### Meeting Minutes – Wastewater Treatment Plants Reference Group Meeting #6

**Project** | Wastewater Treatment Plant Upgrades | **From** | Darren de Klerk
---|---|---|---
**Subject** | Community Reference Group Meeting #6

**Venue/Date/Time** | CHBDC Council Offices (Council Chambers) 12 March 2019, 8:30am

**Present**
- Cr Ian Sharp (CHBDC Councillor)
- Cr David Tennent (CHBDC Councillor)
- Clint Deckard (Community)
- Michael Severinsen (Community)
- Tania Diack (HBRC)
- Malcolm Miller (HBRC)
- Etu Araipu (Grey Power and Community)
- Josh Lloyd (CHBDC)
- Darren de Klerk (CHBDC)
- John Crawford (BECA)
- Hamish Lowe (LEI)
- Simon White (Community, farmer)
- Marge Hape (Tai Whenua)

**Apologies**
- Haana Wilcox (Community)
- JB Smith
- Ricky Carnie
- Sarah Burgess (BECA)
- Karen Bothwell (CHBDC)
- Shane Kingston (CHBDC)

### Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter/ Facilitator</th>
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<tbody>
<tr>
<td>830-845am</td>
<td>Introductions</td>
<td>Darren de Klerk</td>
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<tr>
<td>845-900am</td>
<td>Recap on last meeting</td>
<td>Darren de Klerk</td>
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<tr>
<td>900-1000am</td>
<td>Evaluation criteria</td>
<td>John Crawford/ Hamish Lowe</td>
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<td>-variable criteria</td>
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<td>-weighting?</td>
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<td>1000-1015am</td>
<td>Affordability and external funding sources</td>
<td>Darren de Klerk</td>
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<td>1015-1030am</td>
<td>Meeting regional council requirements vs community aspirations</td>
<td>Darren de Klerk</td>
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<td>10:30-10:45</td>
<td>Morning tea</td>
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<td>1045-1100am</td>
<td>Land suitability</td>
<td>John Crawford/ Hamish Lowe</td>
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<td>1100-1200pm</td>
<td>Packages</td>
<td>John Crawford/ Hamish Lowe</td>
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<td>-preferred package</td>
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<td>-revised/revision to packages</td>
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<td>1200-1215pm</td>
<td>Next step(s)</td>
<td>Darren de Klerk</td>
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<td>12:15-Finish</td>
<td>Light lunch and finish</td>
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**Minutes:** Community Reference Group Meeting #6: 12th March 2019
Introductions

Recap on last meeting

Slides as presented by Hamish Lowe (LEI)

Work completed behind the scenes

- Funding Stream Options
- HBRC meeting and reporting
  - Clarify June report expectations
- Criteria development
- Package development
- Technical backing and feasibility
- Iwi engagement and involvement
- Overall Scope development
  - 45 pieces of individual work

Recap on last meeting

What we have learnt

- complex and inter-related
- Need to balance views

Survey results – this group is good gauge

Land use opportunities and limitations

Combined solutions and staging

Affordability

What discharge options are out there

Relative costs of land vs water options

- No to full water
- No to full land with council buying

How to decide – need criteria and score options against
Evaluation Criteria

<table>
<thead>
<tr>
<th>Pillar</th>
<th>Comment</th>
<th>Rank Overall</th>
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<tbody>
<tr>
<td>Environmental</td>
<td>Protection of river - minimise impact</td>
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<tr>
<td>Cultural</td>
<td>Recognise wastewater as a resource</td>
<td>2</td>
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<tr>
<td>Cultural</td>
<td>Not polluting environment</td>
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<td>Recreational</td>
<td>Community use, facilities, amenity value</td>
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<tr>
<td>Financial</td>
<td>Forward-looking futureproof investment</td>
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<td>Cultural</td>
<td>Maori cultural needs are met</td>
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<tr>
<td>Financial</td>
<td>Alternative funding models to ratepayer</td>
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<tr>
<td>Financial</td>
<td>Affordable</td>
<td>6</td>
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<tr>
<td>Environmental</td>
<td>High standards and compliance</td>
<td>6</td>
</tr>
<tr>
<td>Recreational</td>
<td>Safe for swimming, contact recreation</td>
<td>10</td>
</tr>
<tr>
<td>Recreational</td>
<td>Suitable for fishing/food gathering</td>
<td>10</td>
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</table>
Affordability and external funding sources

- Research undertaken to find out what other councils are doing;

- Government funds
  - Freshwater Improvement Funds
  - Provincial Growth Funds

- Project financing methods
  - Public Private Partnerships (PPP)
  - Design Build Operate (DBO)

- Community Funding Methods
  - Targeted rates
  - One off charges to non-connected users
  - Trade Waste/Industry Charges

Noted that Waipukurau receives significant proportion of its wastewater from trade waste.

