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LAKES COUNCIL

Tarawera Sewerage Scheme

Presentation to Rotokākahi Board of Control

This presentation

- Introductions
- Overview of the project (including timeline)
- What steps have been put in place to protect Rotokākahi?
- He pātai

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Meet the team

- **Gina Rangi** – Interim CEO (6 years with RLC)
- **Stavros Michael** – Group Manager, Infrastructure & Environment (9 years with RLC)
- **Eric Cawte** – Manager – Infrastructure Networks Performance (39 years with RLC)
- **Gerhard Mostert** – Engineer's Representative (3 years with RLC)
- **Kahurangi White-Parsons** – Kaitohu Whakahono / Partnership Advisor (1 year with RLC)

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Overview

- We acknowledge Lake Tarawera, Rotokākahi and surrounding areas are taonga tuku iho
- We acknowledge that Rotokākahi is a private lake, and is held under the mana of the Rotokākahi Board of Control on behalf of the owners
- We acknowledge that human waste is abhorrent and offensive

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Overview: why build a wastewater network?

- Water quality in Lake Tarawera is deteriorating.
- Blue-green algal blooms have started occurring in the summer. The lake is reaching a tipping point.
- Long term solution - reduce the impact of land use
- The most effective thing we can do right now to protect Tarawera is to reticulate wastewater

Tarawera septic tanks also affect Rotokākahi. Septic tanks must be regularly emptied, and the waste is transported by truck to the Rotorua Wastewater Treatment Plant. Truck transportation risks include vehicle accident, operator error, and sewage leak from trucks.

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Overview - 2015 to 2017

Bay of Plenty Regional Council requires homes at Tarawera to remove septic tanks

First Cultural Impact Assessment identifies:

1. The highest level cultural impact is the ongoing degradation of Tarawera and its mauri.
2. The second level impact is the absence of Tūhourangi and Ngāti Rangitihi from Tarawera for 131 years and their desire to return to their ancestral home.
3. The third level impact is impact on sites of significance on the landscape, particularly in relation to urupā.
4. The fourth level of impact is the impact on tikanga associated with waste and its disposal.

Community Steering Group set up (Māori landowners, residents, iwi)

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Overview – 2018

Options developed:

1. On-site treatment at each property
2. A treatment plant at Tarawera
3. Low pressure grinder pumps + connect to Rotorua through the road
4. Low pressure grinder pumps + connect to Rotorua across Playne's Farm
5. STEP pumps + connect to Rotorua through the road
6. STEP pumps + connect to Rotorua across Playne's Farm

The Community Steering Group unanimously voted for option 3

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Why Option 3?

- Will ensure that all properties comply with BOPRC's regulations
- Lowest total cost for current and future homeowners
- Supports mana whenua aspirations to return to Tarawera
- Avoids wāhi tupuna sites
- Can be implemented quickly as resource consents not required
- The most effective option to protect the lakes

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Overview: 2019

Second Cultural impact Assessment recommendations:

- Immediate action to stop septic tanks leaching to Lake Tarawera.
- Assess the viability of an in-catchment treatment plant.
- Council must acknowledge tangata whenua as kaitiaki and engage in direct conversation with Tūhourangi, Ngāti Hinemihi and Ngāti Rangitihi on how to enabled their kaitiakitanga of Tarawera and the surrounding lands.
- Costs should be shared by the parties that created the issue. Alternatives considered for Marae and Papakāinga if they can meet the same standards.

The proposed Spencer Road – Tarawera Road pipeline route was more culturally acceptable because it avoided wāhi tupuna.

