

Cultural Impact Assessment
Mt Cooee Landfill
Resource Consent Application



Mō tātou, ā, mō kā uri a muri ake nei.
For us, and for our children after us.


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Front cover photo: Aerial image of the Mt Cooee landfill and the Kōau branch of the Mata-au.¹

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	Report 1 of 1 – Mt Cooee landfill resource consent application Clutha District Council

¹ See appendices for a glossary of Māori terms, and a list of acronyms and abbreviations used in this report.

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Toitū te Mana, Toitū te Whenua

The people of Kāi Tahu are descended from the whakapapa lines of Waitaha, Kāti Māmoe and Kāi Tahu. Waitaha is used to describe, collectively, all the ancient indigenous groups who lived in Te Waipounamu prior to the migrations of Kāti Māmoe from Heretaunga in the early 17th century, and the later migration of Kāi Tahu. By the time Kāi Tahu arrived, Kāti Māmoe, through a combination of inter-marriage and conquest, had largely merged with the resident hapū of Waitaha. Again, through warfare and intermarriage, Kāi Tahu amalgamated with the resident Waitaha and Kāti Māmoe peoples. Consequently, the terms Kāi Tahu or Kāi Tahu Whānui are used to reference the combined Waitaha, Kāti Māmoe and Kāi Tahu whakapapa.

Te Rūnanga o Ōtākou

Hapū affiliations at Ōtākou come out of Te Ruahikihiki whakapapa, with the principal hapū being Kāi Taoka and Moki II, while an Ōtākou-specific hapū, Kāi Te Pahi also has special significance within our takiwā.

The coastal takiwā of Te Rūnanga o Ōtākou centres on Ōtākou Marae on the Otago Peninsula and extends from Purehurehu to Te Mata-au.



Hokonui Rūnanga

The takiwā of Hokonui Rūnanga centres on the Hokonui region. The takiwā includes shared interests in the lakes and mountains between Whakatipu-Waitai and Tawhititarere with other Murihiku rūnaka and those located from Waihemo south.



Waikoau Ngāi Tahu Runanga (South Otago)

Waikoau is recognised as being under the umbrella of the Papatipu Rūnaka of Otago and has a kaitiaki interest in the lower Mata-au and Catlins including Kaitangata, Iwikatea, Karoro, and Tokatā. The coast from the mouth of the Tokomairaro to the mouths of the Mata-au and the Mata-ura are of historical significance to Waikoau.

Whakaahua 1: Poupoutunoa, a range of hills near Clinton



1.0 He Reo Arataki: Introduction

Clutha District Council (CDC) operates the Mt Cooee Landfill located on the Kaitangata Highway, on the outskirts of Balclutha. The landfill has been operating since 1985 and is the only municipal solid waste landfill in the Clutha District. The landfill serves a population of approximately 18,400 and accepts approximately 9,000 tonnes of refuse from residential, commercial and industrial customers, primarily via Council’s kerbside collection service and the ten waste transfer stations. There is minimal waste collected from outside of the Clutha District. The landfill is operated as a ‘Class 1 landfill’ in terms of the WasteMINZ Technical Guidelines for Disposal to Land 2022.²

Whakaahua 2: Location of the Mt Cooee Landfill



The landfill is currently operating under existing resource consents held from the Otago Regional Council (ORC), which expire on 1 October 2023. The existing landfill cells are nearing the end of their life, with capacity expected to be reached in approximately 2025.

CDC propose to expand the landfill within the existing site by adding five new cells over a 35-year lifespan. The new cells will provide additional waste disposal capacity within the Clutha District and allow for the continued future operation of the landfill until approximately 2060. The new cells will be located to the south and east of the existing cells and have been designed in accordance with current best practice guidelines.

² WasteMINZ, 2022.

As part of the expansion works, CDC also propose to construct a resource recovery centre and education hub within the existing site, which will reduce the volume of waste disposed of at the landfill. The focus for diverting materials will be on those of a hazardous or organic nature with the aim to reduce methane emissions and ensure that waste that can be treated, reused, or recycled is managed appropriately.

1.2 Mt Cooe Landfill site location and surrounds

The Mt Cooe Landfill site is located approximately 1.2km east of Balclutha along the Kaitangata Highway. The site is bounded by the Main South Railway Line to the north and north-east; the Kaitangata Highway and the Mata-au to the south and south-west; and private farmland and residential property to the east. Leachate from the landfill is pumped to the Balclutha Wastewater Treatment Plant, which is located approximately 2.1km to the south-west, across the Mata-au. Access to the landfill site is via Kaitangata Highway.

Whakaahua 3: Location of the two natural wetlands and small waterway on-site



The landfill site is designated in the Clutha District Plan for “refuse disposal” purposes as well as for “landfill” purposes.³ The designation does not contain any conditions. The designation covers land

³ Clutha District Plan, designation number 120.

parcels Lots 1 and 2 DP 12203 and Part Sections 4 and 5 BLK XIV, North Molyneux SD, with a total area of 15.77 hectares.

The landfill is located within the Mata-au catchment, with the Mata-au itself being located approximately 100m to the west of the Mt Cooee site. The site is adjacent to the point at which the awa branches in two.

There are two natural wetlands located within the south-eastern corner of the Mt Cooee site, adjacent to the Kaitangata Highway (shown in Whakaahua 3 above). The Terrestrial, Wetland, and Waterway Assessment undertaken by 4Sight Ltd states that the ecological values of the identified natural wetlands are likely to be low as parts of the wetlands are dominated by exotic species; fauna values appear low; and the wetlands are very small. The wetlands are not listed as Regionally Significant Wetlands within the Regional Plan for Water.

