of the proposed centre was carried out in order to identify traits of other facilities that could provide lessons for this study. Four types of facility were identified:

Table 1. Types of facilities that shared characteristics with the proposed sustainability education centre.

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
<th>Funding</th>
<th>Accommodation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Laboratory</td>
<td>Goat Island Marine Laboratory, Portobello Marine Laboratory</td>
<td>University grants, student fees.</td>
<td>Yes. Host University groups and full-time researchers.</td>
</tr>
<tr>
<td>Council / Charitable Trust-owned Facilities</td>
<td>MERC facility at Long Bay, Island Bay Marine Education Centre</td>
<td>Charitable trust funding, publicly funded through Council.</td>
<td>Sometimes. Depends on the facility — those that operate like camps accommodate visitors.</td>
</tr>
<tr>
<td>School-owned Camps</td>
<td>Private schools: Kahawai Camp for girls (St Cuthbert’s), Tītovi Venture Camp (St Paul’s Collegiate).</td>
<td>Funded by private schools through annual fees.</td>
<td>Yes. Host groups of students.</td>
</tr>
</tbody>
</table>

Of the four types above, school owned / independent camps (in some cases with external providers such as Hillary Outdoors) were the best models for comparisons due to the overlap with Local Board criteria.

Funding

There was no strong underlying theme in how each of the centre types were funded, however, they could broadly be categorised into those that were paid for by the ratepayers / Council (publicly-owned; e.g. MERC), and those that were paid for by institutions (privately-owned; eg. Goat Island Marine Laboratory).

A user-pays system was a common factor between all of the case studies, relying on either students, tourists, the general public, or a mixture of the three. By establishing a continual revenue stream through paying users the facilities are able to cover some of the operating costs associated with running programmes or maintaining the buildings. However, many of the facilities also relied heavily on external funding grants or sponsorship in order to continue providing their services. Public / Council owned enterprises (e.g. MERC) receive annual funding allocations subsidised by ratepayers, allowing them to cover operating costs and offer assistance to under-privileged users.
Research laboratories have fewer characteristics in common with the proposed centre than the other types of facility examined. In terms of establishment costs, the research laboratories stand out for being significantly more expensive due to the high-tech equipment costs, making them largely unattainable for organisations outside of a University.

Demand
The majority of competitive examples catered to students largely from within their own institutions (e.g. University of Auckland students attending Goat Island Marine Laboratory). Those that didn’t have students enrolled at their institution for the most part acted as third party providers of outdoor / adventure style activities to schools in their community (e.g. MERC). None of the facilities were characterised by ‘walk-ins’ or casual visitors. Local user-bases were not a key indicator of whether or not a facility was heavily utilised, and many were attended by non-locals only.

Lessons for a Centre at Aotea Great Barrier Island
Based on the models reviewed, the proposed centre at Aotea Great Barrier Island should:

- Not rely on walk-in customers; should target schools as the primary market.
- Contract a single long-term user (a private school willing to commit for an extended period for a significant portion of the year) to de-risk the proposition.
- Have a structured programme provided by a third party provider.
- Design the governance structure to ensure eligibility to access philanthropic, charitable or public funding.
- Provide suitable accommodation to host groups of students.
- Establish clear ownership of assets and management responsibilities.

Location
Glenfern Sanctuary was identified as the preferred location during the kick-off phase by the Local Board, and was confirmed to be the only feasible location during the research and consultation phase. The reasons why Glenfern Sanctuary was identified as the only feasible site for a centre are:

- It is located in the north of Aotea Great Barrier as preferred by the Local Board to bring additional economic value to the area.
- It is public land maintained by the Glenfern Trust so there is no need to purchase additional land, plus the Council has previously supported the idea of a schools accommodation element of a new centre on the site.
- It is large enough (83ha) to support several new buildings without detracting from the natural aesthetic value of the land.
- There is significant natural value at the Glenfern Sanctuary (walking tracks, flora and fauna) that support sustainability and environmental learning, including the predator control programme.
- Glenfern is the strong preference of Hillary Outdoors (if it is to be the lead provider) due to its proximity to the equipment and storage that Hillary Outdoors already have at the Onuma Christian Camp.
- It is close to the commercial wharf and facilities at Port Fitzroy plus Glenfern also has its own smaller jetty on-site, all within a very sheltered location.
Image 1. Aerial photograph of Glenfern Sanctuary showing the existing structures.

Retrieved from Auckland Council GeoMaps.

Kristin School

The Great Barrier Local Board is not the first organisation to consider establishing a centre of this nature. Significant previous work was led by Kristin School (with architectural design produced by the University of South Australia) in 2016.

This previous work included the design of a pre-fabricated sustainable off-grid (energy, water, waste efficient) student accommodation block at Glenfern Sanctuary, for the purpose of a long stay (~5 week) camp for all year 10 students, in groups of 35-40 at a time. The centre would have been used on a non-exclusive basis i.e. other schools could have used it when Kristin was not. This work was discontinued in 2017 but could potentially be revived and result in significant cost savings on design and construction. The Kristin feasibility work did not include the additional buildings (staff / volunteer accommodation or the visitor / community centre) envisaged by the Local Board / Glenfern Trust, but is otherwise consistent.

Figure 1. Birds-eye view architectural drawing of potential schools accommodation facility.

Supplied by Kristin School. Design produced by the University of South Australia on behalf of Kristin School.

Figure 1 shows bunk-bed units, an attached teacher accommodation block and a bathroom facility on each side separated by a communal living / education space with a commercial kitchen and dining hall.
Image 2 and 3. Photographs of ‘Kauri Paddock’; the proposed location for the accommodation block as part of the Kristin School plans.

Glenfern Trust

In early 2018 Glenfern Trust developed a strategic plan to meet future Sanctuary needs. This included a “schools residential” area (which despite a different name is the same concept as the centre that is the basis of this feasibility study). The proposed location for the schools residential area (Image 2 and 3) were the same as that identified by Kristin School and approved in principle by Auckland Council, Parks Services. Image 4 takes into account:

- The need to ensure privacy of the existing rental accommodation.
- Separating schools accommodation from other public accessed areas.
- A stand alone visitor / learning facility for
  community and visitor access.
- The need for volunteer accommodation.

Although Image 4 identifies sites in 3 stages (with the schools residential being stage 3) this has now been changed by Glenfern Trust and includes all new buildings as a single stage.
Image 4. Aerial photograph of Glenfern Sanctuary with existing and proposed buildings included. Produced by Glenfern Sanctuary Trust as part of their preliminary Master Plan.

Following discussions with Kristin School, Hillary Outdoors and Glenfern Trustees it is apparent the different organisations support the concepts being tested in this feasibility study although further discussion is required to ensure alignment of expectation. The previous efforts of Kristin School and current work of Glenfern Sanctuary Trust are a strong indicator that key stakeholders (including Hillary Outdoors) are aligned in their thinking. Going forward, we recommend that any further business case development is co-ordinated between relevant groups.

Proposed Scope of Operations

Student & Visitor Education

Early engagement with the Great Barrier Local Board indicated a strong preference for the centre to provide visitors with an immersive (i.e. multi-week) educational experience, incorporating ‘ki uta ki tau’ (ridge to reef) learning with sustainability at the core. The main suggested user type (schools) were supportive of this alongside other ‘educational themes’ such as environmental science, outdoor adventure, team building, and citizen science.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
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<tbody>
<tr>
<td>Sustainability</td>
<td>The education centre should incorporate eco-friendly, off-grid ideas into its design and functionality. This aligns well with the vision of the Local Board and the Island culture of sustainable living; lending strength to the concept of an off the grid facility where energy conservation and waste mitigation practices are integrated into the learning outcomes. Kristin School identified long term scientific research projects and sustainability learnings as the key focus for their students, wanting to provide experiences that they would seldom have in the classroom, and to encourage innovative thinking.</td>
</tr>
<tr>
<td>Theme</td>
<td>Description</td>
</tr>
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<td>--------------------------</td>
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</tr>
<tr>
<td><strong>Ecology &amp; Environment</strong></td>
<td>Ecological and environmental themes received strong support from potential users who believed it had great potential to be integrated with ecological aspects that already exist at Glenfern. It was suggested that a collaborative effort between users, Glenfern Trust and the Department of Conservation could provide an approach for tackling some ecological issues in the area (e.g. pest control), plus it would enable students to interact directly with the people leading these initiatives. Glenfern Sanctuary is uniquely positioned to provide ecology programmes that contribute to the improvement / maintenance of the reserve and its biodiversity goals.</td>
</tr>
<tr>
<td><strong>Outdoor Education</strong></td>
<td>Outdoor education would be a core element of the school / cadetship user experience for visiting schools with physical activities on land and water. All schools interviewed expressed an expectation that although teachers may attend and participate, they would want staff employed by Hillary Outdoors to manage the day-to-day operations of the Centre and to deliver this part of the curriculum. This recognises both the specialist skills and the health and safety compliance obligations required to deliver such a programme. Hillary Outdoors are also explicitly expanding their curriculum into sustainability so could deliver this learning.</td>
</tr>
<tr>
<td><strong>Applied Science</strong></td>
<td>A prevalent idea was that the centre could be uniquely positioned as an ‘applied science camp’ for students visiting for up 4-5 weeks at a time. “Separate them from their devices and embed them in the natural environment”. There was strong support from schools interviewed for learning to have a ‘ki uta ki tā’i focus, providing for a range of subjects such as astronomy, terrestrial ecology and aquatic science.</td>
</tr>
</tbody>
</table>

The opportunity to collaborate with Hillary Outdoors should be emphasised; the level of integration with potential users differentiates them from other providers. Hillary Outdoors prioritises and welcomes a learning model that is co-developed with teachers and tailored to suit each school. This approach is particularly effective when considering sustainability or ecological education themes which are increasingly desirable additions to Hillary Outdoors operating model.

**Tourism**

Glenfern Sanctuary already receives tourists that come to walk the tracks and enjoy the tranquility of the location. In addition, Glenfern Trust rents out two buildings to visitors and uses this money to contribute to the upkeep of the Sanctuary. The centre would significantly grow the number of visitors to Glenfern through visiting students, particularly during traditional low season periods. It would also provide additional reasons for ‘drop-in’ tourists such as visiting boating to visit Glenfern with an improved visitor centre experience, and significantly expanded accommodation facilities where these are not being used by schools.

The main potential tourist periods for renting out the camp-style accommodation are:

1. The December / January period when inbound tourism demand is high, and accommodation options at the northern end of the Island are low. The centre would not be in use by schools over this period.
2. The mid-winter period for inbound Dark Sky Sanctuary tourists. This would need to be managed with school demand but could perhaps focus on the July school holiday period.

**Cultural Exchange Working with Local Iwi & Schools**

The existing 3-4 week camps run by Hillary Outdoors at Orana provide a working reference model for how cultural exchanges could be run between visiting students and the local community. Both of the local marae and Okiwi school are involved in these exchanges. These provide an opportunity for both visitors and locals to learn about each other’s way of life and culture, and also provide economic benefit to the local community.

Although local iwi were unavailable for discussions about how ongoing interaction might occur with a centre based at Glenfern, all of the schools spoken to as well as Hillary Outdoors were keen to include bicultural
learning as part of their overall curriculum. This would be an important topic to test with local iwi as part of any future consultation.

**Citizen Science**

The Local Board expressed a desire for citizen science initiatives to be incorporated within the centre, and there was support for this from schools. Citizen science is defined as "the collection and analysis of data relating to the natural world by members of the general public, usually as part of a collaborative project with professional scientists". The rapid development of technology has fuelled growth in the citizen science sector, with enhanced communicative abilities people from all over the country can participate in nationally-run programmes. Glenfern Sanctuary offers a plethora of options to establish a citizen science programme.

High schools are increasingly wanting to provide applied science opportunities to their students. These programmes have a good reputation due to their ability to fit within the school curriculum, and because they give students authentic experiences that allow them to contribute in practical ways. Existing programmes in New Zealand run through science institutions such as Landcare Research and SeaWeek cover a range of subjects including bird counts, pest weed tracking, insect diversity monitoring, intertidal monitoring. The Local Board has also recently funded the training of a WaiCare coordinator on the island who can assist with water quality monitoring and reporting.

**Curious Minds**

The schools programme could align with the MBIE funded Curious Minds programme which encourages and enables science and technology engagement for all New Zealanders. Since 2015, 175 projects have been funded; ranging from social-science through to field survey scientific studies. The Curious Minds Participatory Science Platform supports collaborative, community projects that bring together locals and scientists or technologists on research investigating locally-important questions or problems. This platform builds upon the concept of citizen science by promoting ongoing relationships where the participants can contribute in meaningful ways to the progression of the study. Funding for this programme is for amounts up to $20,000; although this fund is in a pilot phase in South Auckland, Taranaki, and Otago, Great Barrier may qualify for this fund through a structured application and well-conceived study design.

**Unlocking Curious Minds** is another contestable fund that supports initiatives to facilitate the engagement of young New Zealanders who have limited opportunities to experience and connect with science and technology. Up to $2M is available with two levels of grants: up to $30,000 for local projects and up to $150,000 for regional or national projects. This funding platform has a broad set of criteria consistent with the centre being considered in this study, including:

- to support education and community outreach initiatives that focus on science and technology;
- to broaden participants' ability to engage with science and technology;
- to promote the relevance of science and technology in their lives; and
- to encourage engagement in societal debate about science and technology issues facing the country.

There are third party organisations who may be able to deliver a citizen science programme at Great Barrier; partnering with these groups would help ensure quality control on study design, add another educational aspect to the facility on Aotea Great Barrier Island, and may open up new funding opportunities. Discussions with Experiencing Marine Reserves (EMR) – a programme of the Mountains To Sea Conservation Charitable Trust – suggest that this could be one logical partner. EMR is a national programme of experiential learning about marine conservation, aiming to increase awareness and encourage action and support for marine conservation. EMR is also affiliated with the Marine Metre Squared citizen science programme, collaborating with schools in Northland to undertake surveys of marine life around the coastline to contribute to a national database.

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1 https://nzd未必.com/citizen-science.html
2 https://www.landcareresearch.co.nz/information-for/citizen-science/mote-net
3 https://www.curiousminds.nz/funding/participatory-science-platform/
Figure 2. Examples of Citizen Science initiatives operating in New Zealand.
User Types & Demand

Schools

The unmet demand for fully-immersive sustainability / environmental centres aligned with a successful existing outdoor education programme run by Hillary Outdoors is significant based on the interviews conducted with schools and Hillary Outdoors, and research undertaken for this feasibility study. According to Hillary Outdoors there is strong demand from schools for a third party provider to accept liability for health and safety reasons. Existing facilities at Orama are reportedly at or near capacity and are unlikely to have space to accommodate additional users in large numbers. Hillary Outdoors is in discussion with a number of schools that are interested in participating in a camp of this nature, beyond those that are already using Orama.

The proposed centre (using the indicative design provided by Kristin School and ratified in discussion with Hillary Outdoors) would host up to 40 students at a time for a period of up to 5 weeks.

The Local Board, Glenfern Trustees and Auckland Council Park Services are clear that this facility would be made available to public schools in addition to private schools and that no single school be allowed sole access to the centre. It is important however that a ‘cornerstone tenant’ school is willing to commit to a significant portion of available time per year for a number of years. This would significantly derisk the capital requirements of building the centre as it would provide ongoing, reliable cashflow.

Private Schools

Demand exists from private schools to secure a long-term arrangement with Hillary Outdoors to run immersive 4 - 5 week long school camps for all students in a year group (probably year 10). Off grid, sustainability-themed immersive camps are a highly effective way to introduce lifelong learnings to students, providing an opportunity for kids to challenge themselves, develop strong friendships and leadership skills, experience the outdoors, and learn about the environment. The success of programmes run by Hillary Outdoors at Tongariro and Orama, as well as private school ventures such as Tihoi (St Pauls Collegiate), Kahunui (St. Cuthbert’s College) and King’s College Adventure Challenge have created a positive reputation for these type of experiences, driving the demand for similar programmes to be provided to both private and public schools across New Zealand. One private school principal we interviewed noted that “not having a long term camp is almost becoming a differentiator for private schools in the modern era”.

Public Schools

Public school students in the same age bracket also make up this user group, however funding constraints likely make it more difficult for them to establish themselves as a reliable long-term tenant (i.e. an entire year group as opposed to groups of 40 students as a cohort of a year group). Public schools also expressed strong demand for this type of experience for their students, however, cost is a significant limitation. Cost limitations are able to be addressed in a number of ways including:

- Reduce the length of the camp in order to reduce costs to the students.
- Providing camps to a more limited number of students (as opposed to an entire year group).
- Third party providers (i.e. Hillary Outdoors) or the school itself sponsor individual students or offer reduced pricing for the entire cohort through grant funding opportunities.
- Philanthropic foundations provide grants to offset costs.

Hillary Outdoors already receives grant funding from foundations and commercial sponsors; this funding is used to offset operational costs and to subsidise course fees for some users. Hillary Outdoors does not cover all of the costs associated with the course and the accommodation, instead promoting fundraising campaigns by the students and schools to meet the remaining balance.

University Students

One of the Local Board aspirations for the centre was that it would offer researchers and students a high-tech laboratory facility with the capacity for extensive fieldwork operations. Based on our interviews with potential users there is little to no demand for these facilities. A major constraint facing post-graduate students is their ability to fund research, so thinking of them as a potential source of revenue to fund the ongoing costs of a
laboratory is unlikely, not to mention the cost of travel to Great Barrier vs mainland sites. The current trend is that post graduate students doing field work are more frequently being embedded in other organisations that are already established in remote areas (e.g. Department of Conservation) for health and safety reasons. Although a high-tech laboratory facility is unlikely to receive funding from tertiary institutions, we believe that a case could be made for a low-tech wet laboratory suitable for citizen science programmes – which have been identified by key user groups as a desirable inclusion.

We have however identified potential demand for facilities that are able to host 1 to 2 week long tertiary field courses for small groups of university students; ideally at locations with close proximity to areas of environmental significance. The feasibility study also identified short-stay tertiary students as a potential user group. This group consists of small numbers (typically, < 20 at a time, once per year, per class) of under-graduate / post-graduate university students on academic field courses. These users already participate in similar programmes elsewhere, for example, the University of Auckland sends students on annual residential field trips to Manaia Baptist Camp, Whangarei Heads for a 5 day intensive marine ecology project – something that could easily be replicated on Great Barrier Island. Transport costs are however a deterrent from staying at Island destinations compared with the mainland. Provided that the transport to and from Great Barrier Island and the cost of staying onsite remains competitive, this user type could be another reliable long-term tenant that brings a unique scientific quality to the experience. University users would internalise all of the educational aspects and simply require the use of the facilities; this type of demand is unlikely to catalyse the creation of more jobs on Great Barrier.

**Cadetship Programme**

Another possible user type identified through this process is a newly formed ‘cadetship’ programme. This, whilst formative, intends to provide 17-20 year olds with a three year cadetship programme exposing school age / school leavers who would not be going to university or doing a trade apprenticeship exposure to different elements of the corporate workforce. A key element of this, currently being co-designed with Hillary Outdoors would be an ongoing block of time at a centre; 12 days in year one, five days in year two, and five days in year three. The cadetship programme will comprise of 200 individuals each year, which offers a significant potential demand for a centre.

**Dark Sky / Summer Tourists**

Since the primary users are limited by the school year, there would be a ‘low season’ at a centre coinciding with the summer holiday period. This could enable tourists to become users on a pay-per-night basis, but would not be part of a structured education programme per se. The demand for dark sky tourism facilities could also potentially result in a centre being available for rent during the middle of winter; perhaps coinciding with the July school holidays.

**Competition**

We do not anticipate that the proposed centre will directly compete with existing operations on Aotea Great Barrier Island. Since there is demand for more accommodation and due to the fact that existing facilities are operating at/close to maximum capacity, we do not believe that the construction of a new centre will negatively affect current businesses.

Orama Christian Camp is the only facility in close proximity that offers a similar experience to the proposed education centre. Currently, Hillary Outdoors bases its operations on Great Barrier at Orama and has invested considerably into equipment, storage facilities, a boat shed and constructing a rope course to deliver their programme.

The only relevant competitors elsewhere (of size and scale) are in-house providers of outdoor education (i.e. King’s College, St Cuthbert’s School); however these are exclusive programmes and are unlikely to encroach upon this market. Health and safety regulations make it unattractive for many schools to develop the capacity to run these programmes in-house, decreasing the likelihood of competition.

A new facility at Glenfern would provide Hillary Outdoors with an opportunity to continue existing programmes at Orama whilst leveraging the close proximity of Glenfern to utilise the assets held at Orama. The proposed centre should be considered as additional demand, rather than a cause for competitive concern.
Wider Community Benefits

The feasibility study suggests that a centre would have positive impacts to the local economy, including (but not limited to):

- Providing economic growth during low and shoulder season at the northern end of the island.
  - In excess of 11,000 extra bed nights generating income.
  - 7-9 additional full-time employees living and working in the northern end of the Island.
  - Boost to transport links (ferry and bus service).
  - Increased interaction with local schools, mainland schools and iwi.
  - Opportunity for Dark Skies provider to be included in the curriculum.

- No impact from school users on Christmas / high season period, but potential to use facilities for tourists and boaties seeking accommodation.

- Provide the local community access to the visitor / learning centre facilities.

- Separate accommodation block shared between facility staff and sanctuary volunteers – more room for volunteers to be involved at Glenfern.

Risks

There are several risks to the viability of the proposed Centre and associated activities, including:

<table>
<thead>
<tr>
<th>Risk</th>
<th>Likelihood</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key partners fail to form a coalition.</td>
<td>Medium</td>
<td>Significant effort to go into working with each potential partner to seek alignment, followed by joint working sessions to agree core proposition acceptable to all parties.</td>
</tr>
<tr>
<td>A lack of alignment between funders, the Local Board or key users.</td>
<td>Low</td>
<td>Early engagement with potential sources of funding, immediately following agreement of coalition partners.</td>
</tr>
<tr>
<td>Shoulder season / dark skies tourism is not viable due to a lack of demand.</td>
<td>Medium</td>
<td>Effort into marketing accommodation options, ensure price competitiveness for similar offerings elsewhere. Work with dark sky tourism operators.</td>
</tr>
<tr>
<td>Anchor tenant is unwilling to commit.</td>
<td>Medium</td>
<td>Early engagement so all key parties understand expectations of anchor tenant. Ensure centre is fit for purpose and aligned with school expectations.</td>
</tr>
<tr>
<td>Lack of demand means revenue targets are not achieved.</td>
<td>Medium</td>
<td>Work with Hillary Outdoors to generate school / other demand as soon as possible.</td>
</tr>
<tr>
<td>Support is not given by Auckland Council.</td>
<td>Medium</td>
<td>Local Board and key Council staff to ensure senior management / councillors understand and support the concept, and any expectations are understood early in the next stage.</td>
</tr>
<tr>
<td>The CapEx costs of the Centre become too high to attract funding for all elements.</td>
<td>High</td>
<td>Careful design, willingness to consider alternative options such as staging, debt funding, or temporary buildings if costs are too high to attract funding.</td>
</tr>
</tbody>
</table>
Cost and Revenue Estimates

Capital Expenditure & Funding

*Estimated Build Costs*

It is not possible at this early stage to accurately determine the capital costs of building a centre at Glenfern Sanctuary. This is because the different parties that we believe need to be involved have not yet agreed a final design and submitted this for construction estimates. However, it is possible to provide a broad estimate based on the preliminary design work of some of the parties involved.

The following design assumptions underpin the capital cost estimates that follow:

1. There will be **three new buildings** constructed: a student accommodation block; a volunteer and Hillary Outdoors staff accommodation building; and, a visitor centre / community learning centre with basic wet lab.
2. All buildings will be **a sustainable 'off-grid' design** with solar power, rainwater storage, and on-site waste water treatment.
3. The **student accommodation** will have capacity to accommodate up to 40 students and 6 adults (teachers) per night. It will include washing, cooking and dining facilities. Architectural drawings produced for Kristin School by the University of South Australia architecture school provided an indicative cost for this facility (albeit from 2016) of between $2.4 million and $3.4 million for construction. The significant cost range is due to the option of using University of South Australia architecture school students to build the facility versus using a commercial building company.
4. The **volunteer and staff accommodation** will have capacity to accommodate approximately 10 adults at a time with washing, cooking and dining facilities. The building is shown in Glenfern Trust’s strategic site plan, but no architectural drawings have been produced yet so no indicative costs are available. This building is a priority for the Glenfern Trust which wants to accommodate volunteers, but it is not crucial for the school visitor operation as operational staff could rent private accommodation off site.
5. The **visitor / community centre and basic lab** does not yet have agreed parameters for size or facilities, but is likely to contain an open space for displays / lectures, a smaller room for basic lab facilities, and bathrooms for visitors to use. The building is shown in Glenfern Trust’s strategic site plan, but no architectural drawings have been produced yet so no indicative costs are available. This building is a priority for the Glenfern Trust but is not crucial for the school visitor operation. In addition to providing information for tourists (e.g. boaties in the summer peak season), it could be used by visiting scientists and the local community. This study was not able to quantify the level of tourist or local community demand for this building.

