



ARA POUTAMA AOTEAROA
DEPARTMENT OF CORRECTIONS

Stormwater Design at Whanganui Prison

A Rehabilitation Journey

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Karakia

Outline

- Physical setting
- Site and knowledge constraints
- Project objectives
- Journey with Tangata Whenua
- Project outcomes
- Lessons

Physical setting



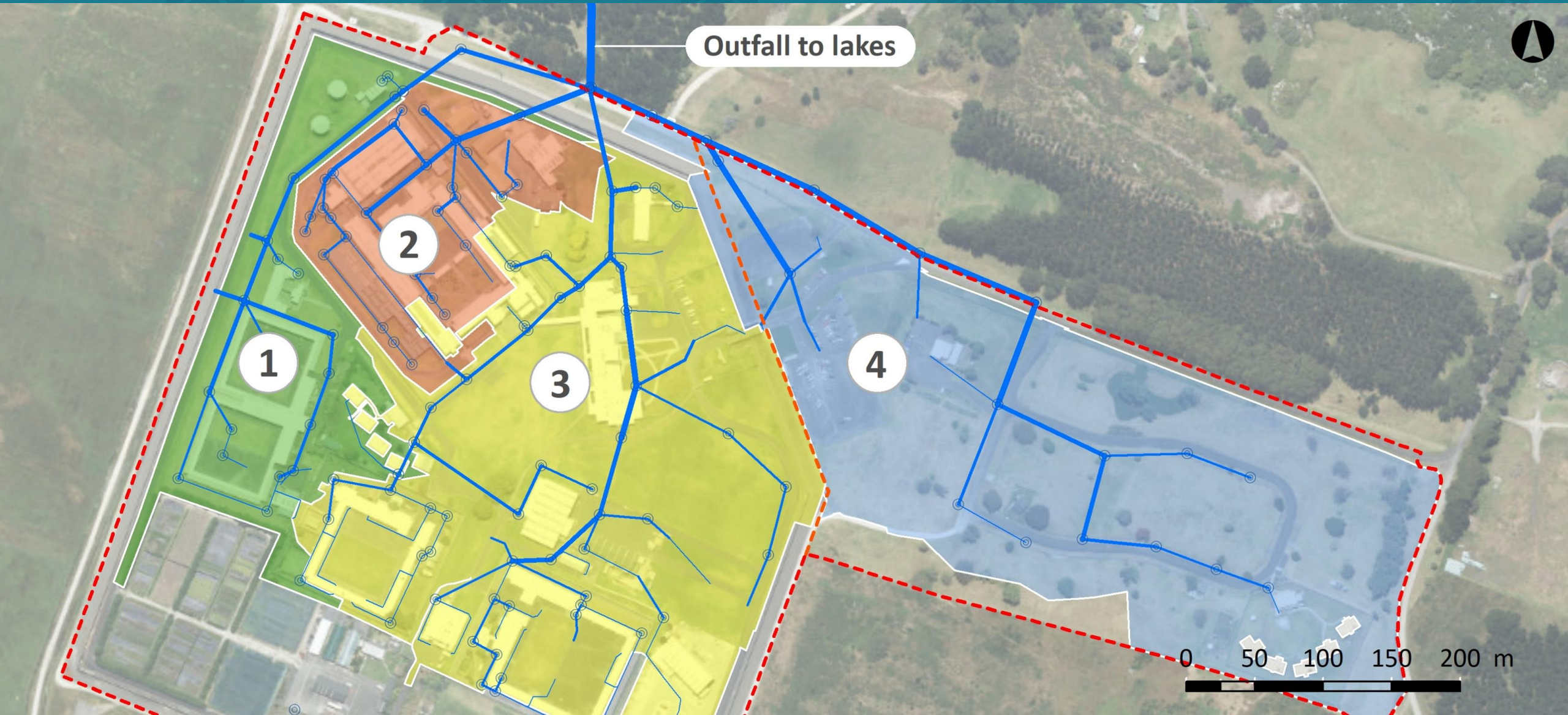
Whanganui Prison

Lake Pauri

*Lake
Wiritoa*

Photo: Bevan Conley

Physical setting – Stormwater sub-catchments



Site constraints

- Security constraints
 - Maintain lines of sight
 - Prevent hiding of contraband
- Hydraulic constraints
 - Shallow pipe network at flat grades
 - High groundwater levels and high winter rainfall
- Little known about catchment, e.g. groundwater quality and direction
- Limited range of treatment measures able to be retrofitted
- Steered initial treatment concept towards proprietary filters
- Constraints were challenged by Tangata Whenua