There is a small unnamed tributary located near the wetlands and shown in Whakaahua 3 above. The waterway extends from the foot of the low hillslopes towards the Kaitangata Highway and flows through a culvert located under the Kaitangata Highway, after which it joins a drainage ditch which runs parallel to the Highway. The waterway has poor water quality which may be due to stock accessing the waterway.

The surrounding landscape is characterised by gently rolling rural land. There are no recognised landscape values for this area identified in the Clutha District Plan.

1.3 Current Mt Cooee Landfill

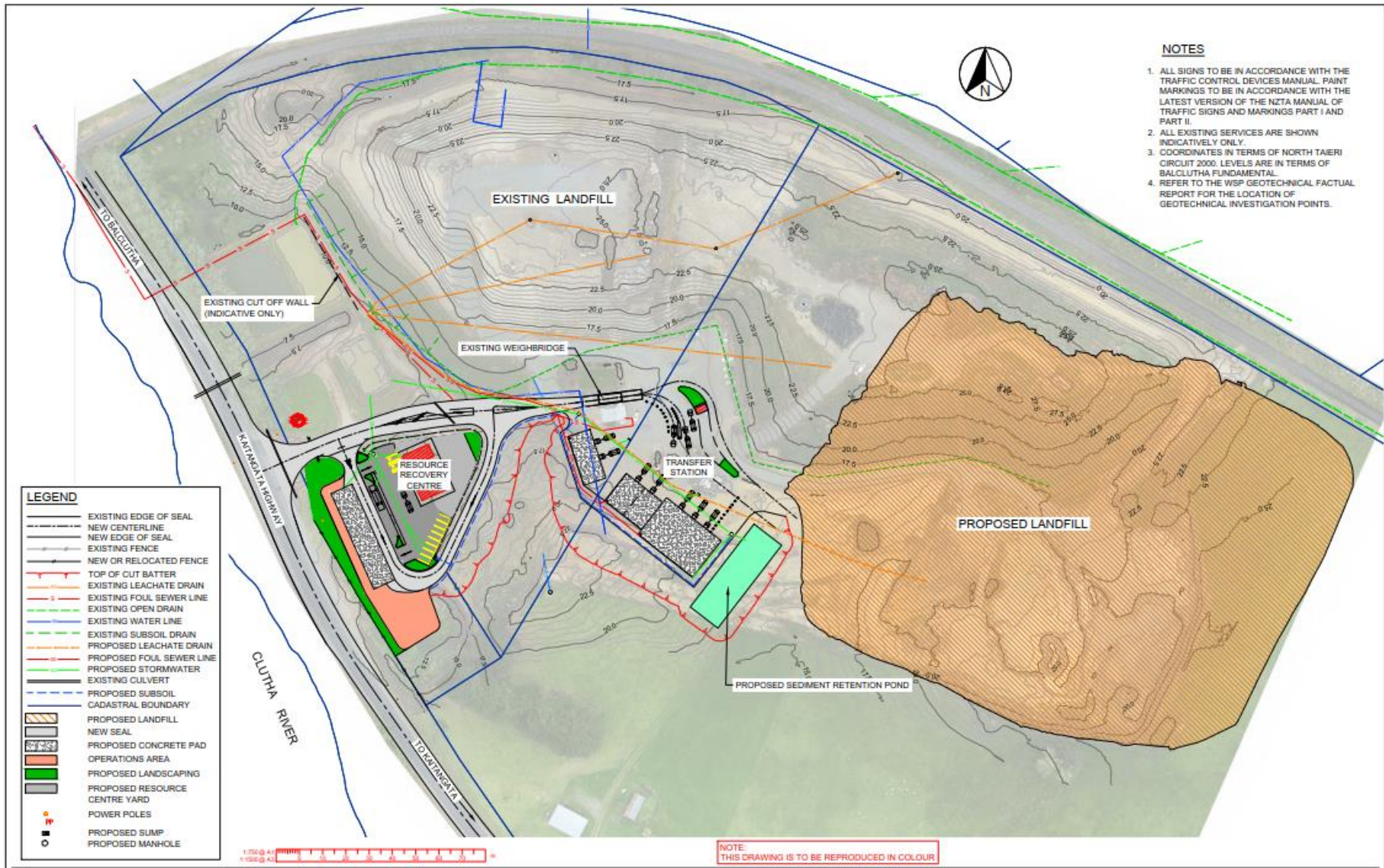
The Mt Cooee Landfill has been operating since 1985 and is the only operational municipal solid waste landfill in the Clutha District. The landfill serves a population of approximately 18,400 and accepts approximately 9,000 tonnes of refuse from residential, commercial, and industrial customers, primarily via Council's kerbside collection service and the ten waste transfer stations. There is minimal waste collected from outside of the Clutha District. The landfill is operated as a "Class 1 landfill" in term of the WasteMINZ Technical Guidelines for Disposal to Land 2022.

The Mt Cooee landfill, to date, has been constructed and operated as an unlined landfill. The underlying greywacke rock and the geohydrology of the site provide natural containment that maximises the capture of leachate. A steel sheet pile cut-off wall was installed across the valley floor at the landfill toe as part of landfill development works in 1995.⁴ The sheet piles effectively extend the wall down to the bedrock across the full width of the valley. The sheet pile wall was capped with a low permeability compacted clay bund. The wall and bund have therefore formed a dam for groundwater flow, which minimises the deeper percolation of leachate but also directs groundwater flow out of the site towards the leachate collection system.

All leachate currently flows towards the existing pump station located at the downstream face of the landfill, which then transfers leachate to the CDC Balclutha Wastewater Treatment Plant for treatment. There is a lined leachate pond located on site (770 m³), which provides emergency storage for leachate overflow from the pump station.

⁴ Note: The site had been in use since 1985.

Whakaahua 4: Mt Cooe Landfill design plan



Stormwater runoff from the site is directed to two stormwater ponds located on site. This includes runoff from the general site (access roads and completed landfill areas), but not the active landfill face as this runoff is captured and treated as leachate.