Broad estimates based on the above assumptions suggest that it may be possible to build the three buildings for between $4.5m and $6.5m. This is based on:

- Student accommodation block costing between $2.6m – $3.9m. This is a higher figure than provided in the Kristin architecture design ($2.4-3.4M) as it assumes a 10% increase in building costs since 2016, and a 5% transport premium for building in a remote location.
- Volunteer and Hillary Outdoors staff accommodation costing between $1m – 1.5m. This is a placeholder figure until an initial design and construction estimate is available.
- Visitor centre and basic lab costing between $0.7m – 1.1m. This is a placeholder figure until an initial design and construction estimate is available.

Raising the capital to build all three buildings at the same time may prove challenging. This is because some funding sources require a co-funding element, or expect to see an ongoing operating surplus with some return...
on their investment in addition to the social impact of the centre (e.g. impact investors). Some alternate construction phasing options include:

A. The student accommodation block could be built first as it does not require the other two buildings. An important advantage of this is that it provides a regular revenue stream that would help facilitate partial debt funding if needed of the other buildings.

B. The volunteer/staff accommodation block could be built at the same time as the student accommodation block as there is confirmed demand for both. A temporary visitor centre could be ‘dropped in’, or a permanent facility built later when demand has been confirmed and separate funding secured.

Sources of CapEx Funding

No single obvious CapEx funding option has been identified yet. The primary users (schools) are unlikely to contribute to the upfront capital required to construct the facilities. Due to the nature of the proposed centre and the type of activities that will be hosted there, we anticipate that capital funding for this project is likely to come from either (or a mix of) grants from philanthropic organisations, government (local and central), or impact investors.

Philanthropic organisations provide funding to organisations and communities for capacity building, employment, environmental care and community development.

Impact investment is becoming increasingly more common in New Zealand as philanthropists, trusts and investors look to affect positive change beyond simply obtaining a financial return. Impact investments refers to investments “made into companies, organisations, and funds with the intention to generate a measurable, beneficial social or environmental impact alongside a financial return.” This type of investment has become attractive to philanthropic institutions who have recognised that by achieving a return on an investment, they can reinvest the money back into the respective programmes (rather than simply providing grant funding).

In the public sector, the largest single source of potential funding comes from the newly formed Provincial Growth Fund. It is seeking to allocate $1 billion per annum over three years to invest in provincial New Zealand. The priorities of this funding are to:

- Enhance economic development opportunities;
- Create sustainable jobs;
- Enable Māori to reach their full potential;
- Boost social inclusion and participation;
- Build resilient communities; and
- Help meet New Zealand’s climate change targets.

The proposed centre meet many of these funding criteria although it is essential that the project demonstrates genuine alignment across a range of stakeholders, as well as some co-funding element. Great Barrier Island comes under Auckland Council’s jurisdiction, but the separation from Auckland City, along with relatively few new employment opportunities, may enable this project to qualify for this funding option.

Another option is retained earnings or debt funding for some of the required Capex funding. The revenue received from the operation of the student programmes in its early years could be used to pay for the construction costs of the other buildings out of retained earnings, or to help secure debt funding to do this. Early discussions with the Glenfern Sanctuary Trust on this subject suggest that this is not a preferred option due to the time delays it could introduce for the other buildings.

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Operating Revenue and Expenses

Revenue

Provisional revenue estimates from renting out the student accommodation block to different user types are set out in the table that follows. It is important to note that these reflect the steady state revenue of a mature operation so, in reality, it may take 12 months or more to achieve this level of revenue. However, this risk is greatly reduced by way of a school ‘anchor tenant’, and from the demand pipeline that Hillary Outdoors can supply.

Specific assumptions are noted within the table, while general assumptions for the revenue estimates are:

- During the summer (or mid winter dark skies) tourism period, all student accommodation is available at commercial rates to tourists.
- Assume beds available during school year and for cadetship programmes is limited to 40.
- The $20 / night rental fee for schools / cadets is an estimate based on our understanding of fees paid at other organisations. The $50 a night for tourists is also an estimate, but in times of high demand and limited availability we believe it would be a competitive price for a high quality facility.

Operational expenses

Most operational expenses will come from running school based programmes out of the student accommodation block. The suggested operating model for school programmes uses an outsourced programme provider (Hillary Outdoors) that is responsible for all associated operating costs, and pays a site rental fee to the building owner (via a governance committee - discussed in the next section). This keeps things very simple from the perspective of the governance committee and building owner (Glenfern Trust) which receives a regular income, without dealing with the complexity of running (and paying for) operations.

Any Hillary Outdoors staff staying in the additional accommodation facility would pay a rental, which is consistent with the model it uses at other facilities. This is expected to largely cover operating costs.

Assuming the facilities are constructed to be self-sufficient for energy, water and waste, then the bulk of operating expenses for the programme provider will be in the form of staff. Hillary Outdoors has estimated that it would need five instructors, a centre manager and two support staff. These would be paid from school programme fees after deducting a site rental charge per student. Details of these costs have not been included here as they would be the responsibility of Hillary Outdoors.

During the December - January summer tourism (and potentially the Dark Skies July tourism period), there would be some operating costs associated with cleaning and maintaining the student accommodation block as part of renting it to tourists. The simplest way to handle these costs would be for the governance committee to pay a set portion of the cost of regular cleaning and maintenance staff to Hillary Outdoors. This would come out of the extra revenue received from tourists renting the student accommodation.
### Table 2. Estimates of potential revenue generated by the proposed centre.

<table>
<thead>
<tr>
<th>User Type</th>
<th>Total Estimated Useage Nights / year</th>
<th>Number of beds available (for revenue purposes)</th>
<th>Total bed nights potentially available</th>
<th>Estimated $ rental per night to Glenfern</th>
<th>Total Potential Revenue</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools - anchor tenant</td>
<td>140</td>
<td>40</td>
<td>5600</td>
<td>$20</td>
<td>$112,000</td>
<td>1 anchor school; 5 week programme, 4 intakes of 40 students.</td>
</tr>
<tr>
<td>Schools - other</td>
<td>105</td>
<td>40</td>
<td>4200</td>
<td>$20</td>
<td>$84,000</td>
<td>Assume 5 week programme, 3 schools, 40 students each intake.</td>
</tr>
<tr>
<td>Cadetship programme (year one)</td>
<td>24</td>
<td>40</td>
<td>960</td>
<td>$20</td>
<td>$19,200</td>
<td>80 attendees in 2 intakes of 40 beds each intake @12 nights for first year of cadetship.</td>
</tr>
<tr>
<td>Cadetship programme (years 2 and 3)</td>
<td>20</td>
<td>40</td>
<td>800</td>
<td>$20</td>
<td>$16,000</td>
<td>80 attendees in 4 intakes of 40 beds each intake @5 nights. 4 intakes represents both year 2 and 3 of cadetship programme.</td>
</tr>
<tr>
<td>Tourism</td>
<td>60</td>
<td>60</td>
<td>3600</td>
<td>$50</td>
<td>$180,000</td>
<td>Assume facilities available for hire Dec and Jan at higher rate than schools / cadets would pay.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>349</td>
<td></td>
<td></td>
<td></td>
<td>$411,200</td>
<td></td>
</tr>
</tbody>
</table>
Recommendations and Next Steps

Operating Model

The operating model for an education / research centre at Glenfern would need to incorporate a range of organisations, each with different roles and responsibilities. The diagram below provides an overview of a suggested operating model based on our analysis of the likely role and contribution of different stakeholders.

We recommend that representatives of the organisations formalise the operating model, respective roles and responsibilities and ongoing commitment through a joint governance committee or similar structure. This would be underpinned by a charter that commits organisations and a funding model that provides revenue from paying users to support new and expanded roles. Our indicative view of the respective roles includes:

**Land Owner** (Auckland Council)
- Have ultimate authority over use of the land including granting concessions for use and any resource consents required.
- Determine strategic priorities for the use of regional parks.
Centre Owner (Glenfern Sanctuary Trust)

- Own any new buildings for the centre within the constraints of any lease or concession.
- Responsible for maintenance of the visitor centre / community learning facility and volunteer accommodation.
- Continue current site management including organising volunteer activities, maintenance of existing buildings, and undertaking ecological management and pest control.
- Maintain a close working relationship with landowner and centre education operator.
- Responsible for Glenfern Sanctuary operations staff (e.g. caretaker, park rangers) but not Hillary Outdoors staff.

Education Centre Operator (Hillary Outdoors)

- Outsourced provider of education programme and and curriculum including responsibility for the health and safety of all education users.
- Responsible for generating and maintaining demand from schools / cadetship etc.
- Responsible for operational costs of the accommodation facility including employing staff (except during the summer shoulder season when the facilities are vacated for tourist rental).
- Responsible for maintaining the schools accommodation facility.

School User ‘Anchor tenant’ (Kristin school or similar)

- Commitment to significant usage of approximately 20 weeks per year of full capacity for extended period (e.g. five year minimum).
- Provide long-term guaranteed revenue thereby reduce risk of capital investment.

Centre Governance

- Operate in accordance with a centre charter that sets out goals and responsibilities.
- Likely to comprise all the main stakeholder groups: land owner; centre owner; education centre operator; anchor tenant; and Local Board.
- Oversight of centre operations including significant decision on centre use and development, but not extending into broader Glenfern Sanctuary Operations (retained by the Glenfern Sanctuary Trust).
- Oversee capital investment and distribution of operating surplus with the majority expected to be returned to the Glenfern Sanctuary Trust.

Next Steps

Provided the Local Board is willing to progress the development of the centre concept, we recommend the next practical steps should include:

1. **The ‘consolidation of the coalition’**

   In order for this project to progress further it is critical that the key parties involved are brought together to determine commitment to proceed and ensure alignment. We recommend:

   - Circulation of the final report among stakeholders that would likely form a coalition.
   - If all agree, confirm the coalition, decide on membership of a governance committee, determine the core spatial design, and to confirm the core operational design (users, providers, volunteers, accommodation etc).
   - Form a project subcommittee to oversee the business case development.
   - Reach agreement on design; including the consideration that the Kristin facility if adopted would provide significant cost reductions.

   Phone: +64 21 670 968 Email: nigel.bradly@envirostrat.co.nz Web: www.envirostrat.co.nz
1. Confirm the business case assumptions and scope.

2. Develop a detailed business case

An in-depth investigation to confirm the centre design and curriculum elements, further develop financial model and benefits to the local community, users, and providers, and identify any significant constraints / risks.

3. Provisional commitment

Ensuring that the key ‘tenant’ is committed - pending Capex funding – plus the written support of ‘gatekeepers’ will lend strength to the progression of the project, and provide assurances to investors / funders that the viability of the centre is not in question. We recommend actions in the following order:

- Consultation with local community and iwi. Auckland Council may want to do this prior to the development of the business case.
- Provide charter document confirming commitments, then approach funders.

4. Approach funders

Although we have indicated where CapEx funding might come from in this report, further investigations into grant schemes and discussions with investment partners is required so that we may approach funders with confidence. We recommend:

- Develop an understanding of the funding landscape and shortlist targets based on likely alignment.
- Develop commercial proposition.
- Engage with potential funders.
## Appendix: Summary of comparative centres

<table>
<thead>
<tr>
<th>Example</th>
<th>Description</th>
<th>Accommodation</th>
<th>User Group</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research Laboratory</strong></td>
<td>The Goat Island Marine Discovery Centre educates people about the marine environment and the research activities of the Institute of Marine Science at the University of Auckland’s Leigh campus. Staff are also current students at the lab and provide visitors with a personalised learning experience about their research. Modern building (2008) adjacent to the marine laboratory at Goat Island.</td>
<td>Up to 24 people can be hosted at a time. Shower/bathroom facilities (approx 8 showers, 8 toilets).</td>
<td>3 main types of user: walk-ins, field course groups, event hire patrons. Walk-ins are generally visitors to the marine reserve and either: 1) don't want to enter the water and want to do something, 2) make a planned trip to include the centre, 3) foreigners.</td>
<td>$4.5 million dollar donation from Edith Blackwell Foundation as part of a $10 million dollar upgrade to the lab facilities including the new bunkrooms.</td>
</tr>
<tr>
<td><strong>Public / Charity-owned Facility</strong></td>
<td>The Island Bay Marine Education Centre is a not-for-profit, education facility operated by the Wellington Marine Conservation Trust (1996). The main purpose is to inspire people, especially children, to learn about Wellington’s and all New Zealand’s marine environments.</td>
<td>None.</td>
<td>3 main types of user: walk-ins, field course groups, event hire patrons. Approx 25,000 students per annum.</td>
<td>Funded by Wellington Marine Conservation Trust.</td>
</tr>
<tr>
<td><strong>School-owned Camp</strong></td>
<td>Kahuni is a 117ha remote camp, in the Bay of Plenty. Students spend 28 days here in Year 10, tramping, kayaking, fishing and learn basic survival skills, culminating in going “solo”. Students also protect and preserve Kahuni for future students by contributing to many sustainability projects.</td>
<td>Hosts entire year 10 student group (approx 30 each visit); 4 week long stay in groups of 8.</td>
<td>Year 10 school girls at St Cuthbert’s; 30 students in each group.</td>
<td>School owns the land and facilities – retailed and outfitted timber mill, since 1979.</td>
</tr>
<tr>
<td><strong>Independent Camp</strong></td>
<td>Hillary Outdoors is a charitable trust that provides outdoor education primarily to young people. Hillary Outdoors opened its first centre in 1972 beside the Tongariro National Park. In 2006 a second centre opened on Great Barrier Island with a marine focus. The organisation also runs a very successful series of nationwide adventure-based events throughout the year. Hillary Outdoors is a not-for-profit organisation run by a charitable trust.</td>
<td>Orama Oasis: &lt;120 guests. Hillary Outdoors Tongariro: &lt;150 guests.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wide variety of user: Corporate team building groups. School groups (range of ages, mainly high school). Duke of Edinburgh Hillary Award groups. International student groups. Home school groups. Tertiary institution groups. Approx 7000 students per annum.</td>
<td></td>
<td>Hillary Outdoors is a charitable trust that relies on funding partners, sponsors and donors, hillary Outdoors charges fees for its courses and these are heavily subsidised by the trust.</td>
</tr>
</tbody>
</table>
Community-led zero waste resource recovery plan for Aotea Great Barrier

File No.: CP2018/22610

Te take mō te pūrongo / Purpose of the report
1. To receive the making the most of waste on Aotea Great Barrier report prepared by Zero Waste Network Aotearoa.

Whakarāpopototanga matua / Executive summary
2. At its March 2018 business meeting the board received a proposal from the Aotea Great Barrier community-led resource recovery steering group. The proposal requested funding to support the establishment of a community-led zero waste programme on Aotea Great Barrier through Zero Waste Network Aotearoa.
3. The board allocated $7,000 to Zero Waste Network Aotearoa to develop a community-led zero waste resource recovery plan for Aotea Great Barrier (GBI/2018/17).
4. Auckland Council’s waste solutions department matched the board’s funding and allocated $7,000 of regional funding to Zero Waste Network Aotearoa bringing the total funding contribution to $14,000. The department also managed the funding contract with Zero Waste Network Aotearoa.
5. In July 2018, Zero Waste Network Aotearoa completed the making the most of waste on Aotea Great Barrier report. The report provides practical advice on a zero-waste approach to waste on Aotea Great Barrier and identifies priority actions for the Aotea Great Barrier community-led resource recovery steering group.

Ngā tūtohunga / Recommendation
That the Great Barrier Local Board:

a) receive the making the most of waste on Aotea Great Barrier report prepared by the Zero Waste Network.

Ngā tāpirihanga / Attachments

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Making the most of waste on Aotea Great Barrier</td>
<td>61</td>
</tr>
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</table>

Ngā kaihaina / Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Authorisers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miriana Knox</td>
<td>Barry Potter - Director Infrastructure and Environmental Services</td>
</tr>
<tr>
<td></td>
<td>Helgard Wagener – Relationship Manager - Great Barrier and Waiheke</td>
</tr>
</tbody>
</table>
Making the most of waste on Aotea Great Barrier

June 2018
Version control:

<table>
<thead>
<tr>
<th>Version</th>
<th>Date released</th>
<th>Approved for release by</th>
<th>Accepted on behalf of the client by</th>
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<tr>
<td>Final</td>
<td>3 July 2018</td>
<td>Rick Thorpe</td>
<td>Jo O’Reilly</td>
</tr>
</tbody>
</table>

Client:
Steering Group for Community-led Resource Recovery on Great Barrier Island

Author:
Produced on behalf of the Zero Waste Network by:
Dorte Wray, Executive Manager, Zero Waste Network
Matthew Luxon, Consultant, Envision New Zealand
Rick Thorpe, General Manager, Xtreme Zero Waste

Disclaimer:
The views contained within this report are those of the authors and do not necessarily reflect those of the Zero Waste Network. While every effort has been made to ensure accuracy with regards to any information or recommendations contained within this report the Zero Waste Network is not responsible for any actions taken as a result of this information or analysis.
Executive Summary

On the 12th June 2018, the draft Auckland Council Waste Management and Minimisation Plan 2018 was adopted by the council’s governing body. Within that plan sits the Tikapa Moana Hauraki Gulf Islands Waste Plan 2018, which amongst other things, clearly articulates Council’s intention to:
1. Establish a Community Recycling Centre on Aotea Great Barrier
2. Support community action and innovation to turn waste into resources

In response, a steering group of representatives from the Aotea Great Barrier community commissioned the Zero Waste Network to outline what Zero Waste best practice could look like in the context of Aotea Great Barrier.

With this information the group intend to work with stakeholders across the community and including iwi, private enterprise and council to identify who is best suited for each part, what the governance structure would be, and funding options.

This report starts with the most urgent and desired aspect of the waste hierarchy - reduction - before looking in turn at reuse, recycling and finally residual waste. There are also sections on zero waste principles, opportunities for energy production from organics, and site design.

In the immediate future, the authors recommend the steering group focus on:
1. Getting agreement on governance and operational structures that would suit iwi, community, private enterprise, and council stakeholders
2. Advocating for a procurement process and contract structure that aligns with the above
3. Establishing any legal entities required
4. Applying for funding as appropriate

Until there is clarity and agreement on the scope of services to be delivered by the community it would be unproductive to develop business plans however, the following table provides guidance on key activities that should be considered as best practice for achieving zero waste on Aotea:

| Reduction                  | 1. Implement a campaign promoting a switch from glass to cans or refill stations for beer  
<p>|                           | 2. Continue to build resident buy-in to the goal of zero waste through community visioning and engagement workshops, activities and events |</p>
<table>
<thead>
<tr>
<th>Item 14</th>
<th></th>
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<tbody>
<tr>
<td>3.</td>
<td>Target visitor population via campaigns and awareness raising activities</td>
</tr>
<tr>
<td>4.</td>
<td>Get a pledge from wholesalers and retailers to consider the packaging used when sending items to the island</td>
</tr>
<tr>
<td>5.</td>
<td>Support the planned introduction of user pays for residual waste disposal at Claris Landfill</td>
</tr>
<tr>
<td>6.</td>
<td>Advocate for the introduction of mandatory product stewardship schemes nationally</td>
</tr>
<tr>
<td>7.</td>
<td>Advocate for the increase of the national waste levy and application to as wide range of landfills as possible</td>
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<tr>
<td>8.</td>
<td>Establish a facility for the process and repair of reusable items</td>
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<tr>
<td>9.</td>
<td>Create incubation workshops for artisans and craftspeople working on the upcycling of discarded materials</td>
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<tr>
<td>10.</td>
<td>Create an innovation hub for entrepreneurs to trial waste diversion technologies</td>
</tr>
<tr>
<td>11.</td>
<td>Move the reuse shop to the landfill site</td>
</tr>
<tr>
<td>12.</td>
<td>Continue with export of recyclable commodities to recycling wholesalers off island, baling material as appropriate</td>
</tr>
<tr>
<td>13.</td>
<td>Commit to glass to glass recycling rather than using glass for aggregate or other down-cycling uses</td>
</tr>
<tr>
<td>14.</td>
<td>Implement user pays for the drop off of e-waste and recyclable commodities</td>
</tr>
<tr>
<td>15.</td>
<td>Develop an on-island composting facility</td>
</tr>
<tr>
<td>16.</td>
<td>Bale residual waste</td>
</tr>
<tr>
<td>17.</td>
<td>Focus on slowing the flow of resources when considering site design</td>
</tr>
<tr>
<td>18.</td>
<td>Co-locate as many resource recovery activities as possible (e.g. the reuse shop should ideally be on the same site as drop off)</td>
</tr>
<tr>
<td>19.</td>
<td>Consider Eunomia’s research on potential methodologies for generating electricity from organic waste and recommendations for further research on preferred option</td>
</tr>
<tr>
<td>20.</td>
<td>Develop an island wide container deposit scheme</td>
</tr>
<tr>
<td>21.</td>
<td>Apply to Ministry for the Environment Waste Minimisation Fund for capital intensive projects</td>
</tr>
</tbody>
</table>
Introduction

With support from Auckland Council's Great Barrier Local Board and Waste Solutions Unit, a steering group of Great Barrier residents interested in the potential for community-led resource recovery initiatives on the island, commissioned the Zero Waste Network to identify best practices for handling the island's waste materials from a Zero Waste perspective.

Once they have this information the steering group intends to work with iwi, council, private enterprise and other stakeholders to work out how to incorporate the various methodologies onto the island. This will involve addressing issues outside the scope of this study such as:

- Options for procurement of services
- Location of activities and site design
- Governance and management arrangements

Background

1. The Auckland Council owned Claris Landfill is almost full, with projections suggesting it will be closed within 5 - 7 years at current disposal rates.¹
2. Auckland Council have a goal of Zero Waste by 2040. Council has implemented a number of initiatives to meet this goal including the development of a regional Resource Recovery Network. Three of the five Community Recycling Centres already developed as part of this initiative operate residual waste transfer station services and are achieving up to 78% diversion of waste to landfill.
3. A number of reports have indicated that Great Barrier residents are eager to take responsibility for managing waste on the island and making the most of the resource it represents. In particular job creation and local economic development are seen as favourable outcomes from a community-led solution to waste management.
4. Auckland Council have contracted GB Cartage to operate the Claris Landfill site, and to collect and process recyclable materials from kerbside, through to 30th June 2019.
5. The procurement process for a contract commencing 1st July 2019 will need to start by mid-November 2018 to meet timeline requirements.
6. Ngati Rehua have indicated that they are interested in the opportunity presented by waste but at this stage would prefer to discuss their possible involvement directly with Council staff and elected officials.
7. Representatives of GB Cartage are part of the steering group that has commissioned this report and are eager to be part of a community-led resource recovery solution into the future.

¹ In the case of a natural disaster this could be dramatically reduced such as the Kaikoura Landfill post-earthquake
Methodology
In carrying out this task the authors have met with the steering group to discuss options. In these meetings the authors were challenged to not only focus on alternatives to sending waste to landfill, but also opportunities for energy generation, local employment and community resiliency.

There have been numerous reports written about waste on the island. While these have been useful in informing this business plan the authors were eager not to duplicate work already done and assume these will be read as background documents rather than summarising them here. A list of suggestions for further reading is provided in the conclusion to the report.

Zero Waste requires continual movement up the waste hierarchy with reduction being the primary goal. Simply put, if a material doesn’t come onto the island then there is nothing to manage. This report has been structured to mimic this philosophy. It addresses best practice scenarios under four key headings of: Reduction, Reuse, Recycle, Disposal.