Project objectives

**Secure
discharge
consent**

Western science view
Fixated on outfall

**Early focus
on water
quality
targets**

Horizons Regional Council One Plan
Limits for metals and nutrients

**Health of
lakes at
forefront of
decisions**

Te Ao Māori world view
Reset project purpose

**Tangata
Whenua
values
included in
design**

Wider objectives
reflected in outcomes

Journey with Tangata Whenua – Timeline

Lodged application for discharge consent with treatment upgrade

Investigated alternative treatment and discharge options (c. \$2M)

Funding of Tangata Whenua SMEs

Consent granted. Decision appealed by Tangata Whenua

Consent granted. Collaboration to meet Tangata Whenua aspirations and Ara Poutama objectives

2013

2014

2015

2016

2017

2018

2019

2020

2021

2022

2023

2024

Engagement with council, community, and Tangata Whenua

Site investigations and remedial works (c. \$8M)

Consent publicly notified. Continued opposition to discharge to lakes

WPTWEG* formed to bring parties together

Mediation and preparation of Joint Engineering Memoranda

Construction of hybrid stormwater treatment system

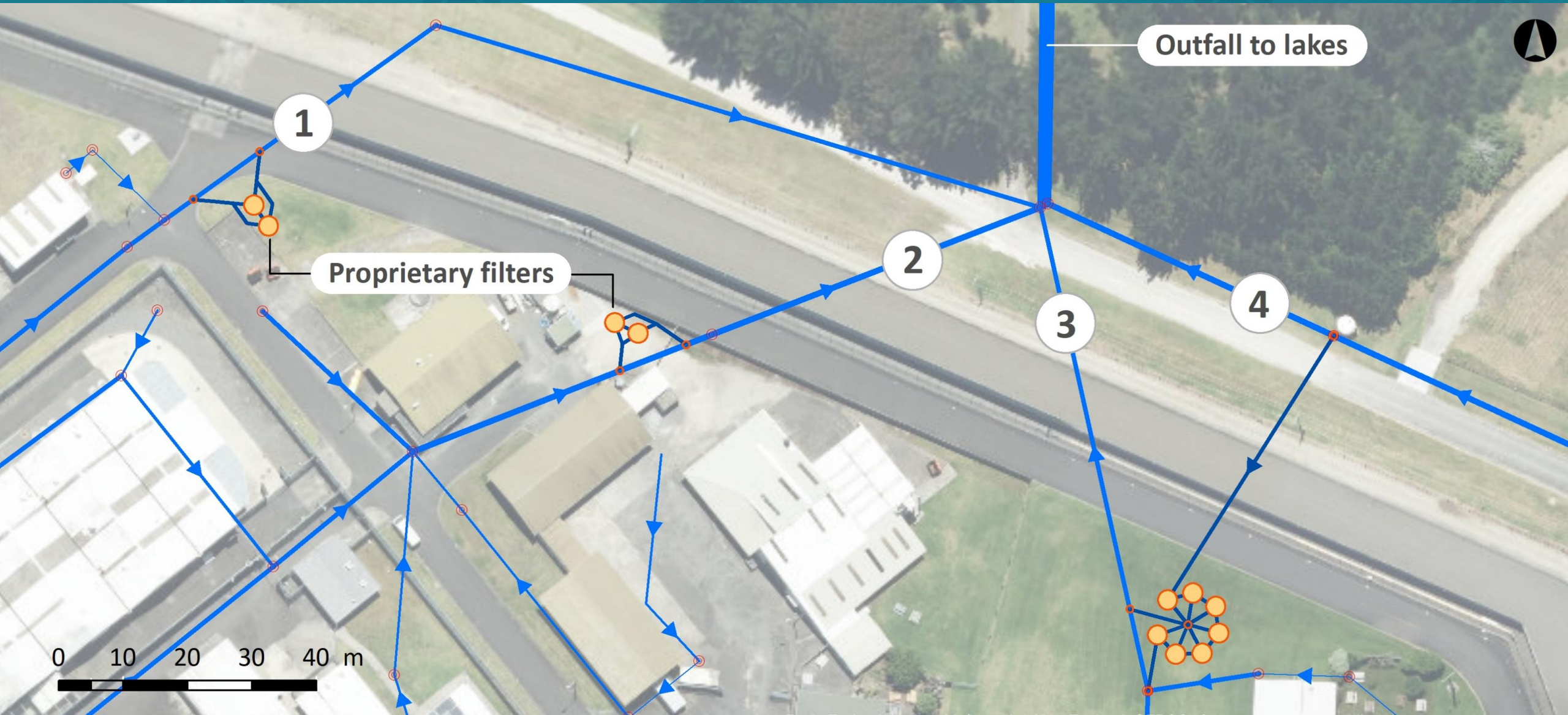
*Whanganui Prison Tangata Whenua Engagement Group