Meeting Regional Council requirements vs community aspirations

HBRC requirements vs aspirations

We know there are periods of non-compliance of conditions
- Occasional high ammonia (short periods)
- Dissolved inorganic nitrogen (when expressed on annual average)

Current conditions written under old plan
- If written now PCIe may be different and potentially more compliance

Compliance would require potentially
- Slightly more treatment
- And/or some removal from the river

However, community aspiration is to get it all out of the river

Potential to be compliant may be $1M’s and not $10M’s

How much over and above compliance does community want to pay for aspirations?
John Crawford (Beca) described consent variation request previously made.

Malcolm Miller (HBRC) described the “whole of catchment” approach that the regional council is taking for assessing discharges against PC6 and requirement for progressive improvement. Suggests that CHBDC contribution will need to be assessed in light other discharges/land uses in the catchment. Work is still to be done by HBRC to determine the relative contribution from all users.

Cr Ian Sharp raised:
Have we quantified the impact of landfill leachate into Waipukurau ponds? and
Do we know the impact of removing the floating wetlands?

Darren de Klerk (CHBDC) indicated that we have the information available to quantify the leachate loading and impact.

John Crawford (Beca) suggested that removing the wetlands is likely to make the plants safer to manage, improve the toxic state of the discharge i.e. the discharge will switch from anaerobic to aerobic.

Land Suitability

What is suitable land for land application?

- Close – to what?
- Free draining, but not too free
- Cheap
- Willing user
- Few neighbours
- Productive crop
- Suitable size

Anything else?
Land suitability

- Many suitable areas are obvious
- Can use existing information to help with search

List of good ‘mapping information’?
- Drainage
- Permeability
- Soil depth (inc depth to groundwater)
- Slope
- Land use
- Nutrient uptake potential
- Flooding frequency
- Parcel size

- Can combine and if good x and good y then better than poor x and poor y
- Use GIS – computer generated maps that have ‘spatial’ information and can create rules between them.
- Produce a suitability map

Land suitability maps outlined within the presentation

Packages

Packages – Design Framework

Wastewater management is complex!!!!!!

Can break into components:
- community sewer reticulation,
- treatment
- reticulation
- storage
- discharged to the environment.

Options for multiple component groupings are divided into Packages
Packages – The Process

Guidance from last meeting:
- New item discharge during low flow
- Dry and wetland treatment
- $100% landeed to expensive
- Final storage

Develop Options for Components (toolbox of Options) → Develop Packages

Apply evaluation criteria → Apply timing/staging → Apply Options to Packages

Determine NPV → Apply scoring → Preferred Solution

Questions?

Packages – What are they

**Package A**
- Combine all three WWTPs: treat and land treat

**Package B**
- Separate upgrade and land treat

**Package C**
- Combine Waipawa/Waipukura; Otane separate

**Package D**
- Combine all three WWTP – land treat and if needed treat upgrade

Minutes: Community Reference Group Meeting #6: 12th March 2019
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<thead>
<tr>
<th></th>
<th>Treat</th>
<th>Storage</th>
<th>River</th>
<th>LD</th>
<th>LT</th>
<th>Stage</th>
<th>NPV</th>
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<td><em>300</em> ha</td>
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<tr>
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<td><em>300</em> m³</td>
<td><em>300</em> m³</td>
<td>Main-9</td>
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<td><em>150,000 m³</em></td>
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**Minutes**

**Cr David Tennent** raised:
Have we determined the impact of the flow regime change on Waipawa River due to the Ruataniwha Storage Project?

**Michael Severinsen (Community)** raised:
Concerned about the inclusion of options where there is still a significant wastewater discharge to River. Suggested the use of HBRC reserve at Walker Road, including the construction of a raised platform and flood protection.

**Monique Davidson (CEO, CHBDC)** provided guidance. Notes there is a need to have options as part of a long term plan. It is important to know costs and funding options to take to the community for consideration.