Governance
While governance is out of scope of this report, case studies have been included as appendices to illustrate various ways community involvement could be achieved in the context of Great Barrier. The scenarios are:
1. 100% community enterprise operation - Xtreme Zero Waste, Raglan
2. Iwi and community joint venture - Cleanstream Northland, Kaitaia
3. Public, private and community partnership - Inorganic Collection, Auckland

Tikapa Moana Hauraki Gulf Islands Draft Waste Plan 2018
This plan is part of the wider Waste Management and Minimisation Plan 2018 adopted by the governing body of Auckland Council on 12th June 2018.

In terms of Great Barrier Island, it outlines the current situation with regards to waste, highlighting seven key issues:
- Reducing the high cost of waste services on the island
- Public drop-off rubbish and recycling points being used as dumping sites
- Influx of visitor and boatie waste in holiday periods
- High levels of food / green waste and recycling going to landfill
- Claris Landfill is nearing the end of its life
- Minimising packaging coming on to the island
• Supporting on island use of waste streams such as glass, building material and cardboard

In response to these issues, Council has committed to the following changes in waste services:

• Kerbside recycling for all recyclables will be introduced in September 2018. This will include glass, plastic, tin, aluminium, paper and card. Weekly in summer and fortnightly in winter.

• Reduced public drop-off sites for recycling from 2018/2019, taking the time to get the number right ('retired' sites can be used for education and community use).

• A new approach to inorganic collection and on-island use of inorganic materials will be trialled, with steps taken towards establishing a Community Recycling Centre by 2020.

• Disposer-pays for domestic refuse proposed to be introduced from 2018/2019.

• Summer barge to remain in place until a disposer-pays system for boating is introduced.

• Gate charges to be introduced in 2017/2018 for all refuse to landfill and continue with reduced landfill opening hours over winter.

In particular the authors note the intention to develop a Community Recycling Centre on the island and have assumed the activities outlined in this report will be part of that initiative.

**Potential for energy generation**

The steering group requested the authors look into the potential for using organic waste for generating electricity which in turn could be used for charging electric cars on the island.

In response environmental consultants Eunomia were commissioned to investigate the potential for using organic wastes from Aotea to contribute to energy self sufficiency while reducing waste and putting waste materials to beneficial use. The full report is provided as an appendix to this report, and includes an assessment of feedstocks and a technology overview.
Zero Waste Principles

A ‘Zero Waste’ world is one where resources are valued and nothing is wasted. It mimics nature in that material flows are cyclical and everything is endlessly reused or recycled without any environmental or social harm.

A key concept in zero waste theory is the ‘Waste Hierarchy’. The waste hierarchy is a simple framework for prioritising the various waste management options available. It prioritises the reduction of waste as a first step, before considering in order reuse, recycling, resource recovery and lastly the optimisation of its final disposal.

Other key zero waste principles include:

- **Product Stewardship** - Product stewardship is a way of managing the health, safety and environmental impacts of products, and in particular the impacts of disposal. Responsibility for reducing the environmental impacts of manufactured good is shared amongst all those involved in the product life cycle - producers, brand owners, importers, retailers and consumers.

- **Landfills and incineration** - The Zero Waste philosophy recognises the need for landfills, but only as an interim measure until waste has been dramatically reduced. However, it is opposed to incineration because of negative environmental, social and economic impacts.

- **Local Economic Development** - Zero Waste focuses on finding local solutions to waste issues. The waste stream is a community asset and can generate local jobs and business opportunities. Studies from around the world show that recycling and resource recovery create more jobs per tonne of material, than landfilling or incineration. In fact it could be said that when waste materials are buried or burnt, jobs are destroyed. It is estimated that recycling can create ten times as many jobs
through just sorting recyclables, and twenty five times as many jobs through re-manufacturing from recycled materials

- Environmental Justice - By advocating for an end to landfills and incinerators, and for a dramatic increase in local resource recovery, Zero Waste aims to eliminate the social injustices brought about by our desire to put waste ‘out of sight and out of mind’.

Community Enterprise and Resource Recovery

Business model

Due to the economics of waste sector, New Zealand has a large number of private enterprises offering residual waste and recycling services as this is where there is the biggest margin. The high labour costs associated with reuse mean that it is an area underserved in New Zealand and although we have a large number of charity stores selling second hand items, they generally avoid repairing items because of the GST requirements that then apply.

A community enterprise, is a business established by a community to solve a community problem. The majority of their income is from the sale of goods and services, but by reducing or eliminating the need to generate shareholder dividends they are able to operate in areas that traditional businesses struggle.

Over the last thirty years communities throughout New Zealand have found success in establishing community enterprises within the resource recovery sector. The Zero Waste Network has 45 members operating community enterprises throughout the country and while not applicable in every situation, there are three recurring success factors:

1. Peppercorn lease arrangements with local authorities for use of sites suitable for resource recovery activities
2. Control of the total waste stream so that profit made in one area (e.g. residual waste), can be used to subsidise a loss-making area (e.g. recycling or reuse)
3. Contracts that act as a cornerstone, or baseline revenue generators, upon which other activity can be built.

Revenue is derived from a mixture of:

- Gate fees collected for the drop off of material (in particular residual and green waste)
- Sale of recyclable commodities (glass, paper, cardboard, metal, plastics)
- Sale of reusable items
- Sale of items upcycled from waste
- Council contracts (site operation, education, etc.)
- Grants from local and central government and philanthropic organisations.
Impact model

Community-led resource recovery operations have proven successful in generating a positive social and environmental impact across New Zealand.

Community Recycling Centres are proven to be great generators of local employment. For example, prior to being redeveloped into a community recycling centre, the Waiuku Transfer Station employed one person, three days per week (0.6fte). The community enterprise now operating the site on behalf of Council now have 10 staff and are open five days per week.

Employment is valuable for the economic development of a community, with some economists suggesting a multiplier effect of three times the wages paid. For example, for every dollar paid to a local worker, there is three dollars value for that community in local spend.

Access to materials adds to community resilience. The Kaikoura Earthquakes demonstrated this point with the community recycling centre distributing warm clothing and blankets to evacuated residents and tourists within an hour and a half of the earthquake, despite it being 2am in the morning.

The environmental impacts of a community-led resource recovery operation are generally measured in terms of diversion of waste from landfill. Continuing with the above examples, Waiuku diverts 65% of the material it receives, and Innovative Waste Kaikoura has reached 77% for its community in the past.

Please refer to the case studies in the appendix for further examples of the business and impact models described above.

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Reduction or prevention is the first step in the waste hierarchy, and the most preferred option. In recent years there have been a number of great community-led education initiatives developed on the island to reduce waste to landfill. Feedback from the steering group indicates that internet based education campaigns are not effective on the island, with radio, wearable arts type events and upcycling workshops being popular and effective.

Reducing waste means lessening the amount of waste generated, for example, by not using something or by using less of it we reduce resource consumption and prevent those materials from entering the waste stream in the first place. Other methods of reduction including redesigning products to use reusable materials, or light weighting (using less of a material). Reduction very often centres around behaviour change.

Having considered the Great Barrier context, this section examines a number of potential reduction initiatives:

1. Education
2. Getting buy in from manufacturers, businesses to use alternative packaging when sending things to the island
3. Campaign to reduce glass beer bottles
4. Data and measurement

Education

Education is defined broadly and includes all programs and services that impart knowledge and skills about waste prevention, reuse, recycling and disposal to people. Increasing community awareness, and developing the motivation, skills and/or knowledge to take action and innovate are key to achieving zero waste.

Education has a role in supporting all waste minimisation and management activities, including reduction right through to disposal.

Commonly, education programmes can be categorised into three types:

1. Public and customer service related communications
2. Awareness building
3. Behaviour change

<table>
<thead>
<tr>
<th>What is it?</th>
<th>Public and customer service comms</th>
<th>Awareness building</th>
<th>Behaviour change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about waste related issues and/or activities. This</td>
<td>Campaigns or programs designed to actively seek out</td>
<td>Programmes of sustained education with the goal of</td>
<td></td>
</tr>
<tr>
<td>Examples</td>
<td>Cost to implement</td>
<td>Likelihood of creating change in behaviour</td>
<td>Audience</td>
</tr>
<tr>
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</tr>
<tr>
<td>Information sheets on composting; Rubbish collection day information; Auckland Councils Make the Most of Waste website; Auckland Council’s customer service hotline</td>
<td>Low</td>
<td>Low</td>
<td>General, made available to those who seek it</td>
</tr>
<tr>
<td>Love Food Hate Waste Campaign; UnPackit Awards; Information stalls at events; Community engagement processes such as surveys; Advertising; Summer Ambassador Recycling Project</td>
<td>Low-medium</td>
<td>Low</td>
<td>Specific audiences are considered in the design of the materials/activity</td>
</tr>
<tr>
<td>Composting Collective workshops; Para Kore programme; Kai Conscious Waiheke programme; Zero waste education in schools</td>
<td>High - these require ongoing contact and support of participants over time</td>
<td>Medium</td>
<td>Designed and delivered to a specific audience</td>
</tr>
</tbody>
</table>

Considerations for effective zero waste education

- In the design phase, aim to identify a clear goal, target audience, tools and evaluation methodologies.
- Mix and match - A range of education formats are likely to be needed to achieve each goal. For example, a website (a public and customer service tool) can be a place to find more information about awareness and behaviour change campaigns.
while public awareness events can be used to identify participants for a behaviour change programme.

- Identifying structural barriers can help in the development of effective programmes. For example, illegal dumping may occur due to an insufficient access to waste and recycling bins. Consultations with the target populations in the design phase is important in identifying such barriers.

- Diffusion of Innovation theory suggest that it is person-to-person interactions that spread change, and that it is trusted peers (family, friends, colleagues and advisors) that have the most effect on changing the behaviour of the majority of individuals. Identifying and using a ‘community champions’ model is one way of incorporating this into education programmes. Partnerships may also decrease the cost of message delivery.

- Know your audience and target messages and message delivery to a specific audiences context and barriers.

- Use multiple delivery methods and times to send messages. People have varying preferences for receiving messages and often need to receive information multiple times before it begins to sink in.

- Look for opportunities to help people break old habits. Use prompts and feedback to support new behaviors. Visual reminders such as stickers or signs can be used effectively to reinforce a new behavior such as composting or proper sorting of curbside recyclables.

- Providing resources to people in a major life change also promotes a change in old habits. For example, moving to a new residence or downsizing, or becoming a parent.

- If you are going to supply services for any school education programme, you'll need someone that is proficient in the classroom and has experience and knowledge of the New Zealand school curriculum. Schools tend to book programmes a year in advance, so getting into schools can take time. There are well-established school education programmes that focus on waste education and sustainability. These programmes are generally taught on contract to local authorities.

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**Vignette: Summer Ambassador Recycling Project, Tauranga**

In this awareness building project, Keep Tauranga Beautiful on behalf of Tauranga City Council employed 10 Recycling Ambassadors to man public recycling stations over the busy summer period around the ten permanent recycling stations in Mount Maunganui.

The aim was to engage the public in correct recycling and waste disposal, and increasing diversion from the recycling stations. All recycling ambassadors were given a resource kit. It included a first aid kit, litter picker, gloves, hand sanitiser, sunscreen, hi-vis jacket, t-shirt, hat and an umbrella. A training session was held before the project began to introduce the crew, discuss their duties and demonstrate how to prepare and manage the waste stations. They were briefed on the current acceptable recyclable and compostable materials, so that they were able to educate the public and answer questions. The staff worked in pairs to encourage more engagement from the public. Each pair had an iPad which they used to survey the public.
The programme began in the 2016/17 summer season and returned in the 2017/18 season for 10 days between December 26th and January 20th. Stations were manned from 10am-6pm with an unmanned 30 minute lunch break.

Mount Maunganui is a tourism hot spot during the summer months, attracting around 20,000 visitors to the area over the New Year period alone. The increased number of people means an increased volume of waste generated. Having waste and recycling stations available to the public provides an opportunity for people to recycle material that would otherwise end up in landfill. It also provides a mechanism for people to think about their disposal behaviours and impart an educational messages and opportunities that may lead to behaviour change.

**Recommended education priorities for Aotea**

**Continue to build resident buy-in to the goal of zero waste through community visioning and engagement workshops, activities and events**

Development of a set of principles that set out the islands priorities - A “this is how we do things here” project. Hire a facilitator to work with the community to tease out the community priorities (along the same line, but in more detail, as the engagement that established the priorities set out in the Hauraki Gulf Waste Plan. Community development outcomes should be the focus here, and an awareness building campaign could be built into it.

**Events**

Fun events draw the wider community in to waste minimisation activities - examples from the ZWN include recycled raft races, recycled trolley derbies, wearable art competitions, community meals with a zero waste activity tied to it (eg jam drives when there is a glut, shared meals from donated food). Repair cafes offer a practical outcome for participants, a social experience and the opportunity for skill-sharing.

**A food waste reduction project**

The [Love Food Hate Waste](#) campaign website is a good source of information, while the Compost Collective offers excellent resources for composting projects.

**Targeting visitor population via campaigns and awareness raising activities**

Ideas for potential projects include:

- An ambassador programme - similar to those in Tauranga and Waiheke
- Manning summer barges and on-shore drop off points with staff
- An awareness campaign to inform visitors
Vignette: Kai Conscious Waiheke Project, The Waiheke Resources Trust

Funded by Auckland Council since 2013, the project takes a community development approach to food waste reduction and has the following aims:

1. Reduce the generation of food waste at a household level on Waiheke Island;

2. Increase uptake of composting activities in households to see a reduction in food waste to landfill from Waiheke Island households;

3. Develop a comprehensive project ‘tool kit’ that other organisations can draw on to run food waste reduction projects in their communities;

4. Experiment further with community development as a methodology for solving municipal problems; and,

5. Connect the community

Each year the KCW project team works with one geographic community on Waiheke to establish that community’s priorities and to integrate food waste reduction into community building activities. Community meals, composting workshops and other community events are undertaken, supported by the KCW staff. The weekly Kai Conscious Cafe at the Waiheke Sustainability Centre takes food destined to be waste from local businesses and turns it into a shared meal that draws in large crowds (pictured).

As part of the Kai Conscious Waiheke project, the WRT ran a campaign directed at new residents. The project team:

- Developed a ‘new residents kit’ that gave information of food waste reduction, waste minimisation, water conservation, septic systems and community engagement opportunities.
- The kit was translated into Spanish to further enhance the engagement potential with Waiheke's large South American community.
- Ran community engagement events such as BBQ's, preserving workshops and beeswax wrap workshops.
- Hired a native Spanish speaker to seek out and personally engage new South American
Getting buy in from manufacturers, businesses to use alternative packaging when sending things to the island

Getting buy in is the key phrase here. The following actions represent a pathway for engaging with businesses.

1. Set a goal - this should be based on data so you can measure your progress over time and should tread the line between being both achievable and visionary. Project goals could also include the number of businesses or individuals engaged with.

2. Decide on the priority waste streams eg the Boomerang Alliance’s Communities Taking Control project have six priority plastic items: water bottles, coffee cups and lids; Straws; Plastic Bags, Foodware (cutlery, cups, plates etc); Takeaway containers. These items are problematic, prolific and there are sustainable, non-plastic alternatives available for each of them. These may be different for Aotea, and the priority waste streams could be established via waste audits of local businesses and/or surveys of businesses/community members.

3. Identify the incentives that will help the businesses take up the use of alternative packaging. The Conscious Consumer model focuses on making a businesses commitment visible via the use of ‘badges’ (see examples below). Certificates and posters that can be displayed, along with member directories, promotion on websites, social media and in the local media are all common incentives offered. Celebration of achievement plays a key role in getting participants to remain committed to the programme.

4. Research and offer resources that can help businesses - common resources include suppliers details and price lists, collateral such as posters and FAQ’s to help businesses become conversant in the issues the project is aiming to address.

A selection of the Conscious consumer badges awarded to cafes as they achieve the programmes various accreditation standards

- Recycling
- Eco-packaging
- Composting
Campaign to reduce glass beer bottles

Within the context of Aotea, glass is a particularly problematic material, due to the cost of transporting it back to the mainland. This section considers the problem from a reduction lens, and focuses on one common source of glass: Beer.

Arguments over which packaging materials have the lowest environmental footprint are complex. Glass and aluminium both come from non-renewable materials, but unlike plastic, they are not fossil-fuel based. Aluminium is made from bauxite, mined from open-pit or dredging mines that have huge environmental impacts. However, when you consider the environmental impacts of transportation, glass, as the heavier of the two has a considerably larger impact.

From a zero waste perspective the deciding factor is generally the likelihood of the product being reused or recycled. Refilling is an option that is discussed further below. In regards to recycling, aluminium is generally easier to deal with - it can be compacted into easy to manage bales and receives a decent return on the commodities market. Transportation of glass for recycling without pre-crushing could be seen as the transportation of a lot of very expensive air, and the cost of transportation of glass from Aotea back to the glass plant in Auckland has been identified as a significant barrier to glass recycling. The price of glass is also significantly lower than aluminum. This represents an argument for avoiding glass packaging when there are alternative options, which in the case of beer, there are.

Refills for beer are slowly coming back into fashion. To incorporate it in the zero waste strategy for Aotea, two things would be required:

1. Commitment from retailers to buy bulk beer (kegs) and to make these available for refills, and
2. Consumers with the appropriate vessels for refilling. These are called Growlers (see image below) and are starting to become more popular in the United States and Australia on the back of the booming craft beer market. Growlers range from large glass bottles, to insulated stainless steel flask or even mini-kegs. The volume is generally around equivalent to six bottles.

Aotea could invest in the purchase of Growler stock either for resale or possibly for a return scheme - along the lines of the ‘swap-a-crate’ system that entails a deposit on the first set of bottles you buy.
Data and Measurement

Robust data allows us to make informed, evidence-based decisions and understand the impact our activities are having. Data collection and analysis is therefore important to consider and build into any waste minimisation activity, wherever it sits on the waste hierarchy.

Measurement of material flows via stocktakes, waste audits, collection of weights and volumes of materials diverted and waste to landfill and sales and other financial information are some of the key data collection methodologies for waste activities. The key piece of quantitative information for zero waste projects is the rate of diversion from landfill. Measuring volume in m³ better represents diversion from landfill as it is the use of space, not how heavy things are that fills up a landfill.

Qualitative data is also important, especially when you’re offering services to the public. Customer satisfaction surveys and case studies can illustrate the way an activity, programme or service is having an impact in a way that is often more relatable than a set of numbers.

Reduction
For projects and events collect data such as number of participants and participant feedback. Behaviour change is a complex area to measure as behaviour change can be slow and there are often multiple drivers for change. Collection of quantitative data can be a part of a specific project - for example the Tauranga Beach Ambassadors project included data on the weights of materials going into the public recycling bins that the ambassadors were stationed at, while the Kai Conscious Waiheke pilot project relied on two neighbourhood-wide waste audits for data, and asked participants to collect and measure their food waste for a month. Capturing impact stories can illustrate the value of a project to individuals and tease out lessons for improving the project.

Reuse
Xtreme Zero Waste have developed a Excel spreadsheet called a product tracker that is being used in most of the Auckland CRC’s. This lists a range of items that will potentially come through a reuse shop, sorted by the following categories:

<table>
<thead>
<tr>
<th>Animal</th>
<th>Building and Renovation</th>
<th>Outdoor Living</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliances_Large</td>
<td>Clothing and Fashion</td>
<td>Sports</td>
</tr>
<tr>
<td>Appliances_Small</td>
<td>Electronics and Home</td>
<td>Upcycled Goods</td>
</tr>
<tr>
<td></td>
<td>Entertainment</td>
<td></td>
</tr>
<tr>
<td>Baby Items</td>
<td>Garden</td>
<td>Vehicles and Boats</td>
</tr>
<tr>
<td>Books</td>
<td>Home</td>
<td></td>
</tr>
</tbody>
</table>
Users input daily sales data (including estimated weights or volumes) into the spreadsheet, and a weekly summary is automatically calculated. Computerised till systems could automate this process but would require investment in set-up.

Standardised volume-to-weight tables can be utilised to estimate data and some CRC’s have developed their own tables. The basic concept uses a container with a known standard volume, such as an apple crate. You then establish how many of one type of item it takes to fill that container and then measure the weight (or estimate using an volume-to-weight table) of the filled container.

**Recycling**
Baled and binned commodities should be weighed. If there is no weighbridge installed, forklift weight scales can be useful for measuring the weight of bales and bins. Volume can be established via bale or bin size, however loose volume is interesting to consider too, as it represents what would have filled the landfill. Industry often states that plastic packaging is small percent of waste stream – which is true by weight but not by volume. 400 kgs of plastic bottles may be 30m3 or more.

**Disposal**
Measure volume & weight - the use of a waste baler will mean measurement of residual waste becomes relatively easy - bales will be consistent in volume and easy to weigh using a forklift weight scales.

**Potential Revenue**
Because reduction activities are generally not revenue generating, they tend to be funded by central and local government, and philanthropic organisations.

One innovative funding opportunity exists in the introduction of a visitors levy for Aotea Great Barrier. This has been a successful initiative for Stewart Island as outlined in the following vignette.

**Vignette: Stewart Island/Rakiura Visitor Levy**
Stewart Island/Rakiura has a small resident population, however it is a destination for a large number of short-term visitors. After years of discussion, the Southland District Council (Stewart Island/Rakiura Visitor Levy) Empowering Act 2012 was passed into law on 26 March 2012. The Act empowers Southland District Council to set and collect levies and obtain revenue from visitors to Stewart Island/ Rakiura. Under the Act, funds must be used to better provide services, facilities, and amenities for Island visitors.

Implemented in 2013, the levy has remained at $5 per person. It is applicable to most visitors who stay on the island for less than 21 days.

Money is collected from two sources:
1. Revenue is collected from approved operators (Ferry, airline and cruise ship operators). These operators include the levy in the ticket price and pay this to Southland District Council.
2. Visitors who arrive on the island via private or chartered transportation must pay the levy via a collection box at the Council office on Rakuira.

The levy fund is administered by the Levy Subcommittee with support from a Technical Advisory Group, and Venture Southland who administer the application process. The Levy subcommittee receives and considers applications for:
1. Activities used by visitors;
2. Activities on the Island for the benefit of visitors; or
3. To mitigate the adverse effects of visitors on the environment of the Island.

Since its implementation the levy has raised a total of $400,000+. $214,000 was raised in the 2016/17 Financial year, and $186,750 worth of project applications were approved by the levy subcommittee.

**Indicative costs**

By prioritising reduction over the other parts of the waste hierarchy we are also suggesting significant financial resources need to be directed to reduction activities. Educational activities can be expensive as they can require significant human resources for project management and implementation, as well as investment in resource development. An ambassador project running along the same lines as the Tauranga example, with all roles being paid positions, would cost upwards of $20,000.
Reuse

Reuse means using something again in its existing form for the same purpose or a similar one, without further manufacture. Taking donated goods and reselling them can be profitable if your business model stacks up and also provides significant social benefit by providing cheap items for economically disadvantaged people on the island. It also diverts material from the waste stream.

Drop off

Drop off of reusable goods is the most common source for reuse enterprises. Some enterprises will do collections from homes or receive materials from other stakeholders such as businesses. Those based at landfills and transfer stations will sometimes retrieve stuff from the tipping floor. Reuse staff need to have a clear sense of the types of materials that can be sold in order to make decisions about accepting or turning away goods. The following is a list of potential categories that may help with decision making:

- item reusable in current condition
- item requires slight repair but is in good condition
- item requires major repair work
- some parts of the item are missing
- item is not repairable but recyclable
- item can only be disposed

Once accepted, items need to be stored appropriately and/or made ready for sale. A wide assortment of goods at an affordable price will ensure the best turnover.

Storage options need to be considered for each type of material. Shipping containers are a common form of storage of surplus stock and seasonal items, and some reuse enterprises use shipping containers as a permanent part of the operation of their yards - opening them up during sales hours as rooms or workshops.

Vignette: Innovative Waste Kaikoura aiding community resilience by providing materials straight after the earthquakes.

Just after midnight on 14 November 2016 a 7.8 magnitude earthquake struck the Kaikoura region of the South Island. The quake caused significant damage to roads and buildings, and effectively cut off Kaikoura from all land based access. Immediately after the earthquake, hundreds of people arrived in search of safer, higher ground in the Innovative Waste Kaikoura car park. It was a beautiful evening, but cold and people were...
poorly dressed, having been shaken from their beds. The resource recovery shop was opened so blankets and clothing could be distributed.

