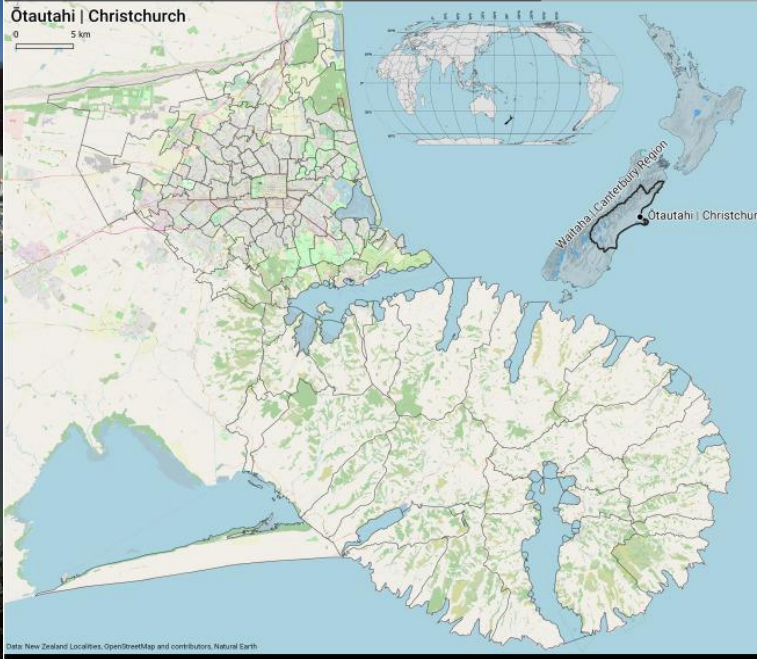


An aerial photograph of a wide, braided river system flowing through a valley. The river has multiple channels and large, light-colored sandbars. The surrounding landscape includes green agricultural fields, patches of forest, and steep, brownish mountains in the background under a blue sky with scattered white clouds.

A Framework for Māori Engagement by the Engineering Profession in Aotearoa New Zealand:

A Three Waters Case Study

Alex Hynds and Lucy Gray



Tēnā kotou katoa

Greetings to you all

Ko Aerana

Ireland

Te whakapaparanga mai

Is my ancestry

Engari,

However

Ko Whanganui a Tara te whenua tupu

Wellington is where I grew up

Ko Ōtautahi te kāinga

Christchurch is my home

**E mihi ana ngā tohu o nehe o Ōtautahi
e noho nei au**

*I recognise the ancestral and spiritual
landmarks of Christchurch where I live*

Ko Lucy toku ingoa

My name is Lucy

Kei roto au i te Water

I am in the water team

He Graduate Engineer ahau o WSP

I am a graduate engineer at WSP

**Nō reira, tēnā koutou, tēnā koutou,
tēnā koutou katoa**

Thus my acknowledgement to you all



Tēnā koutou katoa

Greetings

Ko Awherika ki Te Tonga, nō Tawhiti

South Africa, Tahiti

Te whakapaparanga mai

Is my ancestry

Engari

However

Ko Tamaki Makarau te whenua tupu

Auckland is where I grew up

Ko Ōtautahi te kāinga

Christchurch is my home

E mihi ana ngā tohu o nehe o Ōtautahi e noho nei au

I recognise the ancestral and spiritual landmarks of Christchurch where I live

Ko Alex toku ingoa

My name is Alex

Kei roto au i te Water

I am in the water team

He Graduate Engineer ahau o Jacobs

I am a graduate engineer at Jacobs

Nō reira, tēnā koutou, tēnā koutou, tēnā koutou katoa

Thus my acknowledgement to you all



Lucy Gray
BE (Hons) Natural Resources Engineering
WSP – Water Team



Alex Hynds
BE (Hons) Civil Engineering
Jacobs – Water Team

Challenges Facing Water Systems in NZ

Browns Bay, Auckland



Wellington



Havelock North



Anderson Park, Napier



Proposed Three Waters Reform

By clauses

View whole (2.3MB)