1.4 Current resource consents

The operation of the Mt Cooee Landfill, including associated waste processing operations and facilities, is subject to existing resource consents granted by the ORC in 1995-1996. The consents cover landfill operation activities relating to discharges to land, water, and air, and taking of water as part of the leachate management system. All consents expire on 1 October 2023.

The consent conditions require the development of a Landfill Management Plan, which is to be reviewed annually. The most current Landfill Management Plan is dated 2022.

1.5 Proposed Mt Cooee Landfill Development

The Mt Cooee Landfill is proposed to be expanded to the east and south of the existing cells by developing five new cells sequentially. The three base cells will be developed against the existing landfill footprint in a clockwise order, with two further cells then developed on top of the landfill base up to a final height of approximately 36.0m RL. The total expansion will cover a footprint of 3.23 hectares with a total airspace of approximately 320,400 m³, allowing an estimated 30 years of waste disposal.

As part of the landfill expansion, a new Resource Recovery Centre and Transfer Station will be developed at the site entrance. This will enhance landfill operations and support CDC's strategic objective to minimise waste and to manage waste and recovered materials in a safe facility which prioritises diversion from the landfill.

The general layout of the proposed landfill expansion is shown above in Whakaahua 4.

The key site facilities that will support the operation of the landfill, waste diversion and transfer activities are shown by Tūtohi 1 below.

1.6 Waste Minimisation

An Otago Region Waste Assessment covering Queenstown Lakes, Central Otago, Clutha and Waitaki Districts, and Dunedin City, is currently being undertaken. The regional waste assessment will identify the key issues and options that will then be prioritised and considered as part of a review of the CDC Waste Management and Minimisation Plan 2018 (WMMP).

The WMMP is the overarching document that guides work around waste minimisation within the Clutha District. The current document is reaching the end of its life and is due for review in 2024.

The 2018 WMMP had an overarching focus on promoting waste minimisation and responsible waste management practices through education and collaboration. The key action to reduce waste to Mt Cooee landfill was to investigate and evaluate the best way to reduce organic waste to landfill, however, it was also identified that a kerbside organics collection and subsequent composting was not feasible at the time.

Tūtohi 1: Mt Cooee Landfill key site facilities and proposed mitigation

Facility	Description and mitigations
Waste	<ul style="list-style-type: none"> Waste transfer station for drop-off of general waste, prior to transfer to the landfill. Dedicated refuse tipping floor to allow the separation of waste types prior to disposal. Household hazardous substances drop-off area and dangerous goods store via a bunded shipping container. Green-waste drop-off area / pad. Construction and demolition waste drop off area/separation.
Resource recovery	<ul style="list-style-type: none"> Reuse shop building for resale of preowned and reusable household goods. Drop-off facility for recyclable materials (e.g., glass, cans, cardboard, paper, children’s car seats, E-waste, batteries, whiteware, polystyrene and soft plastics). Education space for learning about reducing waste and its impacts and providing opportunities to upskill (e.g., composting, waste free living or repair workshops).
Liner	<ul style="list-style-type: none"> New cells will be lined with a Class 1-Type 2 Composite Liner (in accordance with WasteMINZ Technical Guidelines for Disposal to Land 2022).
Leachate	<ul style="list-style-type: none"> Leachate collection system, consisting of lateral collectors running across the slope back to the perimeter batters. A main drain will be located down the centre of the cells. All leachate will flow down to the pump station and then be pumped off-site to the Balclutha Wastewater Treatment Plant for treatment and discharge.
Landfill gas (LFG)	<ul style="list-style-type: none"> Landfill gas requirements from Class 1 landfills is currently being reviewed under the Emissions Reduction Plan 2022 (guidance being sought from MfE). If new cells require landfill gas abstraction, this will include a fully enclosed flare; and gas wells constructed as the fill is placed; and reticulation to the flare. Reducing disposal of organic materials to Mt Cooee through the introduction of a transfer station will reduce the production of landfill gas overall.
Stormwater	<ul style="list-style-type: none"> All stormwater from the site (excluding the active landfill face) is collected via drains and pipes and is discharged to the two stormwater ponds located on site for treatment, before being discharged to the Clutha River / Mata-au. All stormwater from the active landfill face is treated as leachate and is discharged to the leachate management system for treatment.
Monitoring	<ul style="list-style-type: none"> Groundwater and surface water monitoring. Landfill gas monitoring stations.
Planting	<ul style="list-style-type: none"> Existing screen planting around the perimeter of the site. Further screen planting is proposed and gradual planting of the finished landfill cells. Initiate programme with local Enviroschools to replant identified wetland area

The Government has recently announced kerbside standardisation requirements that requires CDC to provide household kerbside glass recycling and food scraps collections to the communities of Balclutha and Milton, by 1 January 2027 and 1 January 2030 respectively. This is a key issue that has been identified in the Otago Region Waste Assessment process and will be considered as part of the CDC WMMP review.

Other key issues identified in the Otago Region Waste Assessment include infrastructure, services, leadership and collaboration, and data and monitoring, as well as identifying a number of specific materials that could be managed more in accordance with the waste hierarchy; particularly biosolids/sludges, construction and demolition waste, non-household recyclables, agricultural wastes, glass, organic waste generally, and textiles.

A feasibility study is also being undertaken by CDC that will assess service delivery options for addressing the key issues identified in the Otago Regional Waste Assessment around infrastructure, services and specific materials and will guide the development of the Resource Recovery Park, Transfer Station, and key actions for a new WMMP. This study will look particularly at organic waste diversion and consider whether infrastructure to process food waste, green waste or construction and demolition waste should be developed on site at Mt Cooee as part of the Resource Recovery Park and Transfer Station or whether these waste types should be transported to the nearest available facility in Otago or neighbouring regions for processing.