Processing and repair

Some materials lend themselves to processing and repair activities. Construction & Demolition materials, furniture and whiteware are common examples of material streams where there can be an opportunity to add value to an item before returning it to the reuse marketplace. Only accept what you can do something with, and that you will have a viable outlet for - this will depend on the skills and interest on the island.

One key consideration is that a covered space is necessary, so what you can do is a bit dependent on how much space you have available. Covering a space can be relatively simple - free-standing canopies can be utilised if there is no warehouse or permanent roof space available. A particularly successful configuration is the use of a canopy fastened between two shipping containers. This provides a covered work space as well as lockable storage, and used by a number of CRC's including GAPO in Devonport and Waiheke's Inorganic project (see image below).

Canopy structures come in a large range of sizes and can be made to suit various shipping container configurations.

Untreated timber and building materials may be a good first candidate for a processing-for-reuse project on Aotea, depending on the existence of a DIY market, or research that indicates an interest in such a market. Tools for de-nailing, a covered work and sales space and shelving for the sellable product (usually made available by type and lengths) are the minimum requirements for such a project. Windows, doors, shutters, bricks, fencing and roofing iron are all good candidates for resale, in addition to de-nailed timber.

Bicycles are another candidate for processing and repair. They are also easily cleaned, repaired and could be placed for sale cheaply in the reuse store. Bicycles unsuitable for resale can be stripped and parts made available to local cyclists or as pedal powered water pumps, cloths washers, nut crackers...Remaining materials can be recycled as scrap.
Reuse Shop

Aotea already has a reuse shop. It is important to acknowledge the work being done here and continue to promote it. Expanding the reuse shop services should, first of all, focus where gaps exist. For example, several ZWN members have made the decision not to focus on clothing as there were other second-hand clothing retailers operating in the area.

Things to consider:
- Proximity to disposal site - maximising the opportunity to divert waste from landfill suggests a reuse shop should be as close as possible to the disposal or transfer station site.
- Where possible, have dedicated areas for receiving, sorting and storage of incoming materials.
- Entry to shop should be well-signed and, if possible, vibrant and visually interesting can help draw new customers and build engagement with the communities chosen approach to waste.

Examples of signage from Nelson and Raglan reuse shops

- Common areas within reuse shops:
  - Bric-a-brac
  - Clothing
  - Craft and entertainment (including books, games, craft materials)
  - Furniture (can be displayed outside if there is appropriate sheltered areas)
  - Bargain area/market day/ free tables/areas - use these to regularly make items cheap/free to increase turnover of items
  - Flash trash - an area where more expensive items are displayed. Several ZWN members run auctions for interesting and valuable items to create a buzz and increase sales profits. Many make these conditional to on-site pick-ups or in person bidding to ensure items remain in the community
  - Parts and electrical (consideration of needing a qualified tag and test assessor before being able to sell electronic items)
• Good stock presentation is a key aspect of a reuse shop. Use shelves, racks and containers for items, with large items arranged in groups. Ensure clear walkways and designated areas for specific item categories. Small items can be stocked near the cashier counter to deter theft. Cleaning items for display can help with customer willingness to pay decent prices but depends a bit on staffing levels and site facilities.
• Opening hours - what works best depends a little bit on your community, and what else happens on site. Many ZWN members have several closed days throughout the week when kerbside collections are returning to the site, or to accommodate community visitors who usually visit on the weekends. The decision to limit the number of days the reuse shop is open will also reduce staffing costs.
• Consider opportunities for linking the reuse shop and any education programmes or campaigns. Making educational material available at the reuse shop and training staff to promote zero waste education is an efficient way of increasing your educational reach.

Upcycling

Upcycling is the process of using discarded materials to create something of higher value than the original. The types of items that can be produced depends a lot on what types of discarded materials you have available and the level of craftsmanship in the community. Two other important considerations relate to distribution:
• To achieve a premium price for upcycled items it is advisable to sell through an alternative channel than a reuse shop.
• On Aotea, small items are more likely to find a market with visitors.

Examples of upcycled goods and retailers:
• Upcycle Re-design store, Waiheke [https://www.facebook.com/UpcycleWaiheke/]
• The Reclamation Shop, UK [https://www.facebook.com/TheReclamationShop]
• Hipcycle, US [https://hipcycle.com/]

Wastebusters, Wanaka

Upcycle on Waiheke Island features a collection of upcycled goods made locally by a collective of artists
Potential revenue

Revenue from reuse activities varies significantly from community to community throughout New Zealand. However, as a general guideline, reuse shops and yards that are open five days per week on average generate about $2,000 / m² of retail space per annum.

Operators report that they earn more for the material in their yards (timber, outdoor furniture, bricks, etc.) than they do from the sale of bric-a-brac and other small items inside a reuse shop.
Recyclable commodities

The term recyclable commodities covers; glass, plastic, metal, paper and cardboard - items which are traded in national and international markets in the same way as gold, oil and coffee is traded.

The price a recycler receives for these materials is dependent on what the market is doing at any given time. Some materials like glass are relatively stable whereas others can fluctuate wildly. At times it can become uneconomic to process the material and operators need to decide whether to stockpile material until the price picks up, or dispose of it to landfill.

As already mentioned, Zero Waste best practice suggests recycling is only considered once options further up the waste hierarchy have been exhausted. This reflects the amount of energy that is required to collect, transport and process materials into new products and the carbon impact of this activity. It also acknowledges that recycling can often mean ‘down-cycling’, in that materials are re-processed into lower value items delaying their trip to the landfill rather than stopping it. For example, high quality cardboard becoming low quality egg cartons, or high quality plastic becoming low quality plastic.

Recyclables are taken to a dedicated recycling site for processing. These recyclables will be dropped off in an initial indoor or outdoor receiving or stockpile area. The material might be co-mingled (mixed together) from a kerbside recycling collection or they might be source separated if the vehicle collects only one type of material such as cardboard.

Processing systems vary but most materials require:

• Sorting into colours (glass), grades (paper and cardboard) or type (metals, plastics)
• Compaction and baling (except glass). Systems vary from low-tech hand sorting to hi-tech automatic systems in purpose built Material Recovery Facilities (MRFs).

Source separation

A principle of zero waste is source separation - keeping recyclable materials out of the waste stream by sorting them into separate categories - for example, glass, metal, paper, plastic. This reduces costs and provides high quality material as an input to the recycling process. Householders are encouraged to separate their recycling at home, in particular keeping glass and paper/cardboard separate. Recyclables are sorted
at the kerbside, with different materials going into different truck compartments.

To understand the value of source separation it is useful to understand the alternative - co-mingled or single source recycling. Commingled systems have two main parts, the collection phase and the sorting phase.

The commingled collection methodology uses the same types of vehicles, bins and lifters that are used to collect rubbish, to collect our recycling. Householders are encouraged to put all their recycling into one large vessel, usually a wheelie-bin, crate or sometimes, bags. No sorting gets done during the collection phase. Although unlikely to be a consideration for Aotea, in many places with co-mingled collections, recyclables are often compacted in the truck to maximise the volumes collected on each run and to increase transport efficiencies. Compacting during collection increases the weight collected per load. This reduces the number of vehicles needed to service a given number of households and the number of trips to the recovery facility for off-loading. Commingled collections have gained popularity as they are thought to be safer for the collection staff. It is also assumed that the net cost of recycling will be lower when the collection cost is lower. However, as the image below illustrates, the product that arrives back for processing with much higher chances of contamination and requiring more, often mechanised processing.

Value is created in producing non-contaminated product so it is worth training staff to sort to the purest grade possible. Reducing contamination of a recycling stream is only possible when sufficient space is allocated to that stream, so allocating sufficient space is an important consideration. Remote communities, such as Aotea, with very high freight charges, gain advantages from processing before transporting to market through the significant improvements to material density.
Vignette: Glass Recycling, Wastebusters

Wastebusters is an example of a recycler that prioritises source separation and is guided by the waste hierarchy in its decision making. They collect glass via a public drop off and business collections. These are colour sorted by hand at their sites in Wanaka and Alexander and transported to Auckland to the O-I Glass plant to be made back into bottles, despite the significant cost involved.

In neighbouring Queenstown, the council have employed a single-source recycling, and have been sending their mixed glass to landfill or to be used as roadng.

Wastebusters have been able use this point of difference to market their services to their community.

The benefits of focusing on quality product means Wanaka has continued to find markets for its recyclable materials even as other recyclers struggle with the impacts of China’s ban on recycling imports.

Drop off area

A public recycling drop-off point can be a place where separation can happen from the get go. By investing in good signage and having staff on site to help the public, reprocessing of the public drop-off recyclables should involve minimal further handling. Other materials delivered to site will need to be manually or machine sorted to bring them up to the same quality standard.

The following techniques help residents to separate items correctly when delivering recyclables to the Drop Off site.

Clear Signage along the recycling wall with examples of products to be placed in each bin.

Visual feedback – Being able to see into the bins to check they are putting like with like.

Supervision by staff to assist residents using the facility to fully understand where each recyclable item is to be put.

Checking Bins bins are checked regularly before any contaminants are covered by more recyclables.

Lid bins and Signage (“Please Remove Lids”) – available along the recycling wall to give a clear prompt to remove lids.
Parking and Traffic Flow designed to allow multiple people to use the drop-off wall at the same time and provide a less stressful environment that reduces errors made in haste

Rubbish Bins on Hand so that residents are not tempted to place contaminating materials in with recyclables

Other Recycling Streams Co-located and well signposted such as battery recycling, reuse centre, hazardous materials drop off. This means that residents will not be tempted to place other recyclables in recycling bins.

Glass

Glass can be endlessly recycled back into glass at O-I’s factory in Penrose, Auckland. The costs of transport means that it is, at best a cost neutral, rather than a revenue generating activity, but is more preferable in terms of the waste hierarchy than on-island solutions using crushed glass which would be considered down-cycling or recycling it into a lower grade product. Glass containers are recommended to be colour separated and transported to O-I in Penrose for recycling back into glass containers.

Good separation and freedom from contaminants is essential as contaminated loads of recycled glass can be rejected at the remanufacturing plant. Contaminants include: light bulbs and fluorescent tubes, pyrex dishes and ovenware, china and crockery – cups, saucers, plates, drinking glasses and window glass.

Suitable glass jars could be made available to the public at no cost, for use in preserves/storage

All other glass to be landfilled.

Bottle Deposit Scheme - these have been shown internationally to dramatically increase bottle recovery rates reducing land and marine litter. A local scheme could be introduced on Aotea as follows...

1. All retailers of glass beverage bottles agree to institute a bottle deposit scheme
2. A non-removable sticker, or other identifying feature, is placed on bottles before sale
3. An additional 15c is charged on the purchase price per bottle
4. Retailers pay this to a managing body
5. 2.5c is retained by the managing agency to cover costs, 12.5c is paid to bottle depot operator
6. Customers get 10c back when they return bottles with the identifying sticker
7. Recycler retains 2.5c to cover costs
Glass as aggregate and the carbon footprint of glass recycling

The authors were asked to explore the potential of using crushed glass as a substitute for quarried aggregate in on-island road projects. From a zero waste perspective, this option when compared to the others available, is further down the waste hierarchy in order of preference. However, decision-making about appropriate resource use will very often include a number of other considerations, for example, cost efficiency, plant required and logistical ease. Another increasingly important consideration is the carbon footprint of different processes. The section below offers some further information on the carbon footprint of glass recycling.

For every 10% of recycled glass, used in new glass, emissions go down by 5% and energy used in manufacture goes down 3%3. The NZ glass recycling plant run by O-I in Auckland uses 60% or more recycled content in their bottle-making process. They are world leaders in this area. This means they are saving 30%+ of carbon emissions and 18%+ of the energy required to produce glass from virgin material when they make glass with 60% plus recycled content.

The transport segment of the glass bottle life cycle accounts for only 5% of the CO2 emissions of glass packaging. We understand that glass cullet can be transported 10,000km before the CO2 benefits of using recycled content in the process are offset by the carbon cost of transporting the cullet to the processing plant.

Glass recycling has the potential to be a closed loop system with glass infinitely recyclable with no loss of quality however many times it is sent back through the system. Glass is made of silica sand, soda ash, lime and feldspar - 1.2 tonne of raw material is saved for every tonne that is recycled reducing the impacts of raw material extraction.

Various life cycle analyses have found that recycling glass instead of using virgin materials to make new bottles saves between 314kg4 and 670kg per tonne of glass produced.

A life cycle analysis report5 for O-I in Auckland compared the carbon footprint (carbon dioxide equivalent = CO2e) of glass bottles to aluminium cans and plastic bottles.

- Glass: 0.153 kg CO2e per 350 ml unit
- Aluminium can: 0.422 kg CO2e per 350 ml unit
- Plastic bottle - 0.249 kg CO2e per 350 ml unit

By way of comparison an adult tree absorbs about 0.06 kg per day. It takes a tree 2.5 days to absorb the CO2e emissions that are created when we create one small 350ml glass bottle.

from virgin material and a bit over a day to absorb the CO2e emissions created by making that same bottle with a high proportion of recycled content.

In the context of Aotea, we have considered two scenarios - Scenario One: Glass is shipped back to Auckland and, Scenario Two: Glass is used on-island as a substitute for quarried aggregate.

A detailed carbon footprint analysis of the two scenarios involves calculating the carbon emissions and energy use for the full range of different materials and activities involved. These are a highly complex calculations that sit out of scope of this report, however a summary of the type of information you’d need to consider is below.

The main CO2e producing activities to be considered in Scenario One are:
- Initial production of glass
- Transportation of glass to the island
- Transportation of recovered glass to Auckland for recycling
- Aggregate production
- Transportation of aggregate to the island
- Glass production using recycled glass content

Scenario Two - Glass is used on-island as a substitute for quarried aggregate:
- Initial production of glass
- Transportation of glass to the island
- Processing of glass for use as an aggregate substitute
- Glass production using virgin glass content

When comparing the two, the impacts of the initial production of glass and the transportation of glass to the island are the same for both, so do not need further consideration.

Scenario One involves twice as much transportation - of glass back to the mainland and aggregate to the island. Estimating the carbon impact of the transportation would require information about fuel usage and distance traveled for both aggregate and glass. As an example, the EECA carbon emission calculator⁶ calculates that 1700 litres of diesel (a best guess on the return trip fuel use of the Great Barrier vehicular ferry) emits 4.59 tonnes of carbon. This would then need to be divided by the number of vehicles on the ferry - an average of 10 vehicles would mean 459kg CO2e is emitted per vehicle, for each return trip.

The biggest impact, however, comes from the CO2e savings of recycling glass. Using the lower of the estimates of CO2e from the life cycle analyses mentioned above (a saving of 314kg per tonne) and applying it to the 120 tonnes of glass that was collected on Aotea in 2017 gives a result of a carbon saving of 37.7 tonnes CO2e. Scenario Two does not have this significant saving, and effectively removes the 120 tonnes of glass out of the recycling loop for good.

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⁶ Available at: https://www.eecabusiness.govt.nz/tools/wood-energy-calculators/co2-emission-calculator/
In comparing quarried aggregate to glass, a 2003 Enviros report for British Glass compared different applications for recycled glass and found that a best case scenario would result in savings of 2-3 kg CO₂e/tonne for each tonne of glass into gravel substitute compared to a virgin aggregate. Applied to the 120 tonnes of glass this is a saving of 360 kg CO₂e, and is insignificant compared to the 37.7 tonnes CO₂e saved by sending the glass for recycling.

In summary, when considering the zero waste and carbon footprint impacts of recycling glass, ‘bottle to bottle’ recycling is recommended over using of glass as aggregate substitute.

| Carbon savings from alternative processing of 120 tonnes of Great Barrier glass |
|---------------------------------|-----------------|
| Process                        | Carbon saved (tonnes) |
| Recycling ‘bottle to bottle’    | 37.7 tonnes p.a.   |
| Processing into glass aggregate | 0.36 tonnes p.a.   |
Plastics

Collect and sort all grades of plastic
- #1 Polyethylene terephthalate (PET or PETE) (eg: Disposable soft drink and water bottles) to be colour separated and baled to high density for local or export markets
- #2 High density polyethylene (HDPE) (Examples: Milk jugs, liquid detergent bottles, shampoo bottles) to be colour separated to extract the milk bottles and baled to high density for local or export markets
- #3 Polyvinyl chloride (V or PVC) Examples: cooking oil bottles, plumbing pipes
- #4 Low density polyethylene (LDPE) (Examples: grocery bags, sandwich bags)
- #5 Polypropylene (PP) (Examples: Cloudy plastic water bottles, yogurt cups/tubs)
- #6 Polystyrene (PS) (Examples: Clam-shell take-out containers)
- #7 Other (plastics invented after 1987; includes polycarbonate, or PC, and polylactide, plastics made from renewable resources as well as newer plastics labeled “BPA-Free”, PLA) (Examples: Baby bottles, some reusable water bottles, stain-resistant food-storage containers)

Best practice that considers source separation as a guiding principle would suggest collecting and processing the different grades separately, however space constraints and low material flows for some grades may suggest a mixed plastic grade is more suitable for Aotea. Grades #1 and #2 should, however, be sorted separately. The current difficulty in finding markets for mixed grade plastics is another consideration.

Soft plastics

The Packaging Forum operates a soft plastic recycling scheme through supermarkets on the mainland. Unfortunately, at the time of writing the authors understand that this material is being stockpiled rather than recycled due to a lack of demand for the final products.

This is likely to change and any community initiative is encouraged to establish whether the scheme is fully operational prior to investing effort into establishing a feeder service on the island.

Bio-plastics

One rapidly increasing part of the plastics industry are biobased bio-plastics. These are plastics, in that their carbon-based molecular structure is a polymer, but the material the carbon is derived from is plant based (often sugarcane or cornstarch). Recovery of bio-plastics will likely need to be a feature of future recovery systems. The range of bio-plastics is such that a single recovery methodology is not yet an option. There are some that are essentially the same as other plastics and can be recycled in the same way (eg new generation bio-PET), others that are compostable certain conditions (usually requiring high heat or anaerobic digestion), and still others which can be recycled for reprocessing so would need to be separated from other grades of plastics.
Paper / Cardboard

Paper and Cardboard should be sorted and processed for transportation off-island.

Two grades:
1. Paper: Newsprint, Paper, Fine Cardboard
2. Cardboard: Corrugated cardboard only

Both grades can be baled, however paper is also commonly transported in covered bins.

Cardboard baled at very high density reduces freight costs and avoids the need for rebaling for transport offshore or to local remanufacturers.

Cardboard and paper can be used as mulch around trees and in gardens. Cardboard mulch could be made free to schools and community groups, and advertised as free to the public on pick-up.

Metals

Metals are unique in that they can be recycled almost indefinitely without losing any of their properties. They are separated into two basic types, which are referred to in the scrap metal recycling industry as ferrous and non-ferrous metals.

Ferrous metals like iron and steel are magnetic and can be easily separated from non-ferrous metals by using magnets. Ferrous scrap metal is obtained from old cars, household appliances, steel beams, railroad tracks, ships, “tin” cans and other post consumer items as well as manufacturing cast-offs.

Non-ferrous metals are generally non-magnetic and include grades such as aluminium (including foil and cans), brass, copper, lead, stainless steel and zinc. Although there is less non-ferrous than ferrous scrap metal in the waste stream, it is typically worth more.

Separation and processing to be undertaken on Aotea as much as possible.
- Aluminium cans crushed and baled and sent for smelting.
- Aluminium scrap to be sorted and contaminants removed (including contaminant metals) and sent to the mainland for smelting
- Steel cans to be separated, crushed and sent to the mainland for smelting.
- Copper to be separated and contaminants removed before shipping to the mainland for smelting
- Electrical cables to be separated and bagged before being sent for stripping and smelting
- Steel to be sorted and strapped into bales before being sent for reprocessing
- Non ferrous metals to be bagged in wool sacks before being shipped for resmelting
E-waste

Waste electrical and electronic equipment (WEEE) or e-waste is a diverse waste stream made up of surplus, obsolete, broken, or discarded electronic devices. It is the fastest growing type of waste in the world and is considerably more toxic than household rubbish. Compaction and disposal to landfill can have serious environmental and health impacts, and should be avoided. Whiteware is generally treated differently from computers, TV’s and other small electronic goods due to the larger proportion of recoverable metals.

E-Waste recycling can be expensive and we recommend charging at drop off for electrical items. The price can vary from item to item, CRT televisions and computer screens are generally one of the most expensive items and these cost up to $40 for recycling in Auckland. Some Zero Waste Network members have negotiated a subsidy from council that they then pass on to residents. For example in Nelson, ratepayers get a $20 (inc GST) subsidy - one per address per year.

The volume of E-Waste on Aotea is unlikely to warrant a dismantling project, which requires investment in plant and appropriate space for set-up. Instead, a simple pallet and pallet wrap methodology could be easily employed and materials sent to the mainland for further reprocessing.

E-waste needs to be handled with care as many electronic goods are made up of hundreds of materials, many of which are rare and toxic to people and the environment, if handled inappropriately, there is the potential to be exposed to hazardous substances such as lead, mercury and cadmium. Care also needs to be taken with items that seem relatively simple in construction, for example, degassing fridges prior to disposal to scrap metal or recovery of parts.

Product needs to be stacked in such a way that the load is stable, secure and unlikely to tumble off the pallet. Boxes are useful for the safe stacking of smaller items such as cords, keyboards, even printers.

Some electrical equipment and appliances may be deemed resalable, if they are dropped off in working condition. However these need to be inspected by someone qualified to undertake the Tag and Test process.

Auckland E-Waste recyclers:
- Abilities: [http://www.abilities.co.nz/](http://www.abilities.co.nz/)
Green waste / Organics / Sewage sludge

A number of processing systems exist for processing green, food and sewage waste, including: simple outdoor windrow composting and worm-farming systems, to hi-tech in-vessel composting and anaerobic digestion systems.

Aerobic vs Anaerobic Decomposition

Aerobic composting systems utilise bacteria that exist in the presence of oxygen from the air. To ensure that air gets into the centre of the compost pile, air can be forced in via blowers, or the pile can be turned. The construction and composition of the pile is also important.

Anaerobic decomposition utilises bacteria that exist in the absence of oxygen. This is slower and produces methane and ammonia, which have an unpleasant odour. Home and commercial composting aims to avoid anaerobic decomposition. Anaerobic digestion needs to be a specifically engineered and controlled process and is, for example, commonly associated with waste water treatment.

Potential for energy generation

The steering group requested the authors look into the potential for using organic waste for generating electricity which in turn could be used for charging electric cars on the island.

In response environmental consultants Eunomia were commissioned to investigate the potential for using organic wastes from Aotea to contribute to energy self sufficiency while reducing waste and putting waste materials to beneficial use. The full report included an assessment of feedstocks and a technology overview and is included as an appendix to this report.

The report suggests there are two technologies worthy of further investigation:

- Anaerobic digestion
- Aerobic digestion, or vermicomposting, paired with pyrolysis

It makes a recommendation for further research to:

- Determine the characteristics of the sludges from the ponds and how this is managed, including testing it’s biomethane potential
- Investigate the potential to grow energy crops. This would include land available, suitable crops and calculation of yield and timing of harvest
- Investigate the potential to collect catering wastes (and/or household food waste) for use in the process
- Determine potential quantities of other possible organic waste streams such as untreated timber, animal carcasses, fish wastes etc., and seasonal fluctuations
- Assess available space at the Claris landfill site and its suitability for different processes (in particular vermicomposting)
- Engage with a range of possible technology suppliers to determine their operating parameters and suitability for Great Barrier Island, including capital and operating
costs, feedstocks, installation, servicing, maintenance, and operator requirements etc.

The Eunomia report refers to cardboard (page 6) but does not include it in their calculations. This is because although cardboard is a carbon source, it also has a high lignin content which does not break down easily in anaerobic digestion processes. It would be helpful in a vermicomposting operation however.

**Vignette: Horizontal Composting Unit, Xtreme Zero Waste, Raglan**

Xtreme Zero Waste have built a Horizontal Composting Unit (HCU) based on an original design from Innovative Waste Kaikoura.

The Raglan HCU is 30m x 3m x 2.5m and holds approx. 200m³ of compost at any one time. It was designed to take kerbside food waste mixed with shredded greenwaste and turned regularly as its moved over 12 weeks from one end to the other. The removable roof panels enable rain, humidity, temperature, odour and vermin to be controlled. The HCU cost approx $200,000 although it is expected to last over 50yrs.