Versions and SOPs

Contents

Previous clause

Next clause

Tag clause

Remove

Previous hit

Hon Kieran McNulty

Water Services Legislation Bill

Government Bill

210—2

Contents

Commentary

Key

1Title

2Commencement

Part 1

Amendments to Water Services Entities Act 2022

3Principal Act

4Section 5 amended (Provisions on Te Tiriti o Waitangi/the Treaty of Waitangi)

5Section 6 amended (Interpretation)

6Section 11 amended (Water services entities established)

7Section 13 replaced (Functions of water services entities)

13Functions of water services entities

8Section 15 amended (Status of water services entities)

9Section 18 amended (Other things water services entities can do)

10Section 97 amended (Process for amending or replacing constitution)

11Section 118 amended (Obligation to maintain water services)

12Section 119 amended (Contracts relating to provision of water services)

WS WATER SERVICES PROGRAMME

[f](#) [in](#) [Q](#)

Kāinga

Home

Te Whakatika I ngā ratonga o ngā wai e toru

Improving the way we deliver water services for New Zealanders

Te Take mō te panonitanga

The case for change

He aha te pānga o ngā wai e toru ki a au?


How do these changes affect me?

He pitopito kōrero

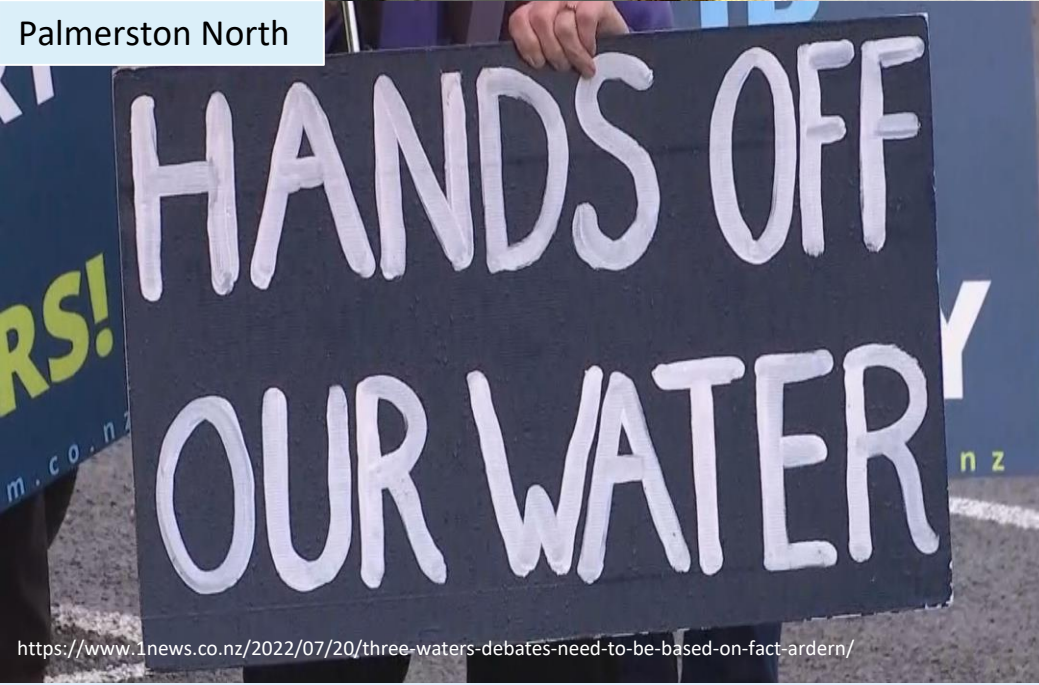
News

Water Services Programme

New Zealanders need safe, reliable and affordable water services



Media and Controversy



Stuff News

Three waters reform process 'not the New Zealand way'

Cherie Sivignon · 16:54, Sep 29 2021

https://www.stuff.co.nz/national/politics/126530074/three-waters-reform-process-not-the-new-zealand-way

Dr Eric Crampton
Dr Eric Crampton is Chief Economist at The New Zealand Initiative.