The Otago Region Waste Assessment, CDC WMMP and feasibility study will be key documents in ensuring that the development of the new Resource Recovery Park and Transfer Station at Mt Cooee will reduce methane gas production through diverting organic waste from landfill disposal, support the recovery of materials that can otherwise be reused or recycled, and support the community through upskilling and education opportunities. This work will also incorporate measures that will ensure the targets in the recently released Te Rautaki Para, the New Zealand waste strategy,⁵ are met and a move is made from the traditional linear economy where resources are used and disposed of, to a circular economy where resources are reused, repaired, remanufactured, or recycled.

1.7 Overview of the proposed resource consents

CDC are applying for replacement resource consents to enable the continued operation, closure, and aftercare of the landfill and waste diversion and transfer facilities at the Mt Cooee Landfill, including the additional five cells.

The key elements of the current application for the landfill are summarised below. More detail is provided in the *Application for Resource Consent and Assessment of Effects on the Environment: Mt Cooee Landfill, Balclutha (WSP Ltd 2023)*:

- The continued operation of the landfill for the disposal of municipal solid waste and hazardous waste through to closure.
- An additional five cells being developed sequentially over a 35-year time period.
- An improvement in the environmental controls within the new cells, with the new cells to be lined and potential landfill gas capture in the future.

⁵ Ministry for the Environment, 2023.

- Additional groundwater monitoring wells have already been installed to monitor leachate in the groundwater.
- Improved landfill infrastructure facilities with the creation of the Transfer Station, the Resource Recovery Centre, the Reuse Shop, and the Education Hub.
- Ongoing aftercare of the landfill, including continued operation and maintenance of leachate collection, landfill gas collection/destruction, and stormwater infrastructure; maintenance of the landfill cap; and environmental monitoring in accordance with the conditions of the resource consents.

Whakaahua 5: Aerial image of Inch Clutha, 1946



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2.0 He Kaupapa Mahi: Methodology

Aukaha has been contracted by CDC to prepare a cultural impact assessment to support the consenting of the Mt Cooee Landfill, including reconsenting existing operations, and the proposed landfill expansion and resource recovery hub. Mana whenua understand that the Council is planning to expand the landfill's operations to the east with improved environmental engineering, and to construct a resource recovery centre to provide an improved waste minimisation service.

2.1 Review of literature

A desktop review was undertaken, focusing on detailed documentary research, to inform the drafting of a cultural impact assessment related to the proposed extension of the Mt Cooee Landfill. Reference material has been derived from the following key sources:

- a. The Kāi Tahu ki Otago Natural Resource Management Plan 2005⁶
- b. Ngāi Tahu cultural maps⁷ and related archival source materials
- c. District wāhi tīpuna mapping
- d. Recorded archaeological sites via ArchSite⁸
- e. Available ecological and environmental monitoring data and reports
- f. Literature review.

Other relevant policies, plans were identified as further source material during the review of literature.

2.2 Cultural values assessment

A cultural values assessment identifies key mana whenua values in the area affected by the proposed activity. The cultural values assessment provided below in Section 3.0 was drafted following a workshop with a mana whenua panel. Mana whenua representatives from Ōtākou and Hokonui, and whānau from Waikōau based in Balclutha, shared their mātauraka and maumaharataka for the area in order to identify key mana whenua values in the cultural landscape surrounding the Mt Cooee site.

2.3 Cultural impact assessment

A cultural impact statement identifies the impacts of the proposal on the cultural values identified, and proposes recommended actions and expectations to protect these values. In the case of this application, cultural impacts in terms of the following will be a focus of the assessment:

- i. Wai māori values
- ii. Mahika kai and biodiversity values
- iii. Wāhi tīpuna

The final assessment and recommendations have been presented to mana whenua representatives for review, comment, and amendment. The final copy is assessed and approved by mana whenua prior to release, to ensure that the report accurately reflects the position of Kā Rūnaka.