The HCU will be used to turn Raglan’s increasing volume of compostable packaging into compost. The HCU does not require electricity although does need a water supply as the compost process requires additional water. There is a simple leachate collection system which can offer leachate back into the compost process or use for other organic processes.

The Raglan required a resource consent due to the as the volume being processed and the inclusion of food waste.
Disposal

The Claris Landfill is the only landfill solely owned by Auckland Council, and one of only three landfills in the Auckland region suitable for municipal waste. At current rates of disposal, the landfill will reach maximum capacity in about five to seven years.

Preparing a landfill for closure can be a complicated process and planning is already underway to ensure the closure of Claris Landfill proceeds smoothly. This is likely to involve stockpiling material that can be used in the capping process, and construction of methane and leachate capture systems. These preparations may mean space on the landfill site is unable to be used for other activities.

Once the landfill is closed waste will need to be transported off the island to an alternative disposal facility.

Waste Baling

Transport off island is a significant cost and achieving efficiencies in this area is therefore critical. It is our view that the most efficient methodology entails consolidation and bulking of waste before shipping off Island. Refuse from kerbside collections, litter bins, illegal dumping and special events will all be deposited at the transfer station for bulking and transport off-island. Our proposed methodology for bulking is waste baling.

Baling is a process that compresses material into a block (bale) which is secured by plastic or wire strapping. The size and weight of the bale will depend on the size of the baler you have.

Waste baler in Devon, UK
Benefits

- Reduces volume of waste by up to 30% - this can reduce the amount of space needed to store waste, and potentially increase landfill life
- Easier to store due to regular shape
- Increases ease, and potentially cost, of transportation
- Reduced storage, transportation and waste disposal costs
- Compacted waste requires fewer vehicles for transportation - lower carbon footprint

Costs

- Purchasing a suitable baler can be expensive
- Requires electricity
- Requires trained operators
- Ongoing costs include strapping, hydraulic oil and training and maintenance costs

**Vignette: Waste Balers, Ashburton Engineering Repairs Ltd**

Ashburton Engineering have produced some of the best balers in the country. They have tailor made balers for many of the community resource recovery centres including Xtreme Zero Waste, Wanaka Wastebusters and Innovative Waste Kaikoura. These balers can produce international weight bales of recyclables (plastics, cardboard, paper, aluminium cans and light gauge steel) ready for export and therefore good premiums.

Ashburton Engineers can also build balers that can bale waste. These balers are unique in that they can also handle recyclables. Waste balers are becoming more common in Aotearoa. There are waste balers at Whakatane, Chatham Islands and Kaikoura. They require a sump system to be built below the baler to collect leachate from the pressed material. The sump can be used to clean the baler prior to processing recyclables.

A waste baler is ideally situated where it can intercept waste coming in through the gate a prior to going to the landfill. At 20:1 compaction the baled waste can increase the life of the landfill considerably and minimise or prevent the need to use landfill cover (which can be 25% or more or the content of a landfill).
The baler going to the Chathams is easily capable of 2 tonnes a day (5 or 6 bales). Some districts are doing closer to 10 bales a day with the same baler.

**Basic specifications**

- The baler dimensions are approximately 7.5m long x 2.5m high (including feed in hopper) and 1.5m wide (including hopper).
- Bale size approximately 750 x750 x1200 long
- Bale weight 350 – 450kg (depending on product)
- Space requirements – approximately 1m from behind baler to wall, 2.5 to 3m (minimum) from door end to wall, height would depend how the baler will be loaded. Common ways are with bins on a forklift with a rotator head to tip the product in or a small loader/boobcat, both would require a 4 to 5m high roof.
- The baler is powered by an electric motor to drive the hydraulic pump, electrics required to run the baler – 400 volt, 50 Hz, 60 amps 3 phase and earth.
- Ballpark price is $108,000 + GST, includes on site commissioning and operator training. Excludes – freight/shipping of baler and feed in conveyer.

**Contact details**
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**Hazardous waste**

Hazardous waste refers to materials that are flammable, explosive, oxidising, corrosive, toxic, ecotoxic, radioactive or infectious. They are wastes that poses a present or future threat to people or the environment. Examples include unused agricultural chemicals, solvents and cleaning fluids, medical waste and many industrial wastes.

Provision of a well designed drop-off point, open to the public on a continuous basis will enable the community to reduce the amount of toxics going into landfill or drains. Storage of hazardous waste needs to be appropriate, and in some cases secure (eg a lockable shed).

There are established recovery programmes for certain types of hazardous wastes including agricultural chemicals and containers ([Agrecovery](#) and [Plasback](#)), ink cartridges (eg [Cartridge Rescue](#) ) and mobile phones ([Re:Mobile](#)).

Car batteries can be stacked onto pallets and sold to a battery recycling company on the mainland.

If liquid wastes are accepted, they should be stored in a distinct and secure area with adequate ventilation, safety signs (e.g. no smoking), roofing and bunding. Different liquid wastes should not be mixed under any circumstances as mixing some liquids (such as oil and chlorine) may create an explosion hazard.
‘Pay to Throw’
Domestic waste is able to be dropped off at the Claris Landfill free of charge. The authors agree with the Tikapa Moana Hauraki Gulf Islands Draft Waste Plan 2018 that this works against waste reduction principles, and user pays for waste disposal should be implemented as soon as possible.

Waste Levy
With the introduction of the Waste Minimisation Act in 2008 a $10 per tonne levy was applied to waste disposed of at municipal landfills. To date about $190 million has been raised through the waste levy and distributed by the Ministry for the Environment and local authorities for waste reduction initiatives.

While this represents a significant amount of money there are two key issues with the current levy, including:

1. When compared to other countries and states it is relatively low. For example the levy in NSW is $163/tonne, and in the UK it is over £80/tonne
2. It is only applied to certain classes of landfills which means only about 25% of waste disposed to landfill is levied in New Zealand

A report released last year has prompted the Associate Minister for the Environment to indicate that the landfill levy will be increased and broadened to a wider range of landfill classes. Even if the levy is only increased by $10/tonne, broadening the type of landfill it applies to means levy funds will increase from about $50 million/year to $200 million/year.

With an increase in levy funds comes an opportunity for more waste reduction initiatives to be successful in their applications for funding. This may mean that an application for a community-led resource recovery facility on Great Barrier is more likely to be successful.
Site Design

Well designed resource recovery parks slow down the flow of material so that resources can be recovered and diverted from going to landfill.

Rather than providing a straight line from the gate to the tipping floor, an effective resource recovery park will encourage customers to drop off their reusables, recyclables, green waste and hazardous waste before being given the final option of disposal to landfill. Equally, they provide space for material to be stockpiled in a reuse shop or yard, so that visitors can assess its usefulness for reuse, upcycling or recycling projects.

It is beyond the scope of this report to develop a suitable site design for Great Barrier, however examples of generic designs are provided below to highlight the importance of getting this crucial aspect to a resource recovery park right.
Conclusion

This report provides practical advice on a Zero Waste approach to waste on Aotea Great Barrier Island.

It assumes that a Community Recycling Centre will be established on the island, and a community enterprise involved in some, or all, of the resource recovery activity in partnership with iwi, private enterprise, and council.

The report outlines core Zero Waste principles, the business and impact models for community-led resource recovery, before providing practical advice on the following key areas:

1. **Reduction** of waste through; education, reduced packaging on imported items, campaign to reduce glass bottles and accurate data collection and analysis
2. **Reuse** of material for through further development of; an effective drop off area, processing and repair, retail shop and yard, and upcycling
3. **Recycling** options for commodities such as paper, card, glass, metals, e-waste and plastics
4. **Recovery** of energy from food waste, green waste and sewage sludge
5. **Residual waste** options for extending the life of the landfill and reduce transport costs when the landfill has closed
6. **Site design** principles

Recommendations

Procurement for an operator of the Community Recycling Centre, and associated services, is likely to start in November 2018. Assuming the community want to be involved in resource recovery, time is short to self-organise, and to identify and discuss preferred contract structures and procurement processes with council and other stakeholders.

In the immediate future, the authors recommend the steering group focus on:

1. Getting agreement on governance and operational structures that would suit iwi, community, private enterprise, and council stakeholders
2. Advocating for a procurement process and contract structure that aligns with the above
3. Establishing any legal entities required
4. Applying for funding as appropriate

Until there is clarity and agreement on the scope of services to be delivered by the community it would be unproductive to develop business plans however, the following table provides guidance on key activities that should be considered as best practice for achieving Zero Waste on Aotea:
| Reduction          | 1. Implement a campaign promoting a switch from glass to cans or refill stations for beer  
|                   | 2. Continue to build resident buy-in to the goal of zero waste through community visioning and engagement workshops, activities and events  
|                   | 3. Target visitor population via campaigns and awareness raising activities  
|                   | 4. Get a pledge from wholesalers and retailers to consider the packaging used when sending items to the island  
|                   | 5. Support the planned introduction of user pays for residual waste disposal at Claris Landfill  
|                   | 6. Advocate for the introduction of mandatory product stewardship schemes nationally  
|                   | 7. Advocate for the increase of the national waste levy and application to as wide range of landfills as possible  
| Reuse             | 8. Establish a facility for the process and repair of reusable items  
|                   | 9. Create incubation workshops for artisans and craftspeople working on the upcycling of discarded materials  
|                   | 10. Create an innovation hub for entrepreneurs to trial waste diversion technologies  
|                   | 11. Move the reuse shop to the landfill site  
| Recycling         | 12. Continue with export of recyclable commodities to recycling wholesalers off island, baling material as appropriate  
|                   | 13. Commit to glass to glass recycling rather than using glass for aggregate or other down-cycling uses  
|                   | 14. Implement user pays for the drop off of e-waste and recyclable commodities  
|                   | 15. Develop an on-island composting facility  
| Disposal          | 16. Bale residual waste  
| Site Design       | 17. Focus on slowing the flow of resources when considering site design  
|                   | 18. Co-locate as many resource recovery activities as possible (e.g. the reuse shop should ideally be on the same site as drop off)  
| Energy from organics | 19. Consider Eunomia's research on potential methodologies for generating electricity from organic waste and recommendations for further research on preferred option  
| Funding           | 20. Develop an island wide container deposit scheme  
|                   | 21. Apply to Ministry for the Environment Waste Minimisation Fund for capital intensive projects  

Suggestions for further reading

A Wasted Opportunity: Using the waste disposal levy to create economic & environmental advantage for Aotearoa New Zealand. Eunomia Consulting


Operating a Sustainable Community Recycling Enterprise. Community Recycling Network Australia

Reuse Centre Establishment Guide. Community Resources Whakatane
http://eunomia.co.nz/crew-reuse-centre-establishment-guide/

Tikapa Moana Hauraki Gulf Islands Draft Waste Plan 2018. Auckland Council

Community Zero Waste Roadmap. Eco-cycle (United States)
Appendices

The following documents are provided as appendices to this report:

1. Case studies of community involvement in resource recovery, including:
   a. Clean Stream Northland (Kaitaia)
   b. Auckland’s Inorganic Collection Service
   c. Xtreme Zero Waste (Raglan)
2. Organic Waste Recovery Options for Great Barrier
3. Letter from Community Energy Network

Appendix 1 - Case Studies

Clean Stream Northland, Kaitaia

Clean Stream Northland (CSN) was an equal joint venture between Community Business and Environment Centre (CBEC) and Te Runanga o Te Arawa. A joint venture agreement was the basis of the relationship. The two organisations had 50:50 ownership of the business and a shared vision. All operational management was devolved to CBEC, while the governance sat with four directors, two from each organisation.

No longer operating, CSN ran 14 refuse transfer stations and recycling centres in the Far North for the Far North District Council (FNDC). This included the main transfer station, district wide recycling services, operation of a reuse shop housed at the main transfer station in Kaitaia, and provision of waste education.

CBEC was formed in 1989 in response to a dramatic rise in unemployment and social problems arising from New Zealand’s mid 1980s economic reforms. The founders wanted to create environmentally sustainable businesses and services that would provide training and employment for local people. The organisation also planned to bid for contracts that would otherwise be run by companies from outside the district. Profits would be ploughed back into the community to create more employment and other community benefits.

One of the first projects CBEC initiated was to use the opportunity of the closure of the town dump to create a new recycling centre. CBEC convinced the council to award them a three year recycling contract based on projected landfill savings. As part of that contract, CBEC established New Zealand’s first rural kerbside recycling scheme, and a network of outlying recycling drop off points. Once the joint venture was established CSN became the contract holder from 2003. By the time CSN lost the FNDC contract in 2015 they employed 34 people and held contracts worth $2million per annum.
Auckland Inorganic Collection

Established in Mid 2015, this project is one of the projects developed under Auckland Council's 2011 Waste Plan and it's goal if achieving zero waste to landfill by 2040. Before 2015 a kerbside collection of bulky rubbish was offered to some regions of Auckland.

Features of the earlier kerbside collection were:
- Close to 100% of materials collected were sent to landfill
- Piles were subject to scavenging, illegal dumping and posed a health and safety risk (eg tv's were often smashed for the copper contained within but left broken once the valuable materials were removed)

In 2014 Auckland Council put a request for proposal and after several months two contracts were given – one to Waste Management for the collection and recycling, and one to the Zero Waste Network (ZWN) for the redistribution of the reusable materials.

The Glen Innes site is the receiving point for the recyclable and reusable materials collected by the new booked, onsite-collection. Waste Management run nine teams of collectors, made up of two trucks (one box truck with one driver and two collectors) and one compactor truck (one driver and one collector). The collection teams arrive at the residential address as per the booking and sort the material into the appropriate truck. When full, or at the end of the day, the compactor truck travels straight to the landfill. The box truck team return to the Glen Innes warehouse and the recyclable material is sorted from the reusable materials. Scrap metal is the majority of recyclables. The lack of wood recycling seems to be due to the limited cheap recycling options for MDF-heavy wood, providing a good argument for better product design that uses materials that can actually be recycled.

Once displayed, materials are available for groups signed up to the ZWN's Auckland Inorganic Reuse Project to chose and take away. ZWN has received over 120 expressions of interest to be collectors of the reusable materials, and currently has over 60 groups inducted and collecting. The process to become a collector is open to all entities - community groups, business groups and public sector groups, with the main condition being that the goods will be reused. Groups apply and if accepted, are inducted to the project and the site and are then given access to a booking system whereby they can select a time to come and check out what goods/materials are available in the warehouse and take anything they want to, for free. AIR project rules require groups to make a maximum of one booking today, there are a handful of groups that do visit daily, with the majority visiting fortnightly-monthly.

Key figures:
- 1,550 tonnes goes through the site per year: 35% Reusable, 63% Recyclable
- 16.5 tonnes/week of reusable materials are redistributed via the project
- Illegal dumping is down by 8,500 tonnes
- 25,000 TVs/monitors have been diverted from landfill via the project
- Participation of Auckland households sits at 15-17% of eligible properties
Incubation Hubs
Three small businesses are also based at the Glen Innes site. This initiative aims to give new enterprises an opportunity to develop the proof of concept stage of their business plan before moving into a fully operational phase off-site.

- Resource Rescue repairs whiteware and sell parts for whiteware and electronic items via Trademe.
- Flourish repairs and upcycles furniture
- Jesus Revival refurbishes and repairs ewaste

Although the Glen Innes site offers a cheap starting point for the hubs, public access for sales seems to be an important feature that is lacking, and the hubs may actually be better off somewhere else.

The role of procurement
The procurement process was via a formal competitive tender process - starting with a Request of Expression of Interest, followed by and Request for Proposal. Several large waste companies put in EOI’s and several of them were asked to put in an RFP, as were ZWN. The tender documents made it very clear that community and environmental attributes were key (non-financial attributes made up 60% of the weighting). ZWN were approached by several of the other tenderers during the RFP phase with offers of partnership, in general along the lines of a sub-contracting relationship. ZWN chose to continue alone and were short-listed. At this point some very frank discussions in which the risks of the awarding the full contract (collections + redistribution) to such a small, operationally inexperienced organisation such as ZWN were thoroughly explored. They then proposed splitting the contract into two parts and contracting ZWN to do the redistribution. They awarded the collection contract to Waste Management, a large waste company. The three parties then met to start a collaborative planning process about three months before the start of the collection. Both contracts are 4 years +1. Contractors meet council separately from the collectors for monthly contract meetings, with a review at the end of each collection period that includes all three parties.
Xtreme Zero Waste, Raglan

Xtreme Zero Waste operates the Raglan Resource Recovery Centre, and provides kerbside collection of food waste, recyclables and residual waste, under contract to the Waikato District Council.

The community enterprise is the second largest employer in the town with around 30 staff employed on full and part time basis.

The centre is located on top of the old landfill that closed in 2000 and covers almost two hectares in usable space. Management is shared between four managers – Finance, Operations, Business Development and Public Relations.

All recyclable (i.e. paper, cardboard, cans, glass, plastic containers) and reusable products and materials (metal, wood, doors, windows, household goods etc.) are accepted on site along with green waste, food waste, cleanfill, hazardous waste, and e-waste.

Opening hours are: Mon, Weds, Fri, Sat, Sun 8.30 – 4.30 pm

Xtreme Zero Waste considers ‘the basic equipment to be a forklift, with rotating head, containment, building for reuse store, digger to squash bins, trucks for business run or mini skips.’
Appendix 2 - Organic Waste Recovery Options for Great Barrier Island

At the request of the Zero Waste Network, Eunomia Consulting have prepared a report looking at the potential for generating electricity from organic material on Great Barrier Island.

If further investigation or analysis is required the group are welcome to contact Eunomia directly for follow up work.

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Organic Waste Recovery Options for Great Barrier

Memo prepared for Zero Waste Network

Introduction

The Great Barrier Island community is interested in approaches that will help it work towards goals of zero waste and renewable energy self-sufficiency. This brief investigation looks at the potential for using organic wastes from the Island to contribute to energy self sufficiency while reducing waste and putting waste materials to beneficial use.

Experience

Eunomia has significant experience in advising on organic waste technologies and strategies both in New Zealand and internationally. Through our work in the UK and Europe, in particular, we have in-depth knowledge of the latest approaches, processes and technologies, and are sought-after advisors in key areas of expertise related to this project. Eunomia has worked across the world on organic waste issues; including New Zealand, Australia, UK, South Africa, India, Slovenia, Slovakia, France, Romania, Bulgaria, Spain, Belgium, and Ireland. We were advisors to DEFRA’s New Technologies programme, and Eunomia’s work was instrumental in the adoption of AD for municipal organic waste in the UK. Our international links give us valuable knowledge and perspective on the latest thinking, key factors that drive successful outcomes, and the range of technological and management solutions that are available.

In New Zealand we have undertaken a range of projects in respect of organic waste options including advising on appropriate technologies and systems. Our clients in this field have included local and regional councils in Auckland, Queenstown, Taranaki, Waikato, and Bay of plenty as well as a number of private operators including Greenfingers, Envirofert, EnviroWaste, Revital, Xtreme Waste, Ngati Whatua Orakei, and Rubbish Direct.

Assessment of Feedstocks

In determining the feasibility of utilising organic wastes to produce energy and soil amendment products it is important to understand the types and quantity of potential feedstocks, together with factors such as seasonal variation.

For the purposes of this assessment the potential organic feedstocks available on Great Barrier are understood to include:

- Septic tank sludge
- Green waste
Great Barrier Local Board
11 December 2018

- Household and commercial food waste
- Energy crops (not currently being grown) & other organics

A discussion of the key characteristics of each is provided in the following subsections.

**Septic Tank Sludge**

A survey of households on Great Barrier found that 73% of households have a septic tank system. A septic tanks need to be periodically emptied which creates waste that needs to be managed.

**Figure 1: Methods of waste water disposal used by Great Barrier households**

![Figure 1](image)


Septic tank sludge is currently pumped out and deposited in pits at the landfill. There are currently in the order of 200 tonnes per annum of sludge deposited in the pits, with substantial seasonal variation as shown in the chart below:

**Figure 2: Septic Tank Sludge by Month**

![Figure 2](image)

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The key characteristics of typical septic tanks sludge from a management perspective are:

- It has a low carbon to nitrogen ration (15:1)\(^2\). This means it would generally need to be mixed with a carbon source for most aerobic or anaerobic treatment processes to be effective.
- It has a low solids content (in the order of 10%) so is very liquid. This makes it less suitable for aerobic composting or thermal processes.
- It can contain septic tank chemicals, (such as sulphuric acid or lye), household chemicals and pharmaceuticals which can potentially interfere with biological processes or be contaminants in an output product. If this material is to be used it may be necessary to educate households regarding the placing of chemicals or other contaminants in septic tanks.
- It is potentially hazardous and presents health risks in management and handling.
- It has a high nutrient content with relatively high levels of Nitrogen and Phosphorus and so has potential value as a soil amendment.
- The use of soil amendment products derived from human faecal matter can present health and cultural issues which need to be managed.

### Green Waste

Green waste is currently separated for composting on great barrier. There are in the order of 130 tonnes per annum of green waste currently separately managed at Claris landfill. This also has notable seasonal variation as shown in the chart below.

Figure 3: Green Waste by Month

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It is worth noting that the seasonal peaks for green waste do not correspond to those for sludge. The green waste peaks are in autumn and to a lesser extent spring, while those for sludge correspond to the holiday season.

The key characteristics of green waste from a management perspective are:

- It has a relatively high carbon to nitrogen ration (30:1)\(^3\). This is considered ideal for most aerobic composting operations
- The woody fraction of green waste generally needs to be shredded to reduce the size of the material and enable it to decompose within standard residence times (3-6 months)
- Shredded green waste (if it is not too fine) helps to provide ‘structure’ within aerobic composting operations that enables air to reach all parts of the pile and prevent anaerobic conditions developing (which can lead to odours)
- While green waste is appropriate for aerobic composting it has a high lignin content (the woody fraction), which does not break down under anaerobic conditions. This means it is not ideal for anaerobic digestion, although it is used as a feedstock in ‘dry’ digestion processes where the leafy component is digested and the woody component acts as a bulking agent.

**Food waste**

There are an estimated 100 tonnes of food waste disposed of to landfill annually with approximately 2/3rds of this being from households and 1/3\(^{rd}\) from commercial sources.

Approximately \(\frac{3}{4}\) of households on great barrier indicate that they home compost.\(^4\)

**Figure 4: Methods of Waste Water Disposal Used by Great Barrier Households**

![Figure 4: Methods of Waste Water Disposal Used by Great Barrier Households](image)


However, it is not clear from the survey what proportion of households home compost food waste. Audits of collected household rubbish bags in September 2014 (winter season) and January 2015 (summer season) showed that food waste comprised 30.6% of

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the weight of the average kerbside bag in winter and 45% per cent in summer. This is consistent with permanent residents being active home composting food waste but holiday makers and boaties not being in a position to do so.

In addition, there are 18 food hospitality establishments on Great Barrier. There is no available data on how all these businesses managed their food wastes, although there are some businesses that divert it to beneficial use.

For the purposes of developing estimates of the quantities of food waste being disposed of we have assumed commercial wastes have a similar proportion of food waste compared to household waste.

**Figure 5: Food Waste by Month**

There are notable seasonal peaks for food waste in household and commercial waste around the Christmas/New Year period.

The key characteristics of food waste from a management perspective are:

- It has a low carbon to nitrogen ration (17:1). This means it would generally need to be mixed with a carbon source for most aerobic or anaerobic treatment processes to be effective.
- It has a low solids content (in the order of 20%). This makes it less suitable for aerobic composting (unless mixed with a bulking agent) or thermal processes, but well suited to anaerobic processes.

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6 [https://www.thebarrier.co.nz/DineOutGuide.htm](https://www.thebarrier.co.nz/DineOutGuide.htm) as of April 2018
7 [http://www.homecompostingmadeeasy.com/carbonnitrogenratio.html](http://www.homecompostingmadeeasy.com/carbonnitrogenratio.html)
• Food waste when separately collected can contain contaminants, such as plastic bags, packaging, cutlery etc. There therefore usually needs to be some form of monitoring and removal of contaminants
• Food waste can contain relatively high levels of salt (depending on the sources) which can be an issue when used to produce a soil amendment. This is particularly an issue with liquid digestate from anaerobic processes as the salt is concentrated in the liquid
• It has a high nutrient content with relatively high levels of Nitrogen and so has potential value as a soil amendment.