COMMENTS BY Ciaran Keogh, Jill Smith, Andrew Riddell

INFRASTRUCTURE

New Three Waters entities: Bad debt and a bad precedent

Water service entities will end up loading balance sheets with debt for projects that have nothing to do with core business, and everything to do with satisfying local political imperatives. Eric Crampton explains how taxpayers could wind up footing the bill.

Comment: Among the problems leading to the Government's proposed Three Waters reform process is the fact that local councils are often forced to take on debt for projects that have nothing to do with their core business, and everything to do with satisfying local political imperatives. Eric Crampton explains how taxpayers could wind up footing the bill.

https://www.newsroom.co.nz/eric-crampton-bad-debt-and-a-bad-precedent

Change in Government

National Party Leader, Christopher Luxon



<https://www.nz.co.nz/news/political/464935/national-pledges-to-repeal-three-waters-legislation-if-elected>

The New Plan

- Keep Taumata Arowai (Water Quality Regulator)
- Monitoring council investment in water infrastructure
- Ensure fair pricing/rates
- Set quality standards
- No co-governance over water

National's plan for Local Water Done Well

1. Repeal Three Waters and scrap the four co-governed mega-entities.
2. Restore council ownership and control.
3. Set strict rules for water quality and investment in infrastructure.
4. Ensure water services are financially sustainable.

LOCAL WATER DONE WELL



Māori Engagement Requirement

The Treaty of Waitangi



Treaty of Waitangi Principles



The Resource Management Act

Version as at 24 August 2023



Resource Management Act 1991

Public Act 1991 No 69
Date of assent 22 July 1991
Commencement see section 1(2)

Note

The Parliamentary Counsel Office has made editorial and format changes to this version using the powers under [subpart 2](#) of Part 3 of the Legislation Act 2019.

Note 4 at the end of this version provides a list of the amendments included in it.

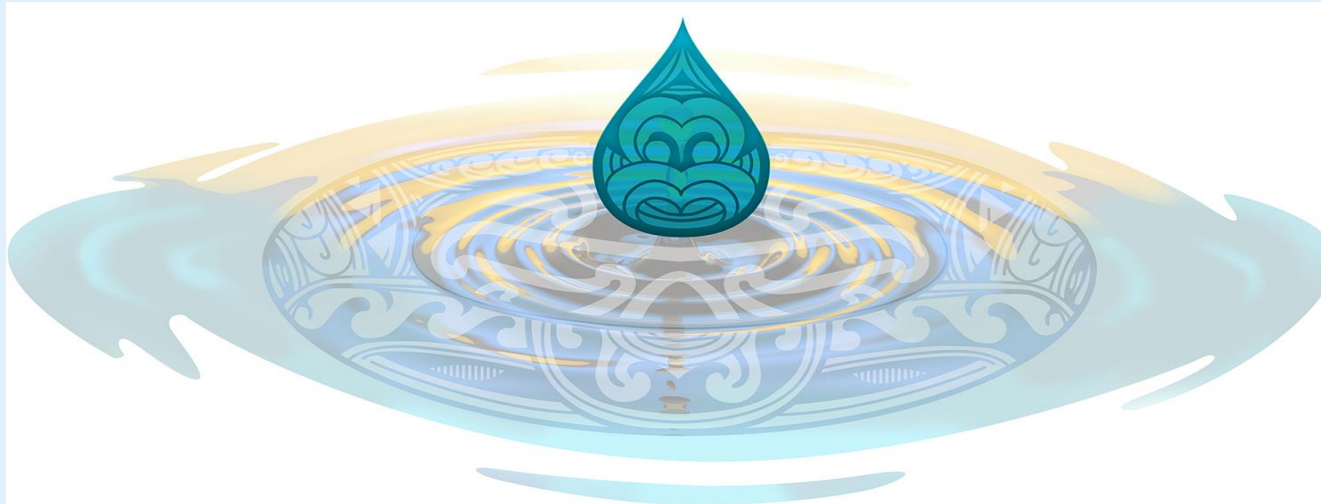
This Act is administered by the Ministry for the Environment.