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Overview: 2020

RLC assessed an in-catchment treatment plant. The study finds it is not feasible because:

- No suitable land (soil/slopes, avoiding wahi tupuna, ecology areas etc)
- Resource consent
- Cost
- Significant delay (which will affect the health of the lake)

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Overview: 2021 to 2023

- Council agrees to option 3 and sets aside funding
- Community consultation with residents and Māori landowners at Tarawera
- Detailed design - 24 km of pressure mains, 3 pump stations, 446 LPG pumps at each home, 44kms of pipes connecting homes to the mains etc
- In 2023 direct consultation begins with Rotokākahi Board of Control regarding the pipe along the roadway

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What protections are proposed to protect Rotokākahi?

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Pipe installation

Directional drilling – minimal ground disturbance.

Continuous welding – strict quality control.

Conservative design – pipe strength higher than maximum pressures.

Pipes pressure tested after installation. Test pressure higher than operating pressure.

Installed 1m below road surface on uphill (inside) side of road. Road typically cut 2m below original ground.

Archaeological monitoring protocols in place.

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Roadway drilling

‘Directional drilling’ minimises disruption to the road surface.

CIA and Archaeological Report recommended that the risk of disturbing archaeological sites within existing road reserves is **low**.

Strict protocols are in place for:

- Mana whenua monitors for construction (RBOC can appoint their own monitor if this is an issue).
- Stop work immediately if anything is found.
- Mana whenua and Historic Places Trust notified if anything is found.

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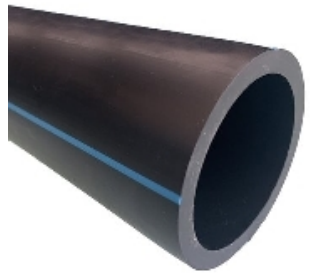
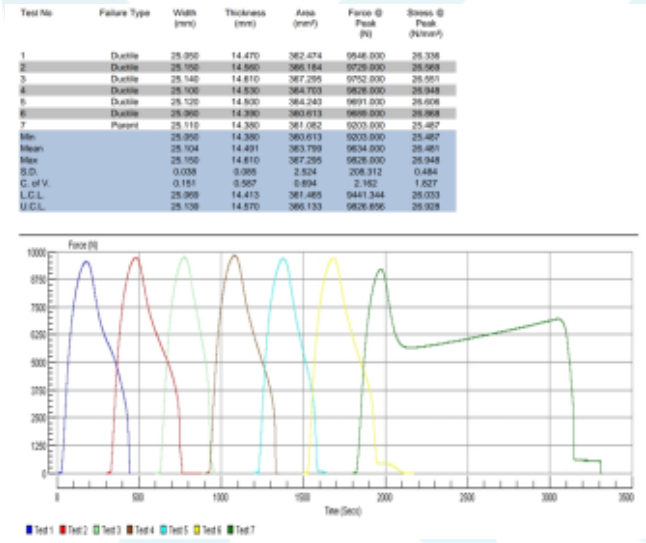
Polyethylene (PE) Pipe



- Very strong and flexible
- PE pipes are the best performing as evidenced in Christchurch earthquake
- Post-earthquake research recommends PE for seismic resilience
- Pipe and weld tests prove tensile strength of 8 tonnes.
- Used in Rotorua for water supply and sewer pressure mains for **15 years** – PE pipes have not failed in that time.



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Pipe installation cont.