Energy Crops and Other Organics

While not common in New Zealand it is relatively common internationally for crops to be grown specifically to produce energy. Crops can be used as inputs to a number of processes including anaerobic digestion, ethanol or oil production, or thermal processes such as gasification or pyrolysis.

There are a wide range of types of crops that can be grown. Some examples include:
• Corn
• Grasses (Lucerne, clover, hay)
• Seed oils (Rapeseed [canola], linseed, sunflower etc.)
• Sugarbeet
• Grain crops

It is outside the scope of the current work to assess the suitability of these crops or other similar for growing on Great Barrier Island, the potential land requirements, yields etc. This would be necessary to evaluate the feasibility of energy crops in this context.

Other potential feedstocks for organic waste treatment processes include:
• Cardboard
• Untreated timber (e.g. pallets etc.)
• Animal carcasses
• Fish waste

While there is data on the quantity of separated cardboard (approximately 70 tonnes per annum) there is no available data on the quantities of other organic materials. Depending on the process ultimately chosen and feedstock requirements it may be worth investigating these and any other potential feedstock sources further. Additional feedstocks could provide additional volume or help to balance input requirements for a process (such as carbon/nitrogen ratio, moisture content and structure, seasonal variations etc.).

Technology Overview

The table below provides a summary of the key technology types that are likely to be appropriate in managing Great Barrier Island’s organic wastes.
<table>
<thead>
<tr>
<th>Technology</th>
<th>Description</th>
<th>Waste processing capabilities</th>
<th>Assessment of suitability for available feedstocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windrow/static pile composting</td>
<td>Material is composted in open air. Material is in large piles or rows and turned at specific intervals. Usually the simplest and lowest cost process.</td>
<td>Garden waste, bark, manures,</td>
<td>Generally, not suitable for food or sludges due to process control issues. Does not produce energy as an output.</td>
</tr>
<tr>
<td>Vermicomposting</td>
<td>In outdoor processes material is laid out in ‘beds’ approx. 0.5m high. They may be covered with cardboard mulch or old carpet etc. Can be a very simple and relatively low-cost process.</td>
<td>Almost any organic wastes, although cooked food waste, high protein wastes, biosolids and other organic sludges can result in odour problems. These can be resolved by adding bulking agents or covering.</td>
<td>Suitable for food and sludges with appropriate management, although product that contains human waste can usually not be used on land where food is grown for human consumption. Some green waste and or cardboard would likely be needed to help aeration and C/N ratios. Temperatures are relatively low so material does not reach 55°C necessary to kill pathogens. However, pathogen kill can be achieved by processing through the worm’s gut. A relatively large amount of space needed for the volume of material. Can be flexible to the quantities of feedstock – likely to work with seasonal variations as worms slow down in colder months. Does not produce energy as an output.</td>
</tr>
<tr>
<td>Static aerated windrow composting (covered)</td>
<td>Material is managed in large piles or windrows, that are covered to prevented odours and the ingress of moisture.</td>
<td>Garden waste, bark, manures, biosolids and other organic sludges, food wastes</td>
<td>Suitable for food and green waste and sludges but careful attention to ratios and process control is required. The technique requires at least 50% ‘bulking agent’, generally operated with around 20%</td>
</tr>
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<tr>
<td>In-vessel composting</td>
<td>Piles are aerated from underneath to maintain aerobic conditions.</td>
<td></td>
<td>Putrescible material to manage odours and avoid anaerobic conditions. Does not produce energy as an output.</td>
</tr>
<tr>
<td>In-vessel mechanical composting</td>
<td>This includes tunnel systems or compost bag type systems. The material is enclosed in some for and aerated. Enclosure enables good process control, (moisture, air, temperature), and odour control. Emissions are usually passed through a biofilter to reduce odour.</td>
<td>Garden waste, bark, manures, biosolids and other organic sludges, food wastes (requires approximately 50% ‘bulking agent’)</td>
<td>Highly suitable for a mix of putrescibles and green waste. Careful attention to ratios and process control is required. The technique requires at least 50% ‘bulking agent’, generally operated with around 20% putrescible material to manage odours and avoid anaerobic conditions. This type of system is relatively capital intensive but space efficient and with good process control is suited to more urban applications. Does not produce energy as an output.</td>
</tr>
<tr>
<td>Aerobic Digestion</td>
<td>Material is enclosed in a unit where it is turned continuously, which speeds up the process and improves control. Similar to in-vessel mechanical composting. Material is enclosed in a unit and turned continuously. The key feature is the addition of enzymes to accelerate the breakdown of sludges, food wastes, biosolids, chicken mortalities, and other processing wastes. Requires approximately 25% fine bulking agent (e.g. sawdust)</td>
<td>Sludges, food wastes, biosolids, chicken mortalities, and other processing wastes. Requires approximately 25% fine bulking agent (e.g. sawdust)</td>
<td>Highly suitable for food waste or sludges as can accept relatively high moisture content. Relatively low bulking agent requirement is an advantage. Relatively high capital cost but speedy throughput means units can be quite small. Does not produce energy as an output.</td>
</tr>
<tr>
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<tr>
<td>Anaerobic Digestion</td>
<td>Involves in-vessel decomposition without oxygen. Anaerobic digestion produces biogas (around 50-60% methane) which can be burned as an energy source, and a digestate which can be separated into a solid and liquid fraction. The digestate can be used as a soil amendment.</td>
<td>Food waste, sludges, biosolids, food processing wastes. Some ‘dry’ processes require bulking agent such as green waste.</td>
<td>Highly suitable for food waste and sludge as works best with high moisture content materials. Limited quantities of green waste are acceptable in ‘dry’ digestion processes. High Capex and process can be sensitive to feedstocks and contaminants.</td>
</tr>
<tr>
<td>Gasification &amp; Pyrolysis</td>
<td>Thermal processes which aim to produce a gas or oil to produce energy. Pyrolysis takes place in the absence of oxygen while gasification has limited oxygen. Pyrolysis also produces a ‘biochar’ (charcoal) which can be used as a soil amendment</td>
<td>Homogenous high carbon content organic wastes such as wood wastes, crop stalks etc. Best suited for waste streams with low waste content and low levels of contamination</td>
<td>Suitable for energy crops, or material such as tyres and wood wastes. Possible to be used for food and biosolids but high moisture content makes these streams less than ideal.</td>
</tr>
</tbody>
</table>
Assessment

Based on the available information there are a number of possible technology configurations that could be appropriate. Two of the most feasible options are presented in this section.

The key factors when considering processing options are that septic tank sludge has a high moisture content, and that there are not large quantities of potential bulking agent (like green or wood waste). This means that most aerobic processes like composting are not likely be suitable for initial processing. One option that can be considered (but would require more investigation) is using the sludge from the pits. This would have the advantages of smoothing out the peaks of material to provide a more regular input feed, and as the material would be more mature, it would present fewer issues in handling. If the pit material has settled and/or undergone evaporation it would have a higher solids content and may be suitable for processes such as vermicomposting. On the other hand, as the material would have further decomposed, the C:N ratio may be even lower.

Anaerobic Digestion

On the surface this is likely to be the best suited technology in terms of the available feedstocks. The main input is septic tank sludge, which it is assumed has a high moisture content. Some generic calculations were undertaken to give an idea of the possible scale of energy generation. Based on the methane generating potential of the available input streams (excluding any energy crops) an AD process could be expected to produce an average of up to 10kwh of energy per day. This would be enough to power 2-3 electric vehicles (depending on their usage)\(^8\).

There are a wide range of off the shelf technologies available internationally that could be appropriate. A few examples are provided in Appendix 1.

Pros:

- Well proven at small scale
- Off the shelf technologies available
- Likely to be well matched to available waste streams
- Can produce energy as well as digestate that can be used on non-food crops
- The crops grown with the digestate could be added to the feedstocks to increase energy generation and potentially smooth seasonal fluctuations (depending on crops used)
- The gas produced can either be used to generate electricity onsite or upgraded to vehicle fuel.

Cons:

- Not well suited to large fluctuations in input quantities and mixes. This could be an issue with the level of seasonal fluctuations of material (this may be able to be partially alleviated by using pit sludge instead of material direct from septic tanks)
- Septic tank sludge has a low carbon content and therefore does not produce much gas. It would require the addition of other higher carbon source material to maximise gas

\(^8\) It should be noted this is a highly theoretical calculation. A lot will depend on the technology chosen, the feedstock mix, and how it is managed. There could also be expected to large seasonal variations.
generation. Green waste added as part of a ‘dry’ digestion process could be appropriate but seasonal fluctuations may be an issue
- Can have quite high capital and maintenance costs

Aerobic Digestion or Vermicomposting paired with Pyrolysis

An alternative could be to process the pit sludge together with other organic waste streams through either an aerobic digestion process (greater process control, low space requirement) or vermicomposting process (lower cost, quality output). The output material could then be used to grow energy crops which could be processed through a technology such as Pyrolysis.

Pros:
- Vermicomposting is low capital cost and easy to establish
- Vermicomposting could be used on pit sludge and may be suitable for septic tank sludge
- Both vermicomposting and aerobic digestion are well suited to potential input streams
- Able to cope with reasonable fluctuations in input material
- Use of crops for output material would ensure a consistent quality of feedstock for energy generation processes.

Cons:
- Two-step process adds complexity
- Pyrolysis (or similar) is likely to be high capital cost
- Small scale pyrolysis plants not available off the shelf – would have to be designed for the situation. There is likely to be a high degree of risk attached to the technology
- The potential for growing energy crops on Great Barrier is untested and potential yields are unknown.

Next Steps

This report has provided a high-level overview of the potential to use Great Barrier Island waste feedstocks to produce energy as well as soil amendments. On the basis of this initial desktop study there would appear to be a number of options that would be worth investigating further.

The following further research is recommended to better inform decision making around the options:

- Determine the characteristics of the sludges from the pits and how this is managed, including testing it’s biogas potential
- Investigate the potential to grow energy crops. This would include land available, suitable crops and calculation of yield and timing of harvest
- Investigate the potential to collect catering wastes (and/or household food waste) for use in the process
- Determine potential quantities of other possible organic waste streams such as untreated timber, animal carcasses, fish wastes etc., and seasonal fluctuations

- Assess available space at the Claris landfill site and its suitability for different processes (in particular vermicomposting)
- Engage with a range of possible technology suppliers to determine their operating parameters and suitability for Great Barrier Island, including capital and operating costs, feedstocks, installation, servicing, maintenance, and operator requirements etc.
Appendix 1: Examples of ‘Off the Shelf’ AD Suppliers

**SEaB Energy**

https://seabenergy.com/products/anaerobic-digesters/

Muckbuster or Flexibuster containerised AD plants

**QUBE Renewables**

https://www.quberenewables.co.uk/bioqube

BioQube modular small scale anaerobic digesters. Container based

**BioFerm Energy Systems**

http://www.biofermenergy.com/anaerobic-digestion-technology/eucolino_small-scale-digester/

EUColino – Small-Scale Digester
Containerised

*Please note: the above examples are provided for information only. Their inclusion should not be taken as any form of endorsement or recommendation by Eunomia.*
3 July 2018

Reference: Response to Organic waste Recovery options for Great Barrier report by Eunomia

To Whom it May Concern

The Community Energy Network (CEN) has been asked to read and provide a response to the report; ‘Organic waste Recovery options for Great Barrier’ prepared by Eunomia. Emphasis of the response is on the potential value of the systems discussed with regards to the opportunities to support the full transition to low impact/carbon energy systems used on the island.

CEN is very supportive of the aspirational goal for Great Barrier to become a zero-waste island. In many respects this mirrors the highly effective effort in recent years for the community to also become resilient with regards to their use of energy. This has been done largely through using residential scale renewable and energy storage technology.

The potential solutions provided in the report discuss options where a near zero waste outcome and supporting a transition to a very low carbon community are a possibility. In my opinion this could represent a unique and potentially extremely valuable example of what a deeply resilient community could look like in New Zealand.

CEN supports the intent and direction of the report and would also welcome an opportunity to discuss how we could work with other groups and the Great Barrier community to support their move to a very low carbon intensive system. Furthermore, there is likely considerable value to communities on other islands and the mainland to hear the story of how Great Barrier has made/is making this transition. This opportunity may be something that could be explored in due course.

Best regards

Gareth Cartwright
Executive Officer, Community Energy Network
gareth@communityenergy.org.nz

People powered wellbeing, together
PO Box 648, Cambridge, 3420 | 027 655 8812 | www.communityenergy.org.nz
Voluntary asbestos inspections of community owned facilities

File No.: CP2018/22929

Te take mō te pūrongo / Purpose of the report
1. To approve local board funding for voluntary asbestos inspections of community owned facilities

Whakarāpopototanga matua / Executive summary
2. Asbestos is a naturally occurring mineral that takes the form of long thin fibres and fibre bundles. Asbestos can be used in items such as car brake pads, pipes, flooring materials and building construction products. Intact asbestos-containing material is not a risk merely by its presence. Potential health problems occur if asbestos fibres become airborne and can cause lung disease and cancer.

3. Regionally, the Community Facilities department is completing surveys of council owned buildings to ensure any asbestos-containing materials are managed in accordance with the Health and Safety at Work (Asbestos) Regulations 2016, WorkSafe New Zealand’s Approved Code of Practice and industry best practice.

4. There are 32 council owned buildings managed by Community Facilities on Aotea Great Barrier Island which will undergo testing to identify the presence of asbestos-containing materials. A team of two to three Asset Risk Assessment Programme (ARAP) staff members will carry out the Asbestos Management Survey inspections in February/March 2019.

5. The ARAP team can only carry out the asbestos inspections on council owned facilities. However, if community groups want to utilise the service of the contractors while on the island, they can arrange to pay for an inspection of their community owned facilities at the rate of $100 per hour. Three hours is an average time to carry out inspections.

6. At the local board workshop on Tuesday 23 October, discussion was held on a proposal that if any community groups wanted to utilise the services of the ARAP team then the local board would cover the full costs of the asbestos inspections.

7. Funding would be allocated from the Capital Grants budget line which is specifically for community owned facilities. There are no council owned facilities, such as sports facilities nor halls on the island, and this budget line exists to support community groups maintain or upgrade their own facilities.

8. The Strategic Broker will extend this voluntary offer to community groups who own and operate the 19 community facilities identified in the Great Barrier Island Community Facilities Review 2016 report and assist in setting up any site visits with the ARAP team.

Ngā tūtohunga / Recommendation
That the Great Barrier Local Board:

a) approve up to $6,000 of the Capital Grants budget for voluntary asbestos inspections of community owned facilities.
Ngā tāpirihanga / Attachments
There are no attachments for this report.

Ngā kaihaina / Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Jacqui Fyers – Senior Local Board Advisor Great Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authoriser</td>
<td>Helgard Wagener – Relationship Manager - Great Barrier and Waiheke</td>
</tr>
</tbody>
</table>
Te take mō te pūrongo / Purpose of the report
1. To provide the Aotea Great Barrier Local Board the opportunity to provide formal feedback on the proposed Regional Public Transport Plan.

Whakarāpopototanga matua / Executive summary
2. Auckland Transport is required to review its ten year Regional Public Transport Plan every three years. The plan describes the services that are integral to Auckland’s public transport network for the next 10-year period. This report requests the Aotea Great Barrier Local Board give feedback on the plan, with special emphasis on the following four focus areas:
   • Expanding and enhancing rapid and frequent networks
   • Improving customer access to public transport
   • Improving Māori responsiveness
   • Harnessing emerging technologies

Ngā tūtohunga / Recommendations
That the Great Barrier Local Board:
   a) provides the following feedback on the Regional Public Transport Plan focus areas of:
      i) Expanding and enhancing rapid and frequent networks
      ii) Improving customer access to public transport
      iii) Improving Māori responsiveness
      iv) Harnessing emerging technologies
   b) and provide additional feedback on local specific interests.

Horopaki / Context
3. The Regional Public Transport Plan (RPTP) is a requirement of the Land Transport Management Act. It sets out the changes to Auckland’s public transport. Transport is a key component of a city’s success. Auckland is growing and as more people live and visit here, the number of trips taken on our transport networks is increasing. The space available for transport networks is finite. This means that we need as many people as possible to travel using efficient forms of transport; such as walking, cycling and public transport. These alternative transport options take less space and are more environmentally sustainable than private motor vehicles. With less pressure on the road network there is more capacity available for critical vehicles that need the road, including road-based public transport, emergency services and freight.

Tātaritanga me ngā tohutohu / Analysis and advice
4. Attached is the summary document for the Regional Public Transport Plans. This document outlines the main changes proposed over the next ten years by focusing on four key areas:
Focus area one

Expanding and enhancing rapid and frequent networks

5. Planning an enhanced rapid transit network through four main city-shaping projects to dramatically increase the speed and coverage of the rapid transit network:
   - City Rail Link
   - City to Mangere Light Rail and Northwest Light Rail
   - SH20B upgrade and Puhinui Interchange
   - Eastern Busway.

6. Implementing improvements on key arterial routes to move more people. This will include bus priority, safety improvements and cycling and walking facilities. Increasing services on the rapid and frequent networks, with the aim to have services every 10 minutes during peak travel times. Using the rapid and frequent networks to help make great public spaces.

Focus area two

Improving customer access to public transport

7. Continuing to deliver improved wayfinding sign systems across the public transport network to make it easier for people to find their way across the network. Increasing and improving the walking and cycling and other choices for access to public transport services, focussing on improving safety. Changing park and ride facilities to meet public demand.

Focus area three

Improving Māori responsiveness

8. Partnering with mana whenua to trial services such as on-demand ride share connecting to marae, which are hard to access by conventional public transport. Ensuring te reo Māori audio announcements and signs for rapid transit stations (train and busway) and extending this across all public transport.

9. Applying Te Aranga Principles when designing major interchanges and stations, with future potential to apply in the planning and design of the Light Rail Transit projects, Puhinui upgrade and stormwater management. Securing opportunities for Māori and local community employment, training and business development when constructing major public transport projects.

Focus area four

Harnessing emerging technologies

10. Improving customer insights and data, and undertaking more thorough analytics of travel data to directly inform service improvements. Continuing to evolve AT mobile apps to meet increasing customer needs. Providing simpler and improved payment options for fares to make travel easier. Using new transport modes generated by new digital technology to supplement and complement existing services, increasing access. Ensuring we future proof for mobility-as-a-service models, which will change how people make travel choices.

11. The full text of the proposed Regional Public Transport Plan can be accessed through Auckland Transport’s website on www.at.govt.nz/rptp.
12. Public transport has an impact right across the Auckland Region and therefore impacts all local boards in some way. This report seeks feedback from local boards on the most appropriate enhancements to Auckland’s public transport over the next ten years.

**Tauākī whakaaweawe Māori / Māori impact statement**

13. The proposed Regional Public Transport Plan has a focus area of Improving Maori Responsiveness and includes initiatives such as: trialing new modes connecting marae with the public transport system, te reo announcements and signage across the public transport system and incorporating Te Aranga design principles into new facilities, such as bus and rail stations.

**Ngā ritenga ā-pūtea / Financial implications**

14. The report has no financial implications for local boards.

**Ngā raru tūpono / Risks**

15. The report has no direct risks for local boards. Each individual project has its own set of unique risks and these will be dealt with as these projects are developed and implemented.

**Ngā koringa ā-muri / Next steps**

16. In terms of what happens to the proposed plan.
   - Public consultation runs until December 14
   - Feedback will be analysed over mid to late January 2019
   - The draft plan will be amended
   - The final proposed plan will go to the Auckland Transport Board in February or March 2019.

**Ngā tāpirihanga / Attachments**

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
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<tbody>
<tr>
<td>A8</td>
<td>Regional Land Transport Plan summary document</td>
<td>133</td>
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**Ngā kaihaina / Signatories**

<table>
<thead>
<tr>
<th>Author</th>
<th>Stuart Knarston - Planning Projects Manager</th>
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<tbody>
<tr>
<td>Authorisers</td>
<td>Jonathan Anyon - Manager Elected Member Relationship Management team</td>
</tr>
<tr>
<td></td>
<td>Helgard Wagener – Relationship Manager - Great Barrier and Waiheke</td>
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</tbody>
</table>
WHAT IS THE RPTP AND WHY DO WE NEED IT?

A WEL-L USED PUBLIC TRANSPORT SYSTEM IS FUNDAMENTAL TO THE SUCCESS OF AUCKLAND. IT IS CRITICAL THAT WE HAVE A PLAN TO IDENTIFY PUBLIC TRANSPORT NEEDS AND OPPORTUNITIES, AND TO SET OUT THE SOLUTIONS.

The Regional Public Transport Plan (RPTP) is a requirement of the Land Transport Management Act. It sets out the changes to Auckland’s public transport system for a 10-year period. This document is a summary of the RPTP; for the full draft plan visit at.govt.nz/rtp

Transport is a key component of a city’s success. Auckland is growing and as more people live and visit here, the number of trips taken on our transport networks is increasing.

The space available for transport networks is finite. This means that we need as many people as possible to travel using efficient forms of transport, such as walking, cycling and public transport. These alternative transport options take less space and are more environmentally sustainable than private motor vehicles.

With less pressure on the road network there is more capacity available for critical vehicles that need the road, including road-based public transport, emergency services and freight.
HOW DOES THE RPTP FIT IN WITH OTHER PLANS?

The RPTP focuses on the planned public transport services and policies that guide the planning and operation of AT’s network.

The RPTP complements and follows on from other plans, including the recently completed Regional Land Transport Plan. It is consistent with the new Government Policy Statement on Land Transport (2018) and the Auckland Plan 2050, as well as AT’s Statement of Intent (2018-21).

Regional Public Transport Plan describes the services that are integral to Auckland’s public transport network for a 10-year period and is reviewed every three years.

60% OF PEOPLE WHO MADE SUBMISSIONS TO OUR RECENT REGIONAL LAND TRANSPORT PLAN SAID IT IS IMPORTANT TO INVEST IN PUBLIC TRANSPORT.
WHAT WE’VE DONE OVER THE LAST THREE YEARS

In line with the 2015 RTP, we’ve redesigned the public transport network to provide better customer service and delivered key changes including:

- New network with simpler, more frequent and better connected services.
- A fairer fare system, based around zones, supported by the smart AT HOP card, meaning customers are no longer penalised for transfers.
- New double decker buses across the network.
- New, improved wayfinding around major hubs: more real-time information displays and consistent bus branding.
- Parnell Station, Panmure Interchange, Otahuhu Interchange and Manukau Interchange; with the Interchanges incorporating Te Aranga Principles.
- Upgraded Pukekohe Station.
- New electric bus and train fleet with unaided accessible boarding.
- Built a new ferry terminal at Half Moon Bay and improved the Downtown Ferry Terminal.
- Created 52 new operator contracts, which have dramatically increased service kilometres and capacity.

Plus, we’ve started work on City Rail Link and Light Rail Transit projects.

THE RESULTS OF THESE CHANGES

INCREASED CUSTOMER SATISFACTION

Combined all public transport modes

CUSTOMER SATISFACTION HAS INCREASED ACROSS THE PUBLIC TRANSPORT NETWORK SINCE 2014.
INCREASED PUBLIC TRANSPORT USE

Over a decade of investment in the public transport system, has resulted in a rapid increase in public transport boardings* from 79 million in June 2015 to 92 million in June 2018. Customer satisfaction has also increased from 84% to 91% during this period.

This increase in patronage reflects the major investment Auckland Council has made over the past few years, through Central and Local Government. It also reflects Auckland Council’s focus on improving the frequency, reliability and improved overall customer experience.

Together, rapid and frequent services accounted for 90% increase in passengers over this period.

* When a person travels to their destination they may need to change modes of public transport or change to another service. Each time they change this is counted as a separate “boarding”. eg Sally travels from her home in Sandringham to work in Mt Wellington. To do this she catches a bus and then a train and then another bus. Sally’s journey is made up of three boardings.
THE CHALLENGES

OUR CHALLENGE IS TO ENCOURAGE PEOPLE TO USE PUBLIC TRANSPORT AS THEIR MAIN CHOICE OF TRAVEL.