Contents

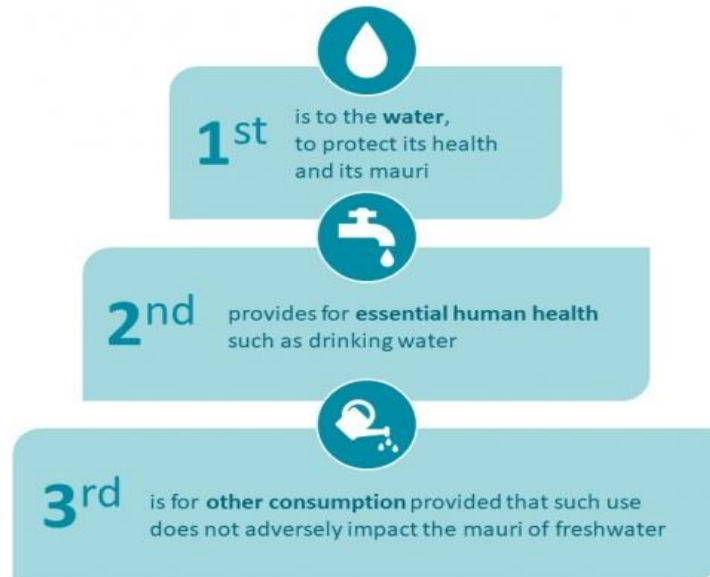
	Title
1	Short Title and commencement
	Part 1
	Interpretation and application
2	Interpretation
2AA	Definitions relating to notification
2AB	Meaning of public notice
2AC	Availability of documents

Te Mana o te Wai

"The Authority Of Water Itself"



OBLIGATIONS



Semi-structured Interviews

- Identify appropriate engagement practice for engineers

Table 1: Interview participants relevant information

Interview Participants	Relevant Information
Participant 1	Civil Engineer, involved in Māori advisory and Water NZ, Māori heritage
Participant 2	Water Resources Engineer
Participant 3	Environmental Engineer, Māori heritage
Participant 4	Natural Resources Engineer, Māori heritage
Participant 5	Chemical and Materials Water Engineer, Māori heritage
Participant 6	Ngāi Tahu freshwater group (Kura Taka Pini) representative, Māori heritage

Semi-structured Interviews

Table 2: Interview questions for engineering consultants

No.	Questions for Participants 1-5
1a	In your area of concern, what is typically involved in the process of consultation/engagement between the engineering profession and Māori? How do you prepare for and approach the consultation? What steps do you follow/what guidelines exist for you to use? What variation occurs within this process? What is the cause of variation e.g. scale, location, cost,... of the project?
1b	What challenges are there in engagement between the engineering profession and Māori?
1c	What experiences have you had/roles have you played in the three waters reforms as a practising engineer?
1d	If you have been involved in the three waters reforms, what engagement with Māori have you had or facilitated?
1e	What are the direct benefits of successful iwi engagement to major engineering projects (such as three waters infrastructure)?
1f	What do you see as top priorities for the three waters reforms?
1g	In your work in the Te Mana o te Wai space, had you had a role in educating colleagues and/or the wider profession about engagement or Te Ao Māori?
1h	What is the role of institutions (such as the universities and professional bodies e.g. Water New Zealand) in ensuring engineers are appropriately knowledgeable and prepared to work with mana whenua in water governance? How could this be improved?