25m is the closest point from pipe to lake

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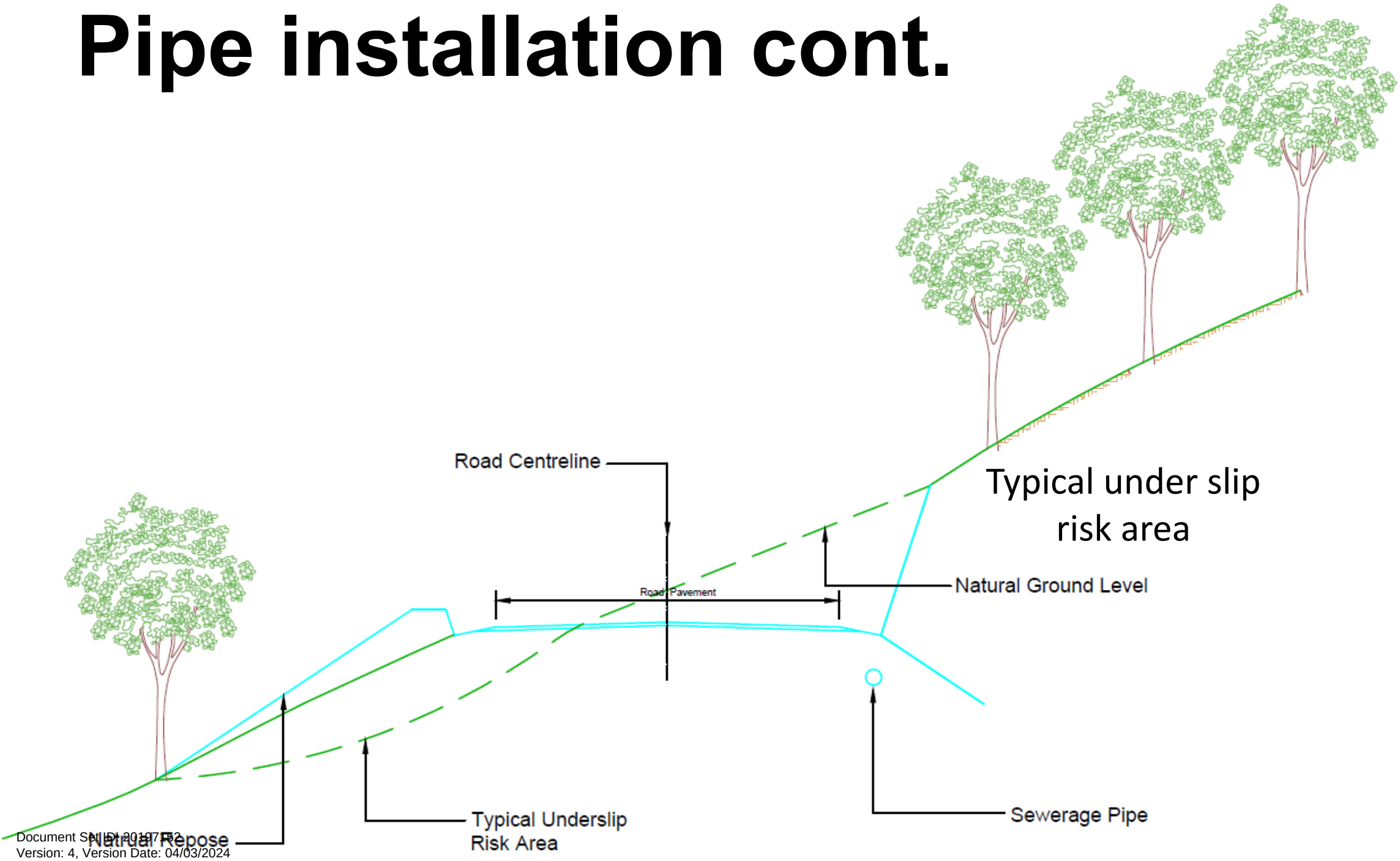
Pipe installation cont.



Monitoring & Maintenance

- 24/7 pressure monitoring of pipeline
- If there is a break, there will be an immediate loss of pressure. This automatically **shuts off** pumping to the pipeline
- Pipeline repairs are typically hours, not days
- Wastewater is stored at pump stations and on-property tanks until repairs complete
- Waste can be trucked away in an extended emergency
- 100-year service life with asset management to assess well before expected end of life.
- Annual wastewater replacement budget - $6 Million

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Conclusion

Without the scheme, human wastewater will continue to leach through groundwater into Lake Tarawera

Further delays will impact the health of Lake Tarawera

We thank you for your time today and allowing us to present to you, please share any questions, concerns or comments you may have.

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