**Simon White (Community, Farmer)** noted that arable/pastoral farmers wouldn’t want wastewater for food and seed crops.
Notes that cropping/arable are efficient water users (less demand for extra water ~100-200 mm/year) while pastoral farmers are more inefficient (~400+ mm/year)
<table>
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<tr>
<th>Minutes</th>
<th>Treat</th>
<th>Storage</th>
<th>River</th>
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<tbody>
<tr>
<td>A</td>
<td>Combine all three WWTPs – treat and land treat</td>
<td>+C</td>
<td>*150,000 m³</td>
<td>*80,000 m³</td>
<td>*20,000 m³</td>
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<td>Separate upgrade and land treat</td>
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<td>C</td>
<td>Central &amp; storage options</td>
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<td>C</td>
<td>Combine all three WWTP – land treat and if needed treat</td>
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Group discussion of assessment of packages against evaluation criteria (form memo circulated prior to meeting).

Pros of centralised plant at Waipawa
- Central
- Few neighbours
- Good layout for incorporation of new/additional plant and/or significant upgrades.

Discuss weighting of criteria

Clint Deckard (community) would like to see an option with absolutely no discharge to river under any conditions. Use of:
- Wetland
- Storage
- Ongoing I&I reductions

David Tennent (Cr) raised: are there any issues with the Waipawa plant location for tangata whenua?

Marge Hape (Tai Whenua) thinks no, unless there are known wahi tapu.

From discussion of options an additional option is raised. John Crawford (Beca) and Hamish Lowe (LEI) describe that if separate plants are retained and upgraded to similar discharge quality as proposed for the combined plants.

Centralised discharge option e.g. land disposal at Ford Road and/or Walker Road is an option.
Minutes

Note that costs of conveying the treated wastewater may be too high for this option but, determine that it will be evaluated in more detail.

Which package is best?

**Costs**

- NPV – what is it
- CAPEX
- OPEX

NPV (net present value) accounts for the whole of life cost of an asset/scheme.

NPV example sheet shown to the group.

Noted that the operational cost of managing biosolids becomes significant for the upgrades treatment plant. Opportunity is to develop beneficial use options.

Upgrade proposed is likely to be in the $15.5M range for the combined option (plant upgrade only). Additional work on costs is underway.

Group agrees that the decision to combine plants or keep them separate will be informed by:

- Cost based
- Ability to expand for future capacity
- Development pressure on land around plants

Consideration is to be given to Otane and Waiapwa combined and Waipukurau separate.

Discuss staging. Group preference is for rapid development (within 10 y). Impact of staging is demonstrated by comparing A1 to A2/A3.

Discuss treatment level. Group preference is for “treatment level B” and this will be implemented prior to developing discharge.

**Darren de Klerk (CHBDC)** raises: what is the impact of river gallery/discharge cells on storage requirement. Note – no change
Ian Sharp (Cr) notes that the general perception from the community is that the treatment plants aren’t working and an upgrade will be essential to manage that perception.

Darren de Klerk (CHBDC) notes there is a similar perception from the regional council.

Move discharge from river to land disposal as soon as possible, using rapid infiltration type discharge as a replacement, particularly at low flows.

Land treatment is no longer favoured by the group.

For land disposal, group wants use of river accretion land (which is owned/managed by HBRC) to be discussed with regional council. Correct person to contact to be suggested by Malcolm Miller (HBRC).

Michael Severinsen (community) suggests also looking into private land around Walker Road.

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### Which package is best – key questions

**Concepts**
- Combined treatment plants?
- Stage over time?

**Is treatment upgrade needed?**
- What standard?
- Use/flexibility dependent?

**Can there be river discharge?**
- All flows
- Avoid below ½ median
- Avoid below median
- Only above 3 x median

**Land treatment**
- Deficit irrigation
- Non-deficit
- What land use
- Use HBRC land?

**Land disposal**
- All year (allowing for drainage)
- Part of year (no drainage)
Minutes

CENTRAL HAWKE’S BAY DISTRICT COUNCIL
28-32 Ruataniwha Street, PO Box 127, Waipawa 4240
T: (06) 857 8060, F: (06) 857 7179
E: info@chbdc.govt.nz
W: www.chbdc.govt.nz

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Which package is best?

- Can we apply a ranking?
- Are all criteria equal..... Should some count for more e.g. costs?
- Or do we have gut feel for what we want?
- Are there Packages you want us to modify?
- Are there Options you want us to consider/tweak?

Group identifies preferred packages for further investigation as:
- A2
- A3
- Variant with separate plants and combined discharge (B1/A2)

Need discussion with HBRC to reach an agreed position.

Brief discussion initiated by Malcolm regarding use of wastewater as biofuel. Darren notes consideration is being given to waste-to-energy options.

Next meeting
- 9th April 2019 at 9am.

Meeting closed at 12:00pm