Table 3: Interview questions for Ngāi Tahu representative

No.	Questions for Participant 6
2a	As mana whenua, please provide an overview of your historical engagement with entities such as Christchurch City Council and Environment Canterbury prior to the proposed three waters reforms.
2b	When did you become aware of the proposed three waters reforms, how were you approached initially, and by whom? Did the initial approaches and overall engagement process conform to your expectations around tikanga? If not, how could this have been improved?
2c	What is your perspective on iwi inclusion in governance and decision-making in this context? What are the shortcomings and how could these be improved?
2d	How have your approaches to/values on water management (e.g. Te Mana o te Wai) influenced your local/regional three waters reforms engagement?
2e	With Ngāi Tahu/Ngāi Tūāhuriri involvement in governance, how might that impact infrastructure asset management processes?
2f	What do engineers need to know/understand about mana whenua co-governance in the three waters context?
2g	What is the role of institutions (such as the universities and professional bodies e.g. Water New Zealand) in ensuring engineers are appropriately knowledgeable and prepared to work with mana whenua in water governance? How could this be improved?

Q - In your area of concern, what is typically involved in the process of engagement between the engineering profession and Māori?



- Nothing is 'typically' involved
- Depends on turangawaewae (sense of place), and variation of views between iwi and hāpu.
- Building relationships is at the core of Māori engagement.
 - Karakia
 - Mihi

Figure 1: Typical components of engagement between the engineering profession and Māori

Q - What challenges are there in engagement between the engineering profession and Māori?

- Insufficient resources to support mana whenua engagement – lack of time and funds.



- Discrepancies in language and communication styles – technical terminologies.
- Lack of Te Ao Māori knowledge by engineering profession – fear of incorrect practice.

Figure 2: Challenges in engagement between the engineering profession and Māori

Q - What are the direct benefits of successful iwi engagement to major engineering projects such as three waters infrastructure?

- Systems–based approach for sustainability and future generations.
- Whakawhanaungatanga (relationship building).
- Cost savings for client upon gaining historical and local Māori knowledge, increasing resilience.
- Minimises community pushback.

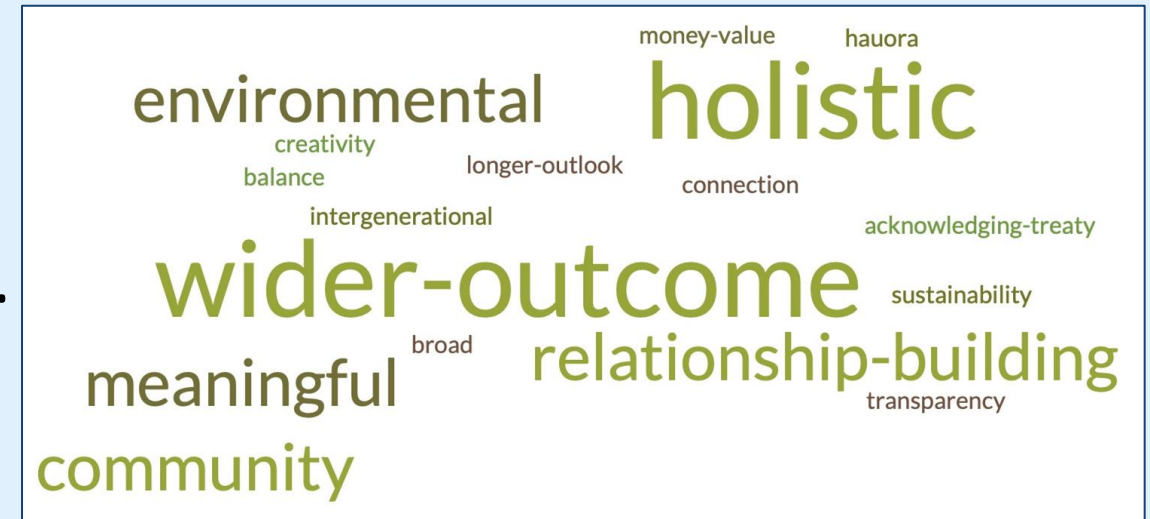


Figure 3: Direct benefits of successful iwi engagement to major engineering projects

Q - What do you see as top priorities for the three waters reforms?

- Safe, accessible, affordable, and equitable drinking water supply.
- Safeguarding the wellbeing of water and people's health.
- Greater government investment prioritisation.
- Collaborate with tangata whenua for asset management.