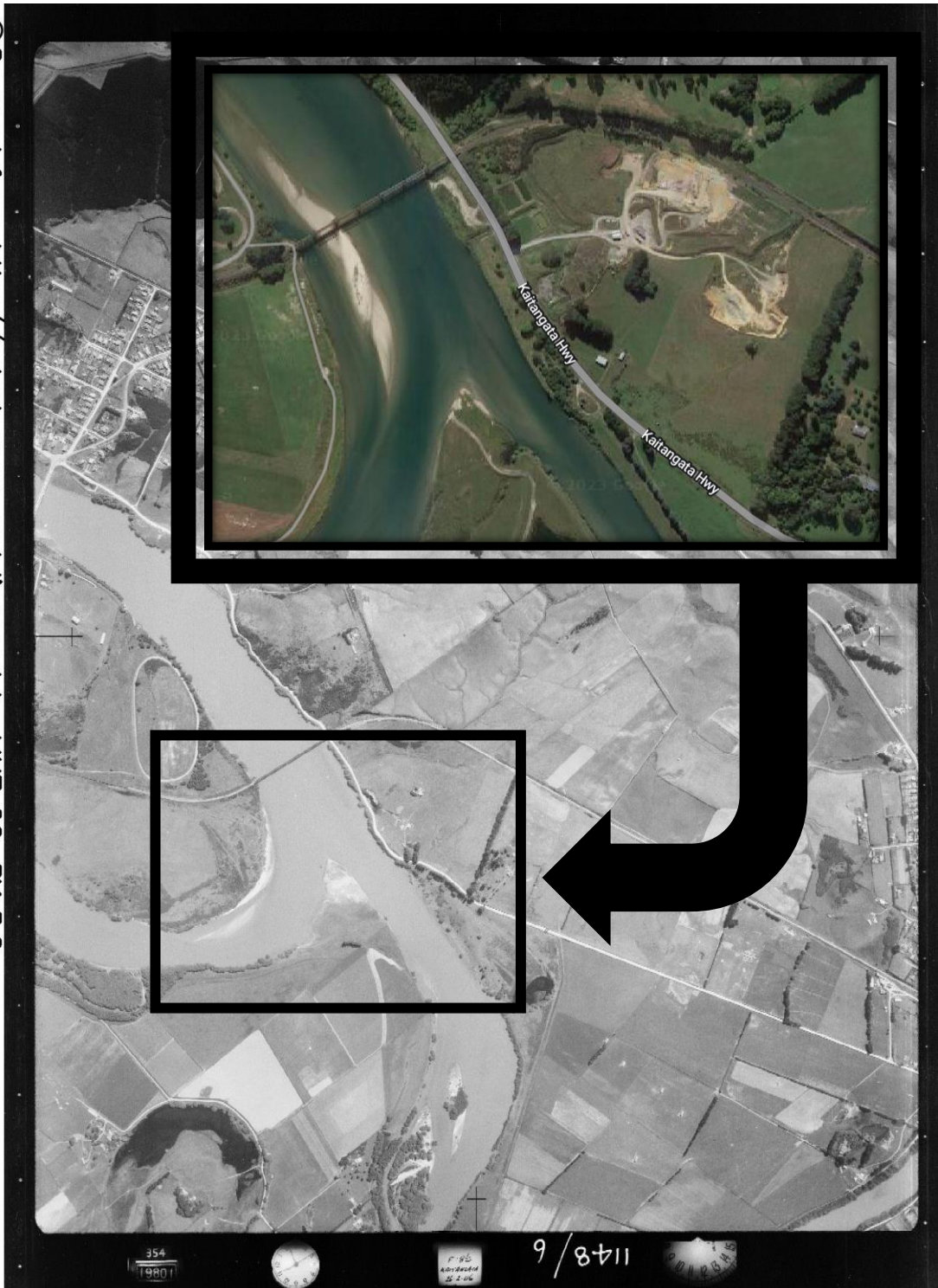
⁶ KTKO, 2005.

⁷ TRONT, 2023.

⁸ NZAA, 2023.

Whakaahua 6: Aerial image of the site (1946) with contemporary aerial image (2022) inset

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3.0 He Puna Karikari: Cultural Values Assessment

3.1 Introduction

Only manawhenua have the expertise to identify values, sites, histories, and processes of cultural significance. Through a co-design process, manawhenua guide how these values and associations can be represented in culturally meaningful ways, while keeping the interpretation and development in the hands of its custodians.

Mana whenua representatives and whānau members, with support from the combined Mana Taiao and Mana Ahurea teams of Aukaha, draw from Kāi Tahu cultural values and narrative documents as valuable taoka filled with inherited cultural knowledge. This mātauraka Kāi Tahu remains under the custodianship of mana whenua at all times.

The following cultural values and concepts have been specifically identified by mana whenua to inform the expansion of the Mt Cooe Landfill, and future opportunities to strengthen intergenerational knowledge, community, and place-based identity. Mana whenua values and concepts are purposefully broad to allow design responses that retain flexibility and adaptability within a co-design process that is guided by mana whenua.

Four core values lie at the heart of a mana whenua worldview, namely whakapapa, mauri, mana, and tapu. These values overlay a broader network of associated values, which are explored in relation to the Mt Cooe landfill in the following sections.

3.2 Whakapapa

The literal meaning of the word whakapapa references the placing down of layers, a metaphor for the layering of generations from the past to the present, and into the future. Kāi Tahu are bound to the land, water and all life supported by them through the whakapapa of creation:

“Creation and the introduction of all elements into the universe is genealogical or whakapapa-based meaning that ultimately all things in the universe are interconnected and they also share a single source of spiritual authority.”⁹

Kāi Tahu are thus nested within the natural environment through whakapapa, which places obligations on Kāi Tahu to protect te taiao. Given the status afforded te taiao and its components through whakapapa, they are viewed as prized and revered taoka with significant levels of mana and tapu, and whose mauri supports the life and wellbeing of people and all living things.

⁹ Pōtiki, 1996.

Whakaahua 7: Cultural values and associations with the lower Mata-au



The following account of Kāi Tahu whakapapa and creation stories is sourced from the words of the famed Kāi Tahu leader, Matiaha Tiramōrehu:

Nā Te Pō, ko Te Ao	<i>From the night came the day</i>
Nā Te Ao, ko Te Ao Marama	<i>From the day, the bright day</i>
Nā Te Ao Marama, ko Te Ao Tūroa	<i>From the bright day, the longstanding day</i>
Nā Te Ao Tūroa, ko Te Koretewhiwhia	<i>From the longstanding day, the unattainable void</i>
Nā Te Koretewhiwhia, ko Te Koreterawea	<i>From the unattainable void, the intangible void</i>
Nā Te Koreterawea, ko Te Koretetamaua	<i>From the intangible void, the unstable void</i>
Nā Te Koretetamaua, ko Te Korematua	<i>From the unstable void, the parentless</i>
E moe ana Te Mākū i Mahoranuiātea	<i>Te Mākū, the damp, lay with Mahoranuiātea, the great expanse of light</i>
Ka puta ko Raki	<i>And the Raki the Sky was born</i>
Tuatahi e moe ana Raki i Pokoharuatēpō	<i>First, Raki lay with Pokoharuatēpō.</i>
Tuarua, e moe ana Papatūānuku. ¹⁰	<i>Next, he lay with Papatūānuku the earth.</i>

Within this whakapapa, the universe is created in the form of darkness and light, before the emergence of tangible elements like water, one of the earliest ancestors that we have direct access to here on Earth. The whakapapa continues down to Rakinui and his wives, Pokoharuatēpō and Papatūānuku. The children of Rakinui and his wives created the elements of te taiao, including mountains, rivers, forests, and seas, and all living things. Kāi Tahu claim the same descent from Raki and his wives.