The public transport network is now in a strong position to absorb future demand and shape Auckland’s future growth; however, there are a number of challenges:

- Increasing the public transport system’s contribution to overall travel
- Enabling safe, convenient customer access to public transport (in the first and last legs of a journey)
- Keeping pace with demand and providing capacity for customers
- Meeting unreliable customer travel times
- Achieving value for money for customers and funders
- Meeting the needs of diverse customers, including the transport disadvantaged
- Making the overall network sustainable
- Using innovation
- Serving customers in new growth areas
- Serving areas of low demand
- Creating safer streets.
OUR VISION FOR PUBLIC TRANSPORT

WE WANT TO PROVIDE AUCKLAND WITH SEAMLESS END-TO-END CUSTOMER JOURNEYS THAT ARE SAFE, ACCESSIBLE AND RELIABLE.

THIS PLAN SETS OUT HOW AT PROPOSES TO MEET THE CHALLENGES FOR THE NEXT 10 YEARS. CUSTOMERS ARE THE CENTRE OF OUR PLAN, UNDERPINNED BY FOUR FOCUS AREAS.

**FOCUS AREA 1**
Expanding and enhancing rapid and frequent networks
- more major improvements
- faster and more reliable travel
- more bus priority to reduce congestion.

**FOCUS AREA 2**
Improving customer access to public transport
- more signs and customer information
- safer walking and cycling connections
- better park and ride facilities.

**FOCUS AREA 3**
Improving Māori responsiveness
- PT announcements and signs in te reo Māori
- apply Te Aranga Principles to design
- employ Māori and procure local talent in transport projects.

**FOCUS AREA 4**
Harnessing emerging technologies
- analyse more data to inform how we provide services
- easier payment options
- easier journey planning and more app capabilities.
WHAT WE’RE DOING OVER THE NEXT THREE YEARS?
HIGHLIGHTS FROM THE RPTP

After the rapid changes since 2015, the next few years represent a period of consolidation. Construction of the four main rapid transit network projects is well underway.

Within the four focus areas, we are implementing a range of exciting initiatives that will continue to enhance customer experience. These are outlined in the table.

**FOCUS AREA 1: EXPANDING AND ENHANCING RAPID AND FREQUENT NETWORKS**

- Planning an enhanced rapid transit network through four main city-shaping projects to dramatically increase the speed and coverage of the rapid transit network:
  - City Rail Link
  - City to Mangere Light Rail and Northwest Light Rail
  - SH20B upgrade and Puhinui Interchange
  - Eastern Busway

- Implementing improvements on key arterial routes to move more people. This will include bus priority, safety improvements and cycling and walking facilities.

- Increasing services on the rapid and frequent networks, with the aim to have services every 10 minutes during peak travel times.

- Using the rapid and frequent networks to help make great public spaces.

**FOCUS AREA 2: IMPROVING CUSTOMER ACCESS TO PUBLIC TRANSPORT**

- Continuing to deliver improved wayfinding sign systems across the public transport network to make it easier for people to find their way across the network.

- Increasing and improving the walking and cycling and other choices for access to public transport services, focusing on improving safety.

- Changing park and ride facilities to meet public demand.
FOCUS AREA 3: IMPROVING MĀORI RESPONSIVENESS

Partnering with mana whenua to trial services such as on-demand ride share connecting to marae, which are hard to access by conventional public transport.

Ensuring te reo Māori audio announcements and signs for rapid transit stations (train and busway) and extending this across all public transport.

Applying To Aranga Principles when designing major interchanges and stations, with future potential to apply in the planning and design of the Light Rail Transit projects, Puhinui upgrade and stormwater management.

Securing opportunities for Māori and local community employment, training and business development when constructing major public transport projects.

FOCUS AREA 4: HARNESING EMERGING TECHNOLOGIES

Improving customer insights and data, and undertaking more thorough analytics of travel data to directly inform service improvements.

Continuing to evolve AT mobile apps to meet increasing customer needs.

Providing simpler and improved payment options for fares to make travel easier.

Using new transport modes generated by new digital technology to supplement and complement existing services, increasing access.

Ensuring we future proof for mobility-as-a-service models, which will change how people make travel choices.

In addition to the four focus areas we are also working to deliver:

**Improvements to ferry services**

This includes:

- increased services on some routes to meet growing demand
- improved timetable and fare integration between ferries and bus/train services to facilitate transfers
- Downtown Ferry Terminal upgrade
- planning options for the future evolution of the ferry system

**A low carbon transport future**

This includes:

- completing electrification of the rail network by 2024/25
- continuing low emissions bus trials and moving to purchase only zero emission buses from 2025
- investigating low emission ferries.

For more details on what we’re doing over the next three years, read the full draft Auckland Regional Public Transport Plan on our website at [at.govt.nz/rtp](http://at.govt.nz/rtp)
WE HAVE PLANNED TO SPEND $28 BILLION ON PUBLIC TRANSPORT OVER THE NEXT 10 YEARS. AROUND $17 BILLION WILL BE SPENT ON CAPITAL AND IT WILL TAKE $11 BILLION TO PAY FOR OPERATING COSTS AND TO RENEW OUR ASSETS.

Funding comes from several sources including central Government, fares and the new regional fuel tax (RFT).

Auckland’s public transport network will cost around

$28 BILLION over the next decade

$1.5 BILLION from regional fuel taxes will help fund these key projects

- Improved bus network across Auckland
  - more bus lanes
  - T2 and T3 transit lanes
  - signal pre-emption to increase overall speed and reliability of buses
  - new busway station at Rosedale.

- Better city centre bus infrastructure
  - more bus interchanges in Downtown
  - improved bus services along Wellesley Street.

- Better access to Auckland Airport
  - improved bus services from New Lynn, Mt Roskill, Onehunga and Botany to the airport
  - new bus/rail interchange at Puhinui.

- Eastern Busway
  - urban busway between Papakura and Botany
  - bus stations at Pakuranga and Botany
  - park and ride facilities at some bus stations.

- Improved train network
  - 20 more electric trains
  - new maintenance and storage facilities
  - City Rail Link.

- Improved ferry network
  - upgrade Downtown Ferry Terminal to hold more ferries and improve customer experience.

- Extra park and ride facilities in areas with little or no feeder buses
  - 1900 new parking spaces across Auckland.

- Light rail
  - a new mode of travel
  - city to Mangere line
  - city to Northwest line.
DID YOU KNOW THAT OVER HALF YOUR TRIP IS SUBSIDISED?

27% of a trip on public transport is funded by Auckland Council.

27% of a trip on public transport is funded by NZTA.

46% of a trip comes from Farebox revenue, that’s what a customer pays to travel on a bus, train or ferry.

AT’s INVESTMENT IN BUS SERVICES

<table>
<thead>
<tr>
<th>2016</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of buses operating in peak times</td>
<td>998</td>
</tr>
<tr>
<td>Number of kilometres travelled</td>
<td>44 million</td>
</tr>
<tr>
<td>Dollars spent</td>
<td>$257 million</td>
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</tbody>
</table>

*(subject to final cost of new network on Whakarewarewa)*
We’ll monitor our performance against a range of measures including:

- boardings per annum across all public transport modes (bus, train and ferry)
- proximity of the population to public transport services
- AT HOP card and AT app use
- Farebox Recovery ratio and cost per customer
- service reliability and punctuality
- customer satisfaction
- increased public transport patronage.
TALK TO US AT
A DROP-IN SESSION!

IF YOU HAVE ANY QUESTIONS ABOUT OUR PLAN FOR PUBLIC TRANSPORT,
COME AND TALK TO US.

TUESDAY 27 NOVEMBER:
4.30-6.30pm.
Takapuna War Memorial Hall, 7 The Strand, Takapuna.

SATURDAY 1 DECEMBER:
10am-12pm.
Manurewa Library, 7 Hill Road, Manurewa.

WEDNESDAY 5 DECEMBER:
5-7pm.
New Lynn Community Centre main hall, 45 Totara Avenue, New Lynn.

SATURDAY 8 DECEMBER:
10am-12pm.
Ellen Melville Centre, Betty Wark Room, 2 Freyberg Place, Auckland Central.

Public feedback is open until Friday 14 December 2018.
NEXT STEPS AND EXPECTED RESULTS

When public consultation for the draft RTP is complete, we will incorporate changes and publish the final version in early 2019. The RTP will give a clear roadmap to follow for the next three years and will help make sure we focus on our customers.

The RTP is AT's public transport vision and plan. There are a wide range of exciting things coming to Auckland, as we strive to make our integrated public transport network ready to meet the continuing population growth and changing needs of Aucklanders.
FEEDBACK FORM

What do you think about our plan?
We're keen to hear what you think about our draft Regional Public Transport Plan for 2018-2028. You can read and download the full plan from at.govt.nz/rtp.

How do I provide feedback?
- Go online to at.govt.nz/haveyoursay and fill in the online survey.
- Complete the free post feedback form on the next page.

If you have difficulty completing the forms, you can call us on (09) 355 3553 and our contact centre staff will fill in the feedback form with you over the phone.

What will we do with your feedback?
After the public consultation period closes, we will consider all feedback and use it to refine the plan.
We will publish the final RTP on our website in early 2019.
If you provide your contact details when you give us feedback, we will notify you when the plan is available.

Personal information
Name
Business/organisation
Street address
Suburb
Post code
Email
Phone

Providing personal details is optional. Providing your postal or email address ensures that we can contact you with updates to the project.
PRIVACY: AT is committed to protecting our customers' personal information.

1. What do you think of our approach to the four main focus areas?

FOCUS AREA 1:
Expanding and enhancing rapid and frequent networks

FOCUS AREA 3:
Improving passenger responsiveness

FOCUS AREA 2:
Improving customer access to public transport

FOCUS AREA 4:
Harnessing emerging technologies
2. What other factors do you think we should consider for the activities listed under each focus area?

3. Do you have any other comments about the draft RPTP?
Auckland Transport December 2018 update to the Great Barrier Local Board

File No.: CP2018/22015

Te take mō Te pūrongo / Purpose of the report
1. To provide an update to the Great Barrier Local Board on transport related matters in their area including the Local Board Transport Capital Fund (LBTCF).

Whakarāpopototanga matua / Executive summary
2. This report covers:
   a) general summary of operational projects and activities of interest to the board
   b) update on the board’s transport capital fund
   c) update on local board advocacy
   d) update on local board transport enquiries and
   e) other Auckland Transport news of interest to the board.

Te tūtohunga / Recommendation
That the Great Barrier Local Board:
   a) receive the Auckland Transport December 2018 update report.

Horopaki / Context
3. This report addresses transport related matters in the local board area and includes information on the status of the LBTCF.
4. Auckland Transport is responsible for much of Auckland’s transport services, excluding state highways and the railway network. It reports monthly to local boards, as set out in its Local Board Engagement Plan. This monthly reporting commitment acknowledges the important engagement role local boards play within and on behalf of their local communities.
5. The LBTCF is a ring-fenced capital budget controlled by local boards and delivered by Auckland Transport. Local boards can use this fund to deliver transport projects that they believe are important but are not part of Auckland Transport’s work programme. Criteria for projects are determined by the Governing Body and include that the project:
   • be safe
   • not impede network efficiency
   • be in the road corridor (although projects running through parks can be considered if there is a transport outcome).
Report on Auckland Transport projects and activities

6. Please see below for information on Auckland Transport’s activities:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Update</th>
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</thead>
<tbody>
<tr>
<td>Great Barrier Airfield Transfer</td>
<td>The Local Board has had an update from council staff about the airfields transfer.</td>
</tr>
<tr>
<td></td>
<td>Previous update:</td>
</tr>
<tr>
<td></td>
<td>The AT Board have supported the recommendation to transfer the Great Barrier Airfields from Auckland Council to Auckland Transport.</td>
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<tr>
<td></td>
<td>The process now is for Community Facilities to advise Council of this recommendation and get approval to engage with the Ministry of</td>
</tr>
<tr>
<td></td>
<td>Transport to commence legal transfer of the airport authority status. We understand that the council (Community Facilities and</td>
</tr>
<tr>
<td></td>
<td>Legal) intend to take this to a council committee meeting. Community Facilities will be providing an update to the Local Board on</td>
</tr>
<tr>
<td></td>
<td>this process.</td>
</tr>
<tr>
<td>Shoal Bay Wharf upgrade</td>
<td>No update this month, previous update:</td>
</tr>
<tr>
<td></td>
<td>Works were completed by the end of August. Divers will return in due course to wrap and install additional under-wharf cross</td>
</tr>
<tr>
<td></td>
<td>bracing.</td>
</tr>
<tr>
<td>Shoal Bay new dingy ramp and rack</td>
<td>No update this month, previous update:</td>
</tr>
<tr>
<td></td>
<td>Consent approved 10 September. Physical works planned to take place after Christmas. Auckland Stonemasons are not available to</td>
</tr>
<tr>
<td></td>
<td>undertake works prior to Christmas as originally planned.</td>
</tr>
<tr>
<td>Shoal Bay new mooring pile</td>
<td>No update this month, previous update:</td>
</tr>
<tr>
<td></td>
<td>Consent approved 7 September. AT’s wharf contractor is no longer on site, so installation will be undertaken in January/February</td>
</tr>
<tr>
<td></td>
<td>by contractor commissioned to undertake improvement works on the Glenfern Sanctuary wharf.</td>
</tr>
<tr>
<td>Cowshed Bridge</td>
<td>Update: Investigation still to be carried out.</td>
</tr>
<tr>
<td></td>
<td>Previous update: A Bailey Bridge has been installed to allow safe access underneath the original bridge. Our contractors will now</td>
</tr>
<tr>
<td></td>
<td>be able to determine if our original assessment of the damage and the necessary repairs is correct. If the damage is greater than</td>
</tr>
<tr>
<td></td>
<td>originally determined, it may be necessary for further investigation.</td>
</tr>
<tr>
<td>Reconfiguration of Intersection</td>
<td>It has not been possible to get an update in time for this report. A separate update will be sent to the Board directly.</td>
</tr>
<tr>
<td>of Whangaparapara / Gray Road</td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Update</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Karaka Bay Road</td>
<td>Potential new passing bays have been marked out and our contractor Downers has engaged to deliver these improvements. We’ll come back to the Board with more specific information, including timeframes, shortly.</td>
</tr>
<tr>
<td>Fish passage at Akapoua culvert / ford at Kaiaraara</td>
<td>No update this month. Previous update: Auckland Transport is looking into permanent structures that are fish friendly, such as the arched bridge design which the local board indicated would be preferred. However, there is no immediate funding to replace this temporary structure. Currently our asset management team is determining what the timeline around permanent replacement would be.</td>
</tr>
<tr>
<td>Auckland Transport Wharf H&amp;S Review</td>
<td>The new Operational Manual is substantially complete it’s just being reviewed by the Ferry Services team. Previous update: Auckland Transport is currently reviewing its wharf facilities and operations at Tryphena and Whangaparapara. Auckland Transport’s Facilities Operation Manager briefed the board on the progress of this review in August and confirmed that: • The Wharf Operator’s role will be expanded to include additional responsibilities, specifically around H&amp;S on the landside of the Wharf. • That the new Operating Plan for the wharf is nearly complete. • That we are working with stakeholders, like Sealink, to finalise details.</td>
</tr>
<tr>
<td>Puriri Bay Road</td>
<td>No update this month. Previous update: The seawall is being monitored. Consultants are working on designs for repairing the sections with storm damage. Work will proceed when the necessary consents and coastal consents are obtained.</td>
</tr>
</tbody>
</table>

### Tātaritanga me ngā tohutohu / Analysis and advice

**Local Board Transport Capital Fund**

1. As of the new electoral term Great Barrier Local Board had $328,104 in their Local Board Transport Capital Fund (LBTCF).

2. Following the proposal to increase the Local Board Transport Capital Fund, the allocation to the board has increased by $189,732 and is now $517,836.

3. From this the Board has committed:
   - $68,000 for a dust seal on Sandhills Road.
   - $20,000 for remediation of fish passages in the culverts on the island.
   - $350,196 for road sealing on Kaiaraara Road

This leaves $79,640 unallocated.
10. Auckland Transport has completed investigations into rough orders of costs for the following projects:
   - To provide a walkway on Whangaparapara Road from the Cross Road to the Hot Pool access, for a cost of $63,000
   - To complete the remaining sections of the Hector Sanderson from Claris Café to the Cross Roads for $287,624
   - Sealing of Puriri Bay Road for $409,450
   - Sealing of Whangaparapara Road for $852,425

   The Board asked if Auckland Transport would be able to contribute to any of the costs for these sealing projects and unfortunately at this point there is not the funding available to do so.

11. Auckland Transport has also been requested to investigate a rough order of cost for:
   - traffic calmers at Claris settlement
   - sealing of a portion of Puriri Bay Road.

12. Auckland Transport has also been requested to investigate into rough orders of costs for the following projects, but at the Board's request has suspended them to focus on other projects:
   - For solutions in the road corridor to address Claris shopping centre carparking safety and congestion issues.
   - Shoal Bay footpath (from Mulberry Grove School to Shoal Bay wharf).

13. Auckland Transport has determined a rough order of cost for Port Fitzroy traffic calmers as outlined by the Local Board for $48,000. Auckland Transport’s Road Safety team has agreed to fund this proposal, so it will not require Local Board funding.

Community Road Safety Budget
14. As presented to the Local Board Chairs at the November Chairs’ forum, a “community road safety” fund is being established for use by the Local Boards.
15. It is currently proposed to be $20m over two years. The funding distribution model is not confirmed yet at this point. It is proposed to be either follow the Local Board Funding Policy or the allocation might be on the number of deaths or serious injuries in Local Board areas.
16. It is expected that more information about this fund will be forthcoming in the New Year.

Ngā whakaaweawe ā-rohe me ngā tirohanga a Te poari ā-rohe / Local impacts and local board views
17. The proposed decision of receiving the report has no local, sub-regional or regional impacts.
18. Auckland Transport will attend a workshop on 4 December 2018 with the local board.

Traffic Control Committee resolutions
19. There were no Traffic Control Committee resolutions pertaining to this local board area.

Tauākī whakaaweawe Māori / Māori impact statement
20. The proposed decision of receiving the report has no impacts or opportunities for Māori. Any engagement with Māori, or consideration of impacts and opportunities, will be carried out on an individual project basis.

Ngā ritenga ā-pūtea / financial implications
21. The proposed decision of receiving the report has no financial implications.
Item 17

Ngā raru tūpono / Risks
22. The proposed decision of receiving the report has no risks. Auckland Transport has risk management strategies in place for all of their projects.

Ngā koringa ā-muri / Next steps
23. Auckland Transport will provide another update report to the local board next month.

Ngā tūpirihanga / Attachments
There are no attachments for this report.

Ngā kaihaina / Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Ben Halliwell, Elected Member Relationship Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorisers</td>
<td>Jonathan Anyon, Team Leader, Elected Member Relationship Management Team Helgard Wagener – Relationship Manager - Great Barrier and Waiheke</td>
</tr>
</tbody>
</table>
Environmental agency and community group reports

File No.: CP2018/22014

Te take mō te pūrongo / Purpose of the report
1. To provide an opportunity for Aotea Great Barrier community groups and environmental agencies with interest or role in the environment or the work of the Aotea Great Barrier Local Board, to have items considered as part of the board’s business meeting.

Whakarāpopototanga matua / Executive summary
2. The Environment Committee of the Aotea Great Barrier Local Board has been discontinued from the start of this electoral term 2016/2019. To continue with the tradition of open and more direct interaction between the board, local groups and others, the local board has extended an invitation to either speak at the board’s business meeting via Public Forum or put items forward and have reports included in the agenda.
3. Inclusion of items on the agenda is at the discretion of the Aotea Great Barrier Local Board Chairperson in discussion with the Aotea Great Barrier Local Board Relationship Manager to ensure the material is appropriate and will not create any issues. Any items submitted will be included under a cover report which will have the recommendation that “item xyz be noted or received”.

Te tūtohunga / Recommendation
That the Great Barrier Local Board:

a) note the following reports:
   i) Biosecurity local board general update October – November 2018
   ii) Biodiversity/biosecurity report October – November 2018

Ngā tāpirihanga / Attachments

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Biosecurity local board general update October - November 2018</td>
<td>157</td>
</tr>
<tr>
<td>B</td>
<td>Biodiversity/biosecurity report October - November 2018</td>
<td>161</td>
</tr>
</tbody>
</table>

Ngā kaihaina / Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Guia Nonoy - Democracy Advisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authoriser</td>
<td>Helgard Wagener – Relationship Manager - Great Barrier and Waiheke</td>
</tr>
</tbody>
</table>
Biosecurity Local Board General Update

Month/Year: 14th October to 14th November 2018

Officers name: Jeremy Warden

Hauraki Gulf Controlled Area - Great Barrier Island

Plague Skinks
Workshop on the 16th & 17th October including a site visits to Omanawa lane and Shoal Bay Wharf to look at site logistics with technical advisory group members.

Plague Skink Shoal Bay Wharf
Chickens (90) have now been shifted into CC3, the low-density cell. Baffles have been added to CC2 & CC3 above drainage outlets to catch leaf litter to prevent blockages.
The first chicken cell (CC1) is being trapped to measure the effectiveness of control by the chickens. Unfortunately a juvenile plague skink was captured on the 9th November. The lure trial cell (6) has had cards disappearing, which is thought to be due to rats being attracted to the lure. Cards will be pinned securely in place to help prevent this from happening.

Cell locations
The table below summarises different cell numbers, and a map showing their location. Note chicken cells have black borders on the map, trap only cells have no borders. Cells 4, 7, & 5 aren’t highlighted on map as they aren’t being used.

<table>
<thead>
<tr>
<th>Cell #</th>
<th>Purpose</th>
<th>Size Ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1st chicken cell</td>
<td>.145</td>
</tr>
<tr>
<td>2</td>
<td>1st trap only cell</td>
<td>.21</td>
</tr>
<tr>
<td>3</td>
<td>Chicken holding cell</td>
<td>.079</td>
</tr>
<tr>
<td>4</td>
<td>Unused cell on top ridge</td>
<td>.073</td>
</tr>
<tr>
<td>5</td>
<td>Unused cell on top ridge</td>
<td>.092</td>
</tr>
<tr>
<td>6</td>
<td>2nd trap only cell (lure trial site)</td>
<td>.133</td>
</tr>
<tr>
<td>7</td>
<td>2nd chicken cell – high density</td>
<td>.05</td>
</tr>
<tr>
<td>8</td>
<td>3rd chicken cell – low density</td>
<td>.13</td>
</tr>
<tr>
<td>9</td>
<td>3rd trap only cell</td>
<td>.033</td>
</tr>
</tbody>
</table>
Plague skinks Omanawa lane
The established plague skink site at Omanawa lane has had 6 trapping transects installed 100m away from the main capture site for delimitation purposes. Transects have received trapping with a single capture made to date 150m from the existing known site.

Argentine & Darwin’s ants
Oceanview Road
An additional 2ha was added to the above site when a satellite infestation was identified along the drain that runs toward the airfield during monitoring. This area has been treated with ground and bottle applications.
Sandhills Road
Ant activity during monitoring was quiet with only one area of concern detected at the south eastern end of the site. This has received a single treatment so far.
Masons Road
Ants detected and treated along a farm access track.
Gray Road
This site is undergoing monitoring with ants detected in areas on the northern side of the road. Hot dry conditions caused bait in bottles to dry within a short period of time. This meant the team had to revert back to the 4 hour monitoring regime in the open areas. This was ample time to lure ants to the bait.
Mohuna
100m² of gorse removed to facilitate monitoring and treatment of Darwin’s ants at the above site

Argentine ant and Plague Skink Surveillance
Plague Skinks
Surveillance trapping is currently underway at Claris club and surrounding properties, Moana view road and a large property within the Mulberry Grove road area.
Trapping at the high risk Shoal Bay Road property associated with recent building activities has been completed with no captures to report.
Argentine ants

The detection of ants at the northern end of the Ocean View site prompted surveillance to be carried out along airfield drains using baited bottles. No ants were detected in this operation.