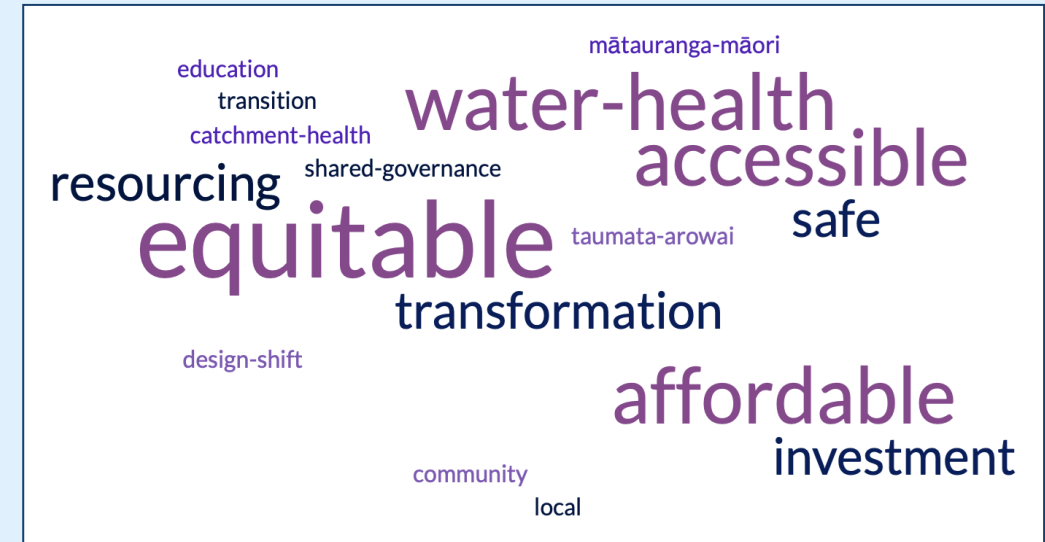


Figure 4: Perceived top priorities of the three waters infrastructure reform

Q - What is the role of institutions in ensuring engineers are appropriately knowledgeable and prepared to work with mana whenua in water governance?

- Inclusion of Te Tiriti o Waitangi, Te Ao Māori, and mana whenua Engagement should be further incorporated into the curriculum.
- Greater institutional involvement is necessary.
- Many workplaces are making efforts to educate employees on Te Ao Māori.

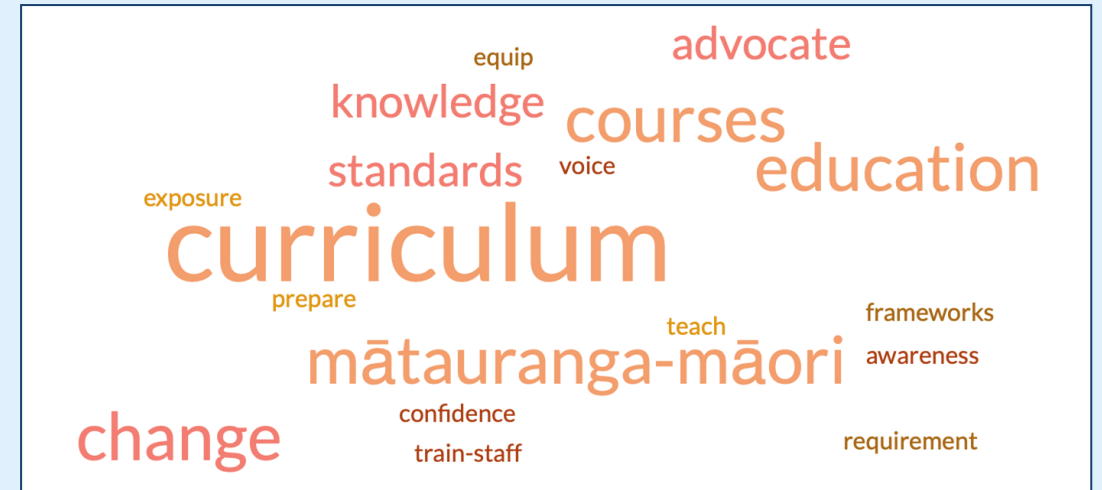


Figure 5: How institutions should ensure engineers are appropriately prepared to work with mana whenua