Everything in existence is acknowledged and connected through whakapapa, establishing the ancestral rights that afford Kā Rūnaka their mana and kaitiaki responsibilities in their takiwā. Outcomes that provide opportunities to uncover, reference and share the whakapapa of the land and people are a priority for Rūnaka, as they enhance a collective sense of place and identity.

Another expression of whakapapa can be seen in the resource management approach ‘Ki Uta Ki Tai,’ emphasising holistic management of interrelated elements within the natural environment. Water released by Raki makes its way into rivers, which in turn connect the entire landscape from the mountains to the sea. From the sea, water evaporates, condenses, and falls again on Papatūānuku, an eternal holistic cycle.

The Mata-au is fed by the glacial waters that flow from the inland tīpuna mauka. The rivers and streams descending the mountains are of a wai tapu nature that reflects the intact mauri of the wai, and the mana of the mountains. The water of the inland lakes was for the most part of the highest quality, and supported rich and healthy mahika kai resources that attracted seasonal visits by parties that would travel inland from the coast.

The name Whakatipu-wai-māori originates from the earliest expedition made by the tīpuna Rākaihautū and his party from the Uruao waka. Rākaihautū is traditionally credited with creating the inland lakes or puna with his digging stick, Tūwhakaroria. The name ‘Wānaka’ is associated with Rākaihautū’s journey, as his party are said to have camped at Wānaka to rejuvenate their spiritual and mental strength. This would have been in the form of wānaka or learning to fortify their spiritual wellbeing through customary ceremony led by tōhuka, ensuring divine guidance and safe passage.

¹⁰ Tiramōrehu, Van Ballekom, & Harlow, 1987.

In the contemporary setting, activities that occur along the awa as it travels from the mountains to the sea impact on this whakapapa, through inputs of sediment, nutrients, and discharges. Water quality in the lower reaches of the awa is recognised as degraded, with high levels of bacteria, high nutrient concentrations, and poor water clarity.¹¹ The outcome is declining water quality across the catchment. These changes in water quality are an expression of the way that these activities affect the whakapapa of the waterway.

There is significant potential for the Mt Cooe landfill to contribute to these negative effects on the whakapapa of the Mata-au. For mana whenua, the protection of the awa from such impacts, whether through groundwater leaching, stormwater incursion, or the treatment of leachate at the Balclutha WWTP, is a primary objective in engaging in this mahi with CDC.

3.3 Tapu

Tapu is an all-pervading force that has been passed down through whakapapa to the people of today. Every natural element possesses a level of tapu derived from their connection to atua and tīpuna, who themselves were imbued with significant levels of tapu. The tapu status of people, places, and resources establishes expectations for the behaviour of whānau, requiring the balancing of rights and responsibilities. Consequently, tapu operated much as any legal system, with prohibitions and restrictions acting as means of protecting and respecting the mana and mauri of the environment, indigenous plants and animals, and the people themselves.¹²

The obligation to respect and protect the natural environment is derived from the significant tapu of te taiao. Natural elements like water, earth, and air are very early ancestors that came into being at the time of the atua and the creation of the world. As a result, their tapu is heightened, as is the obligation to protect them as taoka handed down from tīpuna and held in trust for mokopuna to come.

The term ‘taoka’ refers to cultural, physical, and metaphysical resources that are treasured by mana whenua, including practices, activities, and mātauraka associated with flora, fauna, and the natural world. In the context of the Kāi Tahu settlement, taoka include:

- (a) aspects of the natural environment like water or air
- (b) landscape features such as mountains, lakes, and rivers
- (c) locations and sites associated with the settlement and activity of tīpuna, and
- (d) natural resources and species like pounamu, raupō, or tuna.

Taoka of significant tapu that are present in the cultural landscape surrounding the Mt Cooe Landfill site include wai māori, indigenous biodiversity, and wāhi tīpuna. Their status as taoka places obligations on Kā Rūnaka to champion and protect them, as an expression of mana, and to ensure the sustainability of these taoka for future generations.

Activities related to waste are generally considered incompatible with tapu under tikaka Kāi Tahu. The placement of a landfill beside a significant ancestral waterway like the Mata-au is concerning, given the potential for these activities degrade the tapu of this taoka. It is crucial that the landfill’s construction, use, and operation actively protect the Mata-au and the wider environment as taoka with significant tapu.

¹¹ ORC, 2023b.

¹² MOJ, 2001.

3.4 Mana

The word ‘mana’ refers to the authority and prestige that is passed down through whakapapa. Strongly linked to relative levels of tapu sourced through whakapapa, the natural environment is seen as holding significant levels of mana, which Rūnaka are dutybound to sustain and protect.

Mana is the principle associated with people and is underpinned by the values associated with “responsibility, leadership and birthright.”¹³ In pre-European Māori society, these rights and responsibilities were recognised under tikaka related to the discovery, naming, settlement, warfare, and inheritance of whenua.

The association with atua or tīpuna further reinforces the mana that a natural element or feature may be afforded by the people, with those of the highest regard and status being considered taoka. The Mata-au, for example, is afforded great mana due to associations with tīpuna like Rākaihautū.

Tūturu te noho was one of the primary means that mana whenua status was maintained by whānau in the days before European settlement. Kāika, pā, and nohoaka were established across the takiwā and were connected by ara tawhito. Settlement sites were chosen for political, economic, social, practical reasons, often opting for places that were close to food and natural resources. Heke were undertaken across the year to visit remote areas of the wider estate, enabling seasonal practices to take place such as mahika kai, treating and trading with other hapū and whānau, and reaffirming ahikāroa through the warming of hearths across their takiwā.