Journey with Tangata Whenua – Summary

- Commitment to improve stormwater management beyond status quo
- BPO* assessment concluded proprietary filters most appropriate and other options not viable
- Focus on water quality rather than volume or peak flow reduction and Te Ao Māori view
- Engagement with Tangata Whenua at time of consent application, but
 - a) Not broad enough
 - b) Consultation vs. meaningful approach
- Undertook extensive works to improve quality of discharge

*Best Practicable Option

Journey with Tangata Whenua – Initial treatment concept

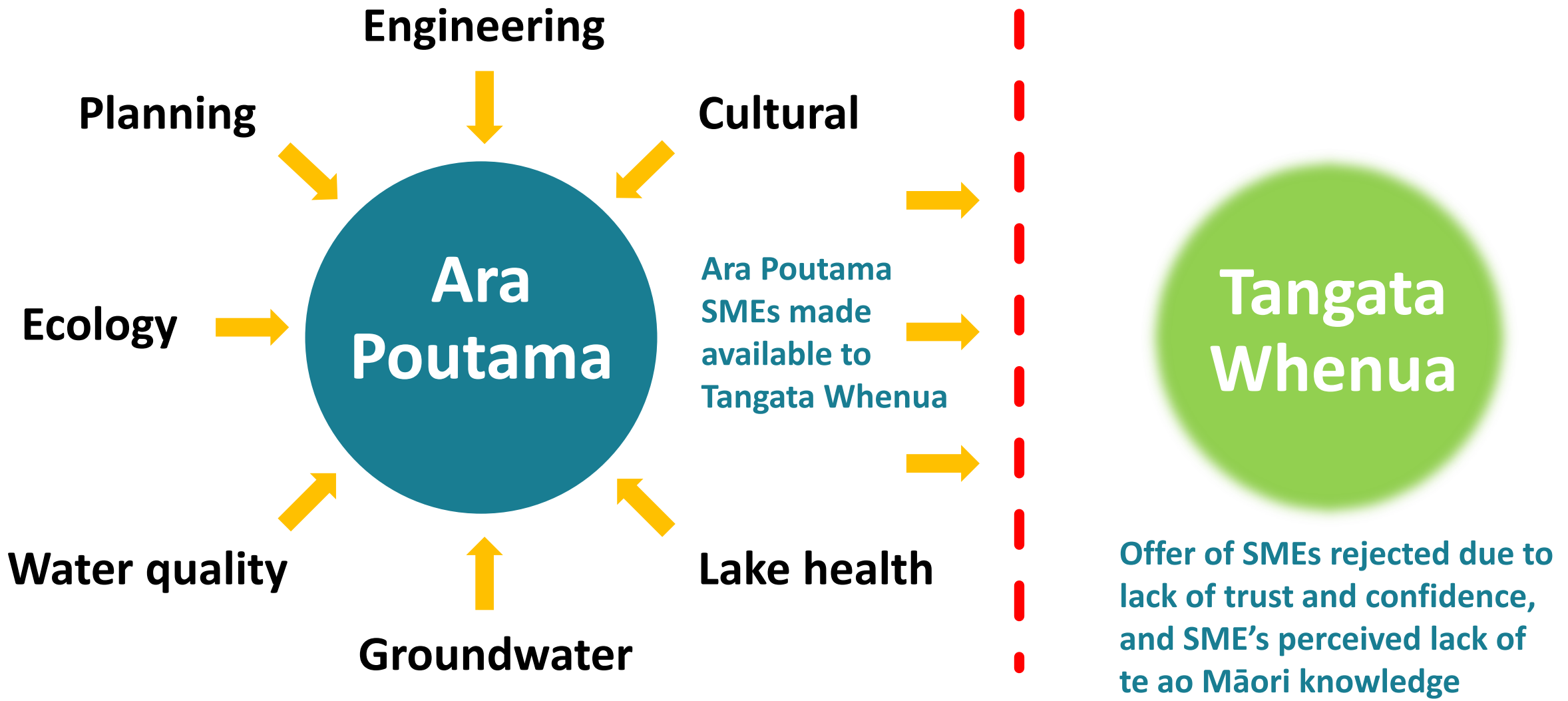


Journey with Tangata Whenua – Early Journey

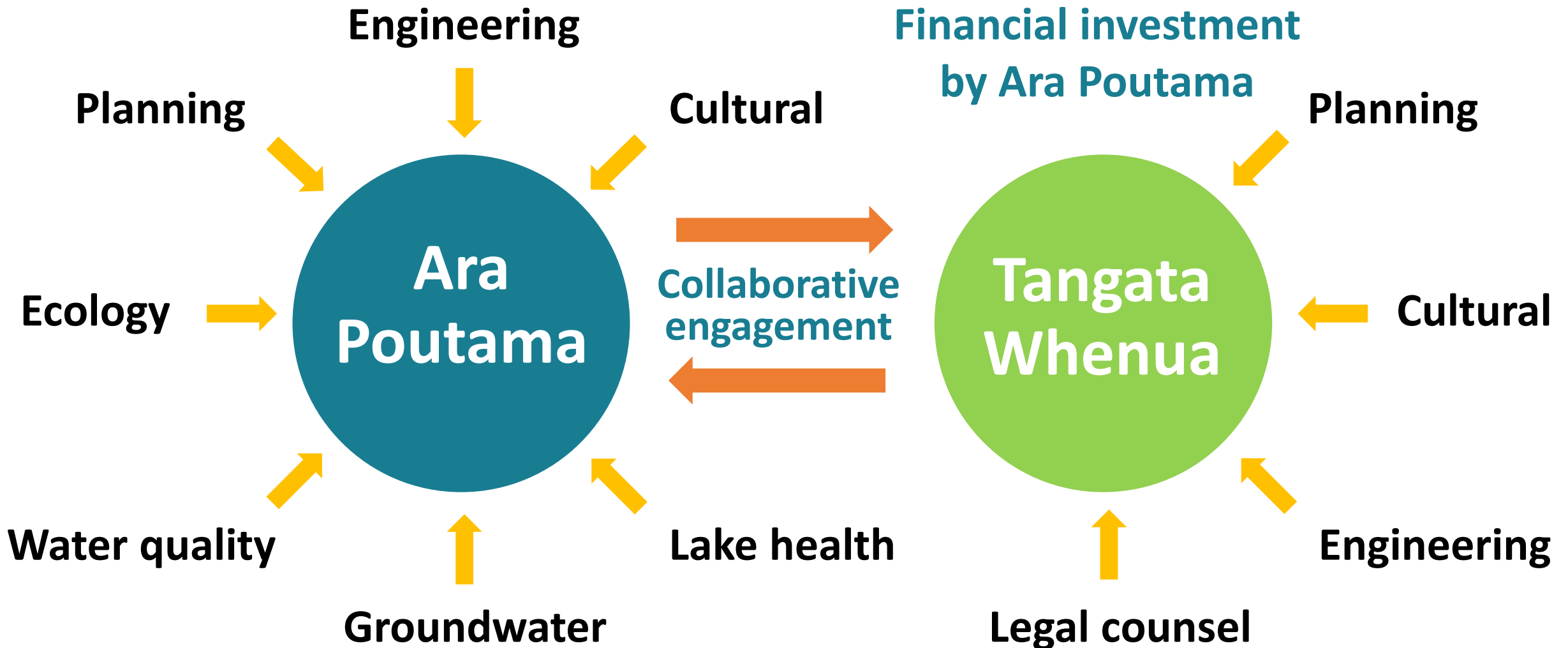
- BPO met water quality targets but focussed on regulatory compliance
- Formation of WPTWEG* to bring parties together
- Early tension and lack of trust
- Cultural and spiritual values needed to be shared by Tangata Whenua
- Ara Poutama prioritised engineering feasibility of design options