Three Pou of Engagement

Strategic Level Involvement of Mana Whenua

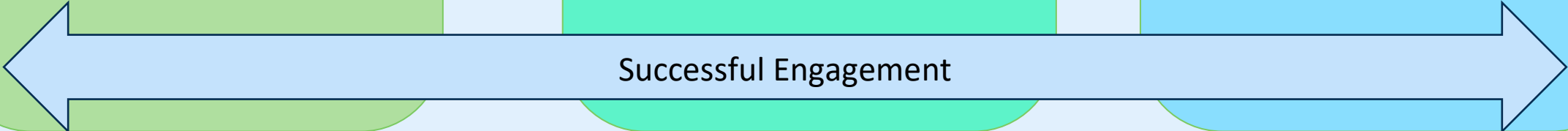
- Involving mana whenua pre-concept design
- Mana whenua at the table for planning and decision-making

Having proficient Te Ao Māori knowledge

- Tikanga
- Knowledge of land and place
- Understanding of Te Tiriti and RMA requirements

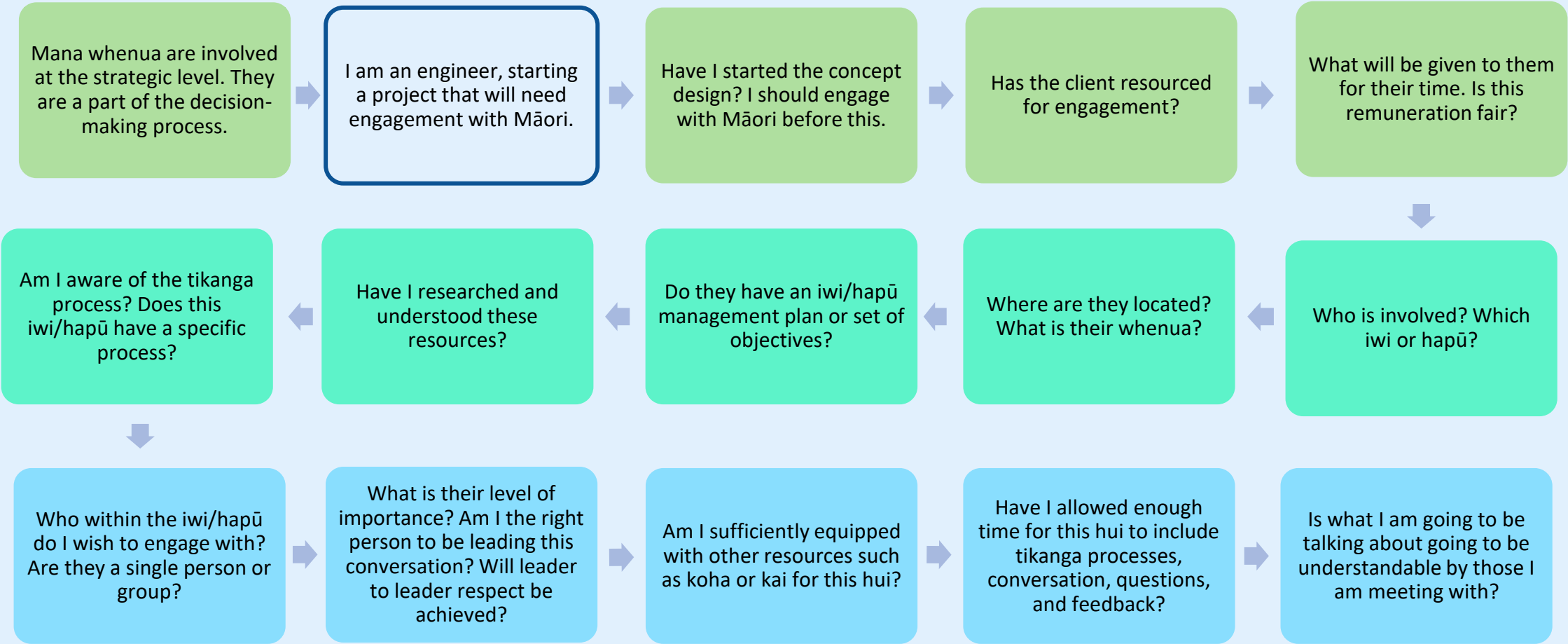
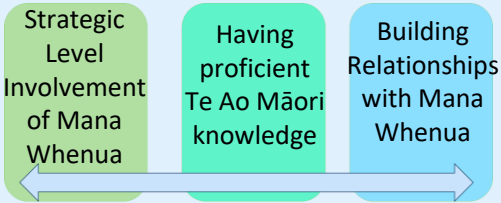
Building Relationships with Mana Whenua