Today, the mana and rakatirataka of Ōtākou and Hokonui is recognised and affirmed under the provisions of the NTCSA 1998,¹⁴ in which the Mata-au is identified as a statutory acknowledgement area based on Kāi Tahu’s “cultural, spiritual, historic, and traditional association to the Mata-au.”¹⁵

Another way that mana is expressed in environmental practice is through balancing the right to take and use natural resources, with the responsibility to care for the environment, and to protect it from damage, degradation, and decline. Today, these principles are reflected in national environmental management policies through the inclusion of principles like Te Mana o te Wai and Te Oranga o te Taiao.¹⁶

Wai māori is afforded great mana by Kāi Tahu. At a basic level, water holds life-giving properties that sustain the wellbeing of people, but also provided ecosystems and habitats for indigenous species, which themselves were prized and respected. For Rūnaka, activities must be undertaken in ways that support the environment to manage itself, with a natural form and function, and with thriving biodiversity. In the context of the Mt Cooee Landfill, Rūnaka expect that the landfill will be operated in such a way as to support te Mana o te Wai in regard to the nearby Mata-au.

3.5 Mauri

Mauri flows from the living world and down through whakapapa, linking all aspects of the world. The mauri of water represents the essence that binds all things, acting as a life-giving force, and connecting the environment, from the mountains to the sea.

¹³ MOJ, 2001, p. 6.

¹⁴ NTCSA 1998, Part 1.

¹⁵ NTCSA 1998, Schedule 40.

¹⁶ NPSFM 2022; NBEB 2021.

Mauri is an observable expression of tapu and mana, denoting the life force that connects the physical and spiritual aspects of the world and the objects and beings within it. Waterbodies with an intact and strong mauri are characterised by good quality waters that flow with energy and life, sustain healthy ecosystems and support mahika kai and other cultural values. The primary resource management principle for Kāi Tahu is the protection of mauri. Concepts such as tapu, noa and rāhui are therefore applied by manawhenua to protect the mauri of a resource.

However, the mauri of a waterway is unable to protect itself against unnatural actions and interventions such as damming, diversions, altered flow regimes, discharges, and activities that impact on the riverbed. When the mauri of wai is degraded, there are multiple impacts. Physical effects may be noticeable in the environment, through changes in the āhua of the water, such as appearance, smell, colour, or taste. Changes in chemical composition or flow of water may also be present. These physical changes are likely to affect animal and plant species that live in surrounding ecosystems. Impacts might include the decline of species, usually native species, and over-population of other species, often those that are introduced. In turn, this alters the connection of whānau with a waterway, as mahika kai uses may become unsustainable if the mauri continues to degrade. From here, a loss of knowledge can occur, as the opportunities to share the stories, practices, and histories associated with a waterway diminish due to the lack of connection.

Whānau have seen this pattern take place over and over throughout the history of European settlement in Te Waipounamu, with many behaviours and actions that undermine and degrade the mana and the mauri of waterways still in evidence today. Activities undertaken in the vicinity can pose a significant threat to the mauri of waterways like the Mata-au, and to native biodiversity and human health.

Sustainable waste management practices are, in themselves, a means of supporting a healthy mauri for the environment. By reducing, reusing, and recycling our waste, we are able to make our environment cleaner, which can help remove many risks to indigenous biodiversity and te taiao. Landfill operations, on the other hand, will continue to pose risks to the mauri of the environment, through impacts on amenity, potential for discharge or pollution, contributing to existing issues like poor wastewater treatment provision, or through impacts on indigenous species.

3.5 Rakatirataka and Kaitiakitaka

Rakatirataka refers to the exercise of mana in order to give effect to Kāi Tahu culture and traditions. In the management of the natural world, rakatirataka is underpinned by the obligations placed on mana whenua as kaitiaki; the practice of kaitiakitaka is an expression of rakatirataka. Wai māori is a taoka that is governed under the domain of rakatirataka, in accordance with Kāi Tahu tikaka and the principles of kaitiakitaka.

The whakapapa connection with te taiao imposes a kaitiakitaka obligation on Rūnaka to protect wai and all the life it supports, in accordance with customs, knowledge, and mātauraka developed over many generations. The duty of kaitiakitaka is not merely about guarding or caretaking; it involves acting as an agent for environmental protection and decision-making, on behalf of tīpuna and mokopuna. The focus of kaitiakitaka is to ensure environmental sustainability for future generations, as expressed in the whakataukī on the cover of this report, 'Mō tātou, ā, mō kā uri a muri ake nei.'

For tīpuna, the state of the environment and the bounty of resources were significant measures of the mana of the people. Under the tenets of kaitiakitaka, Rūnaka consider it their duty to advocate for te

taiao and the Mata-au as an expression of their mana, and in the fulfilment of rakatirataka and kaitiakitaka roles.

3.6 Wāhi Tīpuna and Ara Tawhito

Wāhi tīpuna are interconnected ancestral places, landscapes and taoka that reflect the history and traditions associated with the long settlement of Kāi Tahu whānui in Otago. Ara tawhito provided well-worn highways connecting the numerous wāhi tīpuna of Kāi Tahu whānui, from the coastal bays and estuaries to the wetlands and marshes of the immediate interior, and into the mountainous regions with their glacial lakes.