Wharf and Airport Mustelid and Rodent Pest Surveillance (September)
- Port Fitzroy 85% Bait take, 2 x Kiores caught in DOC200, 0 x Wax tag = Rat
- Tryphena - 15% Bait take, 2 x Ship Rat caught in DOC200, 0 x Wax tag = Rat
- Whangaparapara - 65% bait take, 2 x Ship Rat in DOC200’s. 0 x Wax tag = Rat
- Okupu - 0% bait take. 0 x Rat caught in DOC200, 0 x wax tag = Rat
- Claris airfield environment - 11% bait take
- Claris residential - 2% bait take

Bait Stations at Transfer Sites (September)
- Southern Stations - Medlands 0%, Okupu 0%, Puriri bay 0%, Mulberry grove 0%
- Northern Stations - Motairehe 50%, Okewi 0% & Kawa 62%

Private Jetties & Boat Ramps

<table>
<thead>
<tr>
<th>Location</th>
<th>DOC200</th>
<th>Bait Station</th>
<th>Wax tag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yates</td>
<td>0 x Rat</td>
<td>50%</td>
<td>0</td>
</tr>
<tr>
<td>Jetty</td>
<td>0 x Kiores</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Pickards</td>
<td>0 x Kiores</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Gienfern</td>
<td>0 x Rat</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Whangapara Jetty</td>
<td>0 x Rat</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Okupu Boat Ramp</td>
<td>0 x Rat</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Mulberry Grove Boat Ramp</td>
<td>0 x Rat</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Puriri Bay Boat Ramp</td>
<td>0 x Rat</td>
<td>100%</td>
<td>0</td>
</tr>
</tbody>
</table>

Conclusion: No new species of pest animals detected, bait consumption low at all sites with the exception of Whangaparapara.

Weed Control
- Royal Fern - grid search Claris site and remove approx. 12 juvenile plants.
- Single Agave Americana plant treated on Okupu dunes

Dog Work

Great Mercury Island Dog Blitz
Rats, cats and mice were removed from Great Mercury in 2014 and with the island open for the public to visit ongoing biosecurity is needed to maintain the predator free status. Argentine ants are one of the remaining concerns occupying 100ha* of the Northern end of the island. The Department of Conservation are assisting the owners of the island to contain and control the infestation and are looking at recruiting and accommodating a number of volunteers over the summer for this work.
A team of Dog handlers with pest detection dogs covered 1800ha Ahuahu as well as the outer Mercury Islands carrying out surveillance for Argentine ant, mustelid, cats, rodents and plague skinks. Low incidence weeds were also recorded and the information passed on to ensure they are removed promptly.

Other topics
Meet with the Department of Conservation to discuss biosecurity programmes in order to gain maximum benefit from each other's pest management programmes.
Pest animals

Broken islands rodents

- No rodents were detected on the Grey group and outer islets
- Rat captures were high on the three larger islands:

<table>
<thead>
<tr>
<th>Island</th>
<th>Captures</th>
<th>Total traps</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rangihua</td>
<td>47</td>
<td>138</td>
<td>34%</td>
</tr>
<tr>
<td>Mahuki</td>
<td>14</td>
<td>40</td>
<td>35%</td>
</tr>
<tr>
<td>Little Mahuki</td>
<td>2</td>
<td>14</td>
<td>14.2%</td>
</tr>
<tr>
<td>Motu Taikō</td>
<td>6</td>
<td>10</td>
<td>60%</td>
</tr>
</tbody>
</table>

- A rodent management plan is being developed to manage the increasing rodent population observed on the broken islands e.g. Rangihua rodent captures 2015-1018 (Figure)

![Rangihua rat captures](image)

Plague skinks

Shoal Bay wharf control area

- One plague skink has been caught in the first trial chicken cell after two 80 day predation cycles.
- The outer delimitation line in association with the proposed fence is being trapped for 14 days each month.
- Heat trials are aimed to commence in December on a mainland site to save money (Location TBC).
- Two lure trials commencing including strawberry, mango and visual lures
- A cliff trial location has been selected scheduled to commence in January post fencing.
- A site at Gibbs Landing has been identified for a non-destructive dense vegetation trial. An archaeology assessment will be completed in mid-November to confirm the site.
Monthly report October-November 2018

Omanawa lane

- Transects (Red below) have been deployed at Omanawa lane to delimit the plague skink population.
- The transects have 50-100 traps each and two plague skinks have been caught over ten trap nights on the North-East Transect only.
- To date Plague skinks have only been detected on three properties.
- The population is est. to cover 4ha (min) at present.

- A pathways management plan for Barrier Building Supplies to mitigate the human mediated dispersal risk of plague skink from Omanawa lane is being developed.

Plague skink & Argentine ant surveillance

- Complete: Shoal Bay Road Property & Rosalie Bay Road property: No plague skinks were identified over 12 trap nights.
- Claris Club & Moana view properties are undergoing trapping: No plague skinks have been detected to date.

Biodiversity

Shore birds

- Fences have been erected in Medlands, Awana & Okupu beaches.
- A pair of oyster catches have nested in close proximity to dotterels in o,kupu (pig prints have been observed near the nest so a game camera has been set up to assess threats.
- A Caspian tern nest has been identified in Mulberry Grove beach.
Monthly report October-November 2018

- Social media educational post on the community page reached 50+ people and had 100% Positive feedback

Schools

- 6th November: Kaitoke School visit
- PowerPoint presentation on wading birds and dune ecosystems of Aotea and the threats that face our dotterel.
- The school kids then made dotterel protection posters for our beaches.
Monthly report October-November 2018

Do not go near the nest and don’t take your dogs or horses up there. Thank you.

Keep your dogs away from the birds!

And many more birds live here! Be careful of their nests!
Attachments B

Item 18
Wader education

- Wader walk and talk on Whangapoua spit was cancelled
- Social media educational post on the community page (below)

Hi,

To anyone that was planning on coming along to the wader walk and talk with John Ogden tomorrow up at Okiwi, we have had to cancel. Sorry for any inconvenience.

I encourage you all to head up north at high tide another time and look out for our migrant birds on the Whangapoua spit. The godwits, Golden plovers and maybe a whimbrel if you’re lucky 😊. These birds have just flown back from their breeding grounds in the arctic tundra so catch them while they are here.

Orchids

- Social media education: 100% Positive feedback
- Reach: 60+ people
Monthly report October-November 2018

Hi all, it’s orchid season 😊

This is a sun orchid, one of over forty orchid species found on Aotearoa. Please remember that if you see a native orchid, leave it be. Picking a single flower can equate to the potential loss of many plants. Flowers are unlikely to last once picked and transplanting is almost never successful. Take photos instead! I’d love to see some pictures of a brown beard orchid if any one spots one this spring.

Community

Events

Claris club market day

- Kowhai planting
- Seed germination education
- Information handouts of plague skink & Argentine ant identification

Pest coordinator

- Pest coordinator assistant is being advertised in the community
- Landowners have been approached with a fee for checking rat traps on large land parcels.
- Very few rats are being caught this month.
Monthly report October-November 2018

- Coordinating role with the drinking water and Dotterel workshops.
- Project is considering purchase of sensor camera/s for monitoring

More pork survey summary

- 26 respondents 100% were interested in counting morepork
- 21 people (80%) were very likely to participate in a count, (12%) were likely & (8%) were indifferent.
- The most popular months for counting morepork were November, December & January (96% of respondents could participate in these months).

Where are you interested in counting morepork on Great Barrier?

- Reasons people were interested in a morepork count:
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/17/2018</td>
<td>7:45 PM</td>
<td>Love all birds and am keen to know more about them as well as protect their habitats. (Would count them from Cape Barrier, this is not an option listed below)</td>
</tr>
<tr>
<td>10/17/2018</td>
<td>8:48 AM</td>
<td>I really like hearing them at night - gives me the impression my environment is environmentally friendly for them to survive</td>
</tr>
<tr>
<td>10/17/2018</td>
<td>6:59 AM</td>
<td>Yes! But am a bit concerned as there don’t seem to be many around Medlands where we live as in the past years.</td>
</tr>
<tr>
<td>10/16/2018</td>
<td>9:52 PM</td>
<td>They have disappeared from the North end of GBI</td>
</tr>
<tr>
<td>10/15/2018</td>
<td>9:00 AM</td>
<td>Always like hearing them though have only seen a couple</td>
</tr>
<tr>
<td>10/14/2018</td>
<td>4:28 PM</td>
<td>Because we have no knowledge of their status here and this would provide good baseline data.</td>
</tr>
<tr>
<td>10/12/2018</td>
<td>9:02 PM</td>
<td>Dark sky</td>
</tr>
<tr>
<td>10/12/2018</td>
<td>11:12 AM</td>
<td>Not hearing them like we used to.</td>
</tr>
<tr>
<td>10/12/2018</td>
<td>9:47 AM</td>
<td>Lure hearing them calls at dusk and during the night, Glassy NZ yelling.</td>
</tr>
<tr>
<td>10/12/2018</td>
<td>7:22 AM</td>
<td>Interested in the well being of all our native species</td>
</tr>
<tr>
<td>10/10/2018</td>
<td>19:07 AM</td>
<td>I am studying Environmental Science and love the nature here on Artes.</td>
</tr>
</tbody>
</table>
Monthly report October-November 2018

- We have two regular here most evenings.  
  10/1/2018 11:31 PM
- Bring back childhood memories having them.  
  10/1/2018 12:15 PM
- I just love hearing them at night very comforting.  
  10/1/2018 3:29 PM
- Because I love hearing these at night.  
  10/1/2018 8:54 PM
- I love all the different noises they make, would like to know what each noise means.  
  10/1/2018 9:40 PM
- Have quite a few around our place in the bush, hearing them most nights.  
  10/1/2018 4:10 PM
- I hear them a lot at my house, and am surprised that others don’t.  
  10/1/2018 4:27 PM
- Would like more native birds to thrive here.  
  10/1/2018 4:13 PM
- They are a very easy to hear part of the ecosystem.  
  10/1/2018 4:02 PM
- I love them, nothing better than the sound of birds calling at night.  
  10/1/2018 3:40 PM
- We have a few in our block and it would be great to track their numbers.  
  10/1/2018 3:46 PM
- Because they too often become victims of 2nd gen anticoagulant use.  
  10/1/2018 3:13 PM
- Great birds.  
  10/1/2018 3:15 PM
- Love the little things and their nightly song.  
  10/1/2018 3:15 PM
Other comments:

- Interested in learning more about monepork on Aotea.
  10/17/2018 8:40 AM

- Not being negative. Moneporks were prevalent in our area and in Pt Fitz, but around the time of the poison drops on Glenfern/ Kalkoura/Broken Islands disappeared first from Pt Fitz & then our area. Seldom heard now.
  10/16/2018 9:52 PM

- Keen to get involved by counting from my land at the top of the hill behind Katoia school rd. Can do it at any time of the year however would need a few weeks notice due to my commitments on the mainland though...
  10/16/2018 9:06 AM

- Be fun
  10/14/2018 4:20 PM

- Great idea to do this count. If it goes well the next could be maybe kottara. They seem to be down in numbers so far this spring.
  10/12/2018 9:47 AM

- I have at least 2 resident moneporks and their call at night is soothing
  10/12/2018 7:22 AM

- 2, maybe 3 calling to each other most nights over the last few weeks. Quite close to my house too.
  10/12/2018 12:27 AM

- Very interested to see where they are.
  10/11/2018 11:54 PM
Monthly report October-November | 2018

Meetings

- Biosecurity Group meeting
- Pest animal control group meeting
- Local Board environment update
- Plague skink Tactical Advisory Group
- Collaboration meeting with Great Barrier DOC staff
- Evaluation: Ecology vision facilitator
- Central/South biosecurity team meeting
- Community native plant nursery proposal

Next month: workshops/Events:

- Local Board environment update
- Lepidium survey Motu Mahuki
- Kawau Argentine ants
- Christmas biosecurity team workshop
- Great Barrier visit from Brian Shields, Liz Brooks & Andy Stein
- Bird aversion training for dogs
## Monthly report October-November 2018

<table>
<thead>
<tr>
<th>Non-Financial Performance Measures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Biosecurity RFS received</td>
<td>3</td>
</tr>
<tr>
<td>Number of Biosecurity RFS completed</td>
<td>3</td>
</tr>
</tbody>
</table>
Te take mō te pūrongo / Purpose of the report

1. To note the Aotea Great Barrier Local Board proceedings taken at the workshop held on 6 November, 13 November, 20 November and 27 November 2018.

Whakarāpopototanga matua / Executive summary

2. Under the current Standing Orders of the Great Barrier Local Board 12.1, workshops convened by the local board shall be closed to the public. However, the proceedings of every workshop shall record the names of members attending and a statement summarising the nature of the information received, and nature of matters discussed. No resolutions are passed, or decisions reached but are solely for the provision of information and discussion. This report attaches the workshop record for the period stated above.

Te tūtohunga / Recommendation

That the Great Barrier Local Board:

a) note the record of proceedings for the workshop held on the 6 November, 13 November, 20 November and 27 November 2018.

Ngā tāpirihanga / Attachments

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A0</td>
<td>Great Barrier Local Board Workshop Record - 6 November 2018</td>
<td>177</td>
</tr>
<tr>
<td>B0</td>
<td>Great Barrier Local Board Workshop Record - 13 November 2018</td>
<td>179</td>
</tr>
<tr>
<td>C0</td>
<td>Great Barrier Local Board Workshop Record - 20 November 2018</td>
<td>181</td>
</tr>
<tr>
<td>D0</td>
<td>Great Barrier Local Board Workshop Record - 27 November 2018</td>
<td>183</td>
</tr>
</tbody>
</table>

Ngā kaihaina / Signatories

| Author          | Guia Nonoy - Democracy Advisor                                      |
| Authoriser      | Helgard Wagener – Relationship Manager - Great Barrier and Waiheke |
### Great Barrier Local Board Workshop Record

Workshop record of the Great Barrier Local Board held at Great Barrier Local Board office, 81 Hector Sanderson Road, Claris, Great Barrier Island on Tuesday 6 November 2018 commencing at 9.10am.

**PRESENT**
- **Chairperson:** Izzy Fordham
- **Members:** Luke Coles, Jeff Cleave, Sue Daly
- **Apologies:** Shirley Johnson
- **Also present:** Helgard Wagener, Jacqui Fyers, Miriana Knox, Shanti Morgan, Jeremy Warden, Peter Brooks and Mark Purdie  
  By Skype: Jonathan Miles, Jestine Joseph, Rodney Klaassen, Katrina Morgan, Jody Morley, Kathy Cumming, Anna Bird, Gary Wilton, Pippa Sommerville and Guia Nonoy

<table>
<thead>
<tr>
<th>Workshop Item</th>
<th>Governance role</th>
<th>Summary of Discussions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Board member discussion</td>
<td>Keeping informed</td>
<td>Staff discussed the following:</td>
</tr>
</tbody>
</table>
| 2. Environment update                                                        | Keeping informed, Oversight and monitoring | a. Treasure Island Ambassador report  
  Jonathan Miles (via Skype)                                                    |                                | b. Biosecurity/Biodiversity monthly report  
  Shanti Morgan                                                                  |                                | c. Biosecurity Local Board General Update  
  Jeremy Warden                                                                  |                                |                                        |
| 3. Emergency water supply                                                    | Keeping informed, Oversight and monitoring | Staff discussed the emergency water supply project                                     |
| Peter Brooks                                                                  |                                |                                        |
| 4. Great Barrier Local Board 2019/2020 local board agreement and integrated work programme development | Local initiative / preparing for specific decisions, Setting direction | Discussion with the board and staff on the 2019/2020 local board agreement and work programme |
| Jacqui Fyers                                                                  |                                |                                        |
| Mark Purdie                                                                   |                                |                                        |
| Jestine Joseph (via Skype)                                                    |                                |                                        |
| Rodney Klaassen (via Skype)                                                   |                                |                                        |
| Katrina Morgan (via Skype)                                                    |                                |                                        |
| Jody Morley (via Skype)                                                       |                                |                                        |
| Miriana Knox                                                                  |                                |                                        |
| Kathy Cumming (via Skype)                                                     |                                |                                        |
| Anna Bird (via Skype)                                                         |                                |                                        |
| Gary Wilton (via Skype)                                                       |                                |                                        |
| Pippa Sommerville (via Skype)                                                 |                                |                                        |
| Guia Nonoy (via Skype)                                                        |                                |                                        |

The workshop concluded at 4.00pm.
Great Barrier Local Board Workshop Record

Workshop record of the Great Barrier Local Board held at Great Barrier Local Board office, 81 Hector Sanderson Road, Claris, Great Barrier Island on Tuesday 13 November 2018 commencing at 9.00am.

PRESENT
Chairperson: Izzy Fordham (by Skype from 11.00am)
Members: Jeff Cleave, Sue Daly (from 11.00am), Shirley Johnson (by Skype)
Apologies: Luke Coles
Also present: Helgard Wagener, Rodney Klaassen, Ron Johnson, Cushla Buchanan, Ben Halliwell, Richard La Ville, Ross Cunningham, Kathy Cumming
By Skype: Jacqui Fyres (from 11.00am), Fran Wilde, Katrina Morgan, Dilecka Senewiratne and Guia Nonoy

<table>
<thead>
<tr>
<th>Workshop Item</th>
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<th>Summary of Discussions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Remuneration Authority discussion with Local Board Members (by Skype for all elected members)</td>
<td>Keeping informed</td>
<td>Discussion with Fran Wilde, Local Board Services staff, Democracy Services staff and other elected members about remuneration for the next term.</td>
</tr>
<tr>
<td>Fran Wilde</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note: This item was attended by elected members from other local boards and staff from Local Board Services &amp; Democracy Services departments.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Community Facilities (CF) update</td>
<td>Keeping informed</td>
<td>Staff talked about the following items:</td>
</tr>
<tr>
<td>Rodney Klaassen</td>
<td>Oversight and monitoring</td>
<td>1. Community Leasing update</td>
</tr>
<tr>
<td>Katrina Morgan (by Skype)</td>
<td></td>
<td>2. Work programme update</td>
</tr>
<tr>
<td>Ron Johnson</td>
<td></td>
<td>• Claris Cemetery</td>
</tr>
<tr>
<td>Cushla Buchanan</td>
<td></td>
<td>• Windy Canyon</td>
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<tr>
<td></td>
<td></td>
<td>• Interpretive signage - stage two continuation</td>
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<tr>
<td></td>
<td></td>
<td>3. Operational Maintenance update</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Asbestos building inspections</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Memorial benches</td>
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<tr>
<td></td>
<td></td>
<td>• Mahi Tahi newsletter</td>
</tr>
<tr>
<td>Workshop Item</td>
<td>Governance role</td>
<td>Summary of Discussions</td>
</tr>
<tr>
<td>---------------------------------------</td>
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<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3. Auckland Transport update</td>
<td>Keeping informed</td>
<td>Discussions were about the following:</td>
</tr>
<tr>
<td>Ben Halliwell</td>
<td>Oversight and monitoring</td>
<td>1. Airport</td>
</tr>
<tr>
<td>Richard La Ville</td>
<td></td>
<td>2. Bore project</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Wayfinding signage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Transport capital fund</td>
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<tr>
<td></td>
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<td>5. Recreational pontoon</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Fish Passages</td>
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<td></td>
<td></td>
<td>7. Road safety</td>
</tr>
<tr>
<td>4. Introduction of new Arts &amp; Culture</td>
<td>Keeping informed</td>
<td>Staff talked through the following items:</td>
</tr>
<tr>
<td>Culture Advisory Manager</td>
<td></td>
<td>1. Meeting with Great Barrier Heritage &amp; Arts Village Trust</td>
</tr>
<tr>
<td>Ross Cunningham</td>
<td></td>
<td>2. Investment ideas</td>
</tr>
<tr>
<td>Attendee:</td>
<td></td>
<td>3. Local board priorities</td>
</tr>
<tr>
<td>Kathy Cumming</td>
<td></td>
<td>4. Promotion of Barrier art</td>
</tr>
<tr>
<td></td>
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<tr>
<td>5. New monthly reporting - Power</td>
<td>Keeping informed</td>
<td>Staff discussed the new monthly reporting service.</td>
</tr>
<tr>
<td>Business Intelligence</td>
<td></td>
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<tr>
<td>Dileeka Senewiratne (by Skype)</td>
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<tr>
<td>Attendees:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cushla Buchanan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guia Nonoy (by Skype)</td>
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</tbody>
</table>

The workshop concluded at 4.00pm.
Great Barrier Local Board Workshop Record

Workshop record of the Great Barrier Local Board held at Claris Conference Centre, 19 Whangaparapara Road, Claris, Great Barrier Island on Tuesday 20 November 2018 commencing at 8.30am.

**PRESENT**
- Chairperson: Izzy Fordham
- Members: Luke Coles (Skype), Jeff Cleave, Sue Daly, Shirley Johnson
- Also present: Helgard Wagener, Jacqui Fyers, Guia Nonoy, Dileeka Senewiratne
- By Skype: Hazel Durkin, Jenny Chilcott, Robert Walsh

<table>
<thead>
<tr>
<th>Workshop Item</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Waste solutions team update</td>
<td>Keeping informed</td>
<td>Discussion with the team was on the following:</td>
</tr>
<tr>
<td>Hazel Durkin</td>
<td></td>
<td>1. Tip Shop operation</td>
</tr>
<tr>
<td>Jenny Chilcott</td>
<td></td>
<td>2. Waste steering group report</td>
</tr>
<tr>
<td>Robert Walsh</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The workshop concluded at 10.00am.
Great Barrier Local Board Workshop Record

Workshop record of the Great Barrier Local Board held at Great Barrier Local Board office, 81 Hector Sanderson Road, Claris, Great Barrier Island on Tuesday 27 November 2018 commencing at 8.30am.

PRESENT
Chairperson: Izzy Fordham
Members: Luke Coles, Jeff Cleave (Skype), Sue Daly, Shirley Johnson
Councillor: Mike Lee
Also present: Helgard Wagener, Jacqui Fyers, Edward Siddle, Richard La Ville, Kathy Cumming, Julia Harker, Nikki Marchant-Ludlow, Nikki Brough, Rosie Stoney and Cushla Buchanan

By Skype: Mark Purdie, Paul Robinson, John Norman, Ruth Woodward, Natalia Tropotova

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Board member discussion</td>
<td>Keeping informed</td>
<td>Members provided an update on their respective areas of interests and other issues in the Great Barrier Local Board area.</td>
</tr>
<tr>
<td>2. Great Barrier Airfields – delegation to Auckland Transport update</td>
<td>Keeping informed</td>
<td>Discussion was on the content of the report being put before the Governing Body in December 2018 and to confirm the board’s support for the change proposed.</td>
</tr>
<tr>
<td>Edward Siddle</td>
<td>Oversight and monitoring</td>
<td>Councillor Lee gave an update on his portfolio and discussed other matters of relevance to the board and the island.</td>
</tr>
<tr>
<td>Richard La Ville</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Update with Councillor Lee</td>
<td>Keeping informed</td>
<td></td>
</tr>
<tr>
<td>4. LBA workshop 2: To discuss the local consultation content</td>
<td>Setting direction</td>
<td>Discussion was on the local consultation content for the local board agreement.</td>
</tr>
<tr>
<td>Jacqui Fyers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mark Purdie (Skype)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. ATEED update: revised delivery methods for local economic development</td>
<td>Keeping informed</td>
<td>Staff presented to the board the revised delivery methods of LED’s local board work programmes.</td>
</tr>
<tr>
<td>Paul Robinson (Skype)</td>
<td></td>
<td></td>
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<tr>
<td>John Norman (Skype)</td>
<td></td>
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<tr>
<td>Attendee: Kathy Cumming</td>
<td></td>
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</tr>
<tr>
<td>Workshop Item</td>
<td>Governance role</td>
<td>Summary of Discussions</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>----------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>6. Community Empowerment Unit update</td>
<td>Keeping informed and keeping informed and monitoring</td>
<td>Staff gave the board an update on current projects on the island.</td>
</tr>
<tr>
<td>Kathy Cumming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Draft Golf Facilities Investment Plan</td>
<td>Input to regional decision-making</td>
<td>Staff discussed the regional draft Golf Facilities Investment Plan.</td>
</tr>
<tr>
<td>Ruth Woodward (Skype)</td>
<td></td>
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</tr>
<tr>
<td>Natalia Tropotova (Skype)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Review of Cemeteries and Crematoria Bylaw 2014 (Bylaw) and Cemeteries and Crematoria Code of Practice 2014 (Code)</td>
<td>Input to regional decision-making</td>
<td>Staff discussed the statutory review of the bylaw and code of practice 2014.</td>
</tr>
<tr>
<td>Julia Harker</td>
<td></td>
<td></td>
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<tr>
<td>Nikki Marchant-Ludlow</td>
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<td></td>
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<tr>
<td>Nikki Brough</td>
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<tr>
<td>Rosie Stoney</td>
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</tr>
<tr>
<td><strong>Attendee:</strong> Cushla Buchanan</td>
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</tr>
</tbody>
</table>

The workshop concluded at 3.45pm.