*Whanganui Prison Tangata Whenua Engagement Group

Journey with Tangata Whenua – Early-mid journey



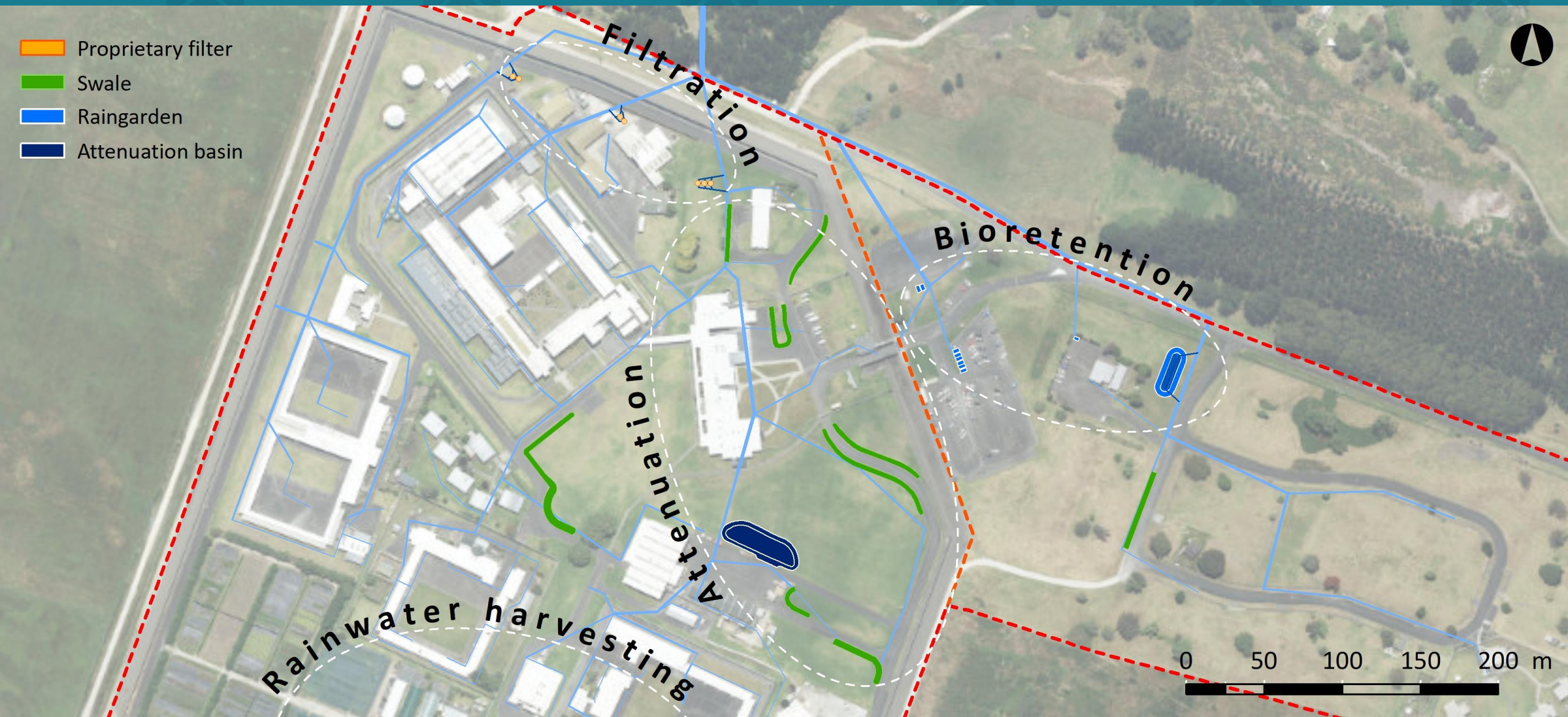
Journey with Tangata Whenua – Mid-current journey