Tūtohi 2: Wāhi Tīpuna in the area surrounding the Mt Cooee Landfill site

Ikoa Māori	Description
Mata-au	The Clutha River
Matau	The Māori name for the North Branch of the Mata-au
Kōau	The Māori name for the South Branch of the Mata-au
Iwikatea	The bend in the Mata-au before it divides at Balclutha. Traditions avers that a conflict took place on the flats here and many of the dead were unburied.
Takihaka-Turaka-o-te-wharawhara	The rise situated behind the loading bank at Balclutha. Some centuries ago, a chief made frequent overland trips between Ōtākou and Murihiku, and one of his camps was at Balclutha.
Te Upoko o Toiro	The name of where the Waitepeka Railway Siding was located.
Taepu-ta-noa	The Māori name for Stirling.
Wai-o-kura	A place located on Inch Clutha.
Kohuru	A pā situated near Stirling.
Ka-maru	Part of the hill near the railway cutting between Stirling and Balclutha.
Whaka-keo	The hill located at Benhar on the north side of the Mata-au.
Tararuwai	A hill adjacent to Penyuik Farm north of Balclutha.
Toiro <i>Toiro Stream</i>	A small stream that flows into the southern bank of the Mata-au near Balclutha.
Hāwea	A rise located near Kaitiria, the former Kaitangata Lagoon.
Roto-nui-a-Whatu <i>Lake Tuakitoto</i>	A small lake situated near Kaitangata, it is one of the lakes dug by Waitaha ancestor, Rākaihautū.
Tauhinu	A lagoon that was situated at Inch Clutha.
Waiotepeka <i>Waitepeka River</i>	Correct spelling of the Waitepeka River, which flows into the south bank of the Mata-au.
Kapu-a-waka	A lagoon situated near the Mata-au.
Te Haoka <i>Te Houka</i>	Correct spelling of Te Houka, a river crossing place.

Wāhi tīpuna are characterised not only by natural and physical aspects, but also by the place names and associated traditions and events that bind Kāi Tahu to the landscape, just as the landscape itself is a part of Kāi Tahu identity. Such landscapes are linked by whakapapa in creation traditions, underpinning mana whenua status, and breathing life into mātauraka and tikaka. These are treasured places that transcend the generations and are today recognised as wāhi tīpuna (see Tūtohi 2 below for a list of wāhi tīpuna in the area).

Wāhi tīpuna in the surrounding cultural landscape are numerous, indicating the level of activity and presence Kāi Tahu had there in the past. Many of these sites refer to landscape features, such as hills and waterways, indicating significant familiarity with the landscape, given that even minor features like streams and parts of hillsides are also named. Significant amongst these are the names associated with important waterways, including the Mata-au and the two branches of its lower reaches – the Matau (north branch), and the Kōau (south branch).¹⁷

Wai māori is an integral and enduring aspect of this ancestral landscape with many ara tawhito following the path of significant awa, connecting a network of wāhi tīpuna, including kāika, pā, nohoaka, and wāhi mahika kai. Rivers are a symbol of permanence and a source of spiritual meaning, but also provided services as a travel-way, a way-finder, and a source of food and sustenance.

Water was, and is, employed extensively by mana whenua for both spiritual and common uses. Wai is used to remove tapu, and in ceremonies, but also as a source of hydration and a means of transportation. What is more, wai māori provided significant habitat for indigenous flora and fauna, many of which provided crucial resources for whānau in the past.

Waterways like the Mata-au provided highways that were much quicker to traverse than walking, whether by paddling or punting along a slow-flowing stream or river, or by riding the rapids of large rivers like the Mata-au from far inland to the coast. Mōkihi made from raupō and harakeke, such as would have been commonly found along the wetland and duneland areas of Balclutha in the past, were a common mode of transportation.

Tūtohi 3: Known archaeological sites in area surrounding Mt Cooe Landfill

NZAA number	Description
H46/27	Site destroyed. Reported umu site.
H46/35	Artefact find of a wooden pounder at the Waiotepeka Stream between Ōwaka and Cheetwood Road.
H46/24	Site destroyed, reportedly found in 1902 during ploughing at Kaitangata. Reported artefact find of a “greenstone spearhead.” Reported find of several umu. Reported that site was thought to be an old pā site.
H46/25	Site destroyed, on the area known as the “Balloon” at Inch Clutha. Reported artefact find of toki. Reported early Māori potato farming site.
H46/26	Artefact find of toki. Find of an oven. On the south bank of Matau branch of the Mata-au

The Mata-au was a significant ara tawhito for whānau living along the southeast coast of Te Waipounamu, providing a pathway to follow up to the inland areas and upper lakes, and a travel-way to quickly return to the coast by mōkihi or waka. The pathways that ara tawhito followed were created and retained by generations of tīpuna who embarked on heke as an expression of cultural identity and to enable knowledge transfer.

Tīpuna would travel throughout the vast estates of their takiwā over an annual calendar that supported an array of cultural practices including food gathering, reconfirmation of ahikāroa, trade and relationships with other hapū and whānau, and the passing of mātauraka from one generation to the next. Ara tawhito were cemented by use, with their longevity based on their ability to meet several

¹⁷ TRONT, 2023.

priorities for tīpuna, including ease of access, natural egress to significant places, and availability of food in the surrounding landscape.

Known Māori archaeological sites in the area surrounding Mt Cooe Landfill indicate activities associated with settlement and mahika kai (see Tūtohi 3 above). Of particular note is the number of artefact finds; several pounamu tōki are identified,¹⁸ and one wooden tōki, possibly used in processing raw fibres for textile production.¹⁹ One artefact find of a pounamu “spearhead” was reported.²⁰ Half of the known sites (3 of 6) reference umu, but it unclear whether these were for food preparation or another use.²¹

These layers of history convey deeper information about the ways that whānau interacted with the area around Mt Cooe Landfill in the past. These histories provide a baseline for the aspirations and intentions of Kā Rūnaka to restore the environment to that which their tīpuna experienced in the past. This is undertaken as an obligation as manawhenua to care for the environment as guardian that has been passed that duty by tīpuna, and in the recognition that the role is held in trust for mokopuna. Kā Rūnaka expect that the operation of Mt Cooe Landfill