- Hui etiquette: Koha, Kai
- Pepeha; telling who you are and where you come from
- Having a good attitude
- Being genuine and authentic



Successful Engagement

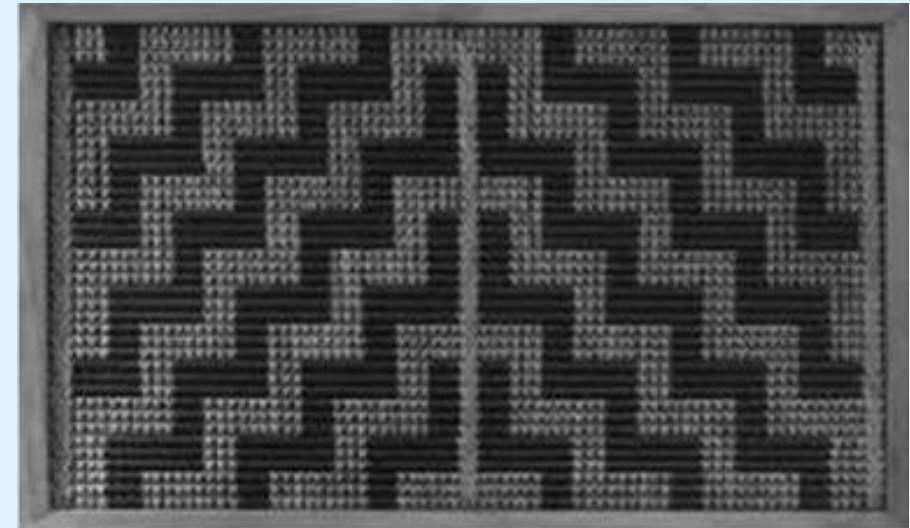
Key Considerations for Preparation and Implementation of Māori Engagement



Systematic Change

- Institutional involvement
 - Te Ao Māori knowledge in engineering curriculum
 - Communication in courses
 - Further education provided at employment level
- National requirements
 - Mandate inclusion of Te Ao Māori in curriculum
 - Mandate iwi engagement in asset management

Poutama, staircase



Sourced from: Toitū te Mātauranga: Valuing culturally inclusive research in contemporary times . (Macfarlane, 2018)

Acknowledgements

- We would like to give a special thanks to our interview participants for their time and contribution to our study. We are grateful for the insight and resources they provided.
- This research was conducted with University of Canterbury Human Research Ethics Committee approval: HREC 2023/81/LR.
- Thank you also to Dr Matthew Hughes, our project supervisor, for his support and advice throughout the project.

**THANK
YOU**

An aerial photograph of a wide, braided river system flowing through a valley. The river is composed of multiple channels separated by light-colored sand and gravel bars. The surrounding landscape includes green agricultural fields, patches of forest, and steep, rocky mountains in the background under a blue sky with scattered white clouds. A large body of water is visible in the distance on the right side.

Questions?