Project outcomes – Consent conditions

- Conditions (27) aligned with principles of Te Mana o te Wai
- Prioritise lake health and respect mana of receiving waterbodies
- Engineered features within prison boundary (filters, swales, bioretention)
- Opportunities to mimic natural hydrology
- Rainwater harvesting and re-use for plant irrigation
- Other agreed outcomes that focus on lake health
 - Lake weed harvesting (nutrient removal)
 - Landscaping of wetland areas
 - Green outfall
 - Mātauranga Māori monitoring framework

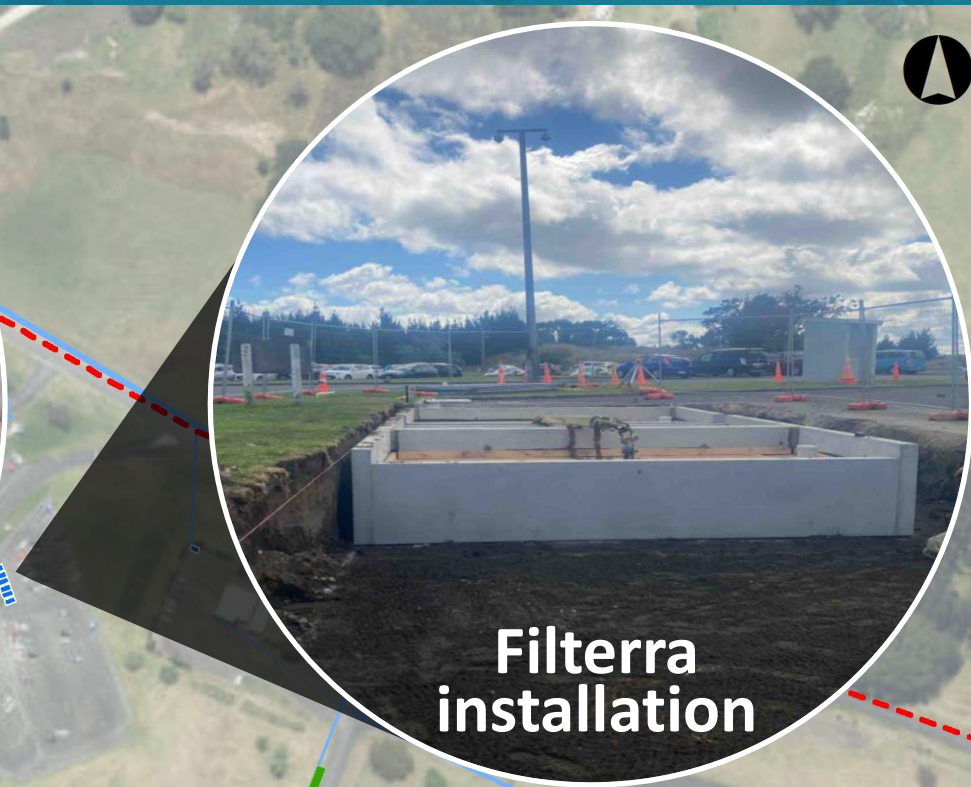
Project outcomes – Hybrid design



Project outcomes – Site blessing



Project outcomes – Construction



Lessons

- Traditional Tangata Whenua consultation model was not fit for purpose
- Investment in cultural outcomes
- Invest in Te Ao Māori/Technical experts to bridge communications gap
- Take Tangata Whenua on the journey right from the start

Kupu Whakamutunga

*Mā te wai, ka tika ai te huarahi
Through water, the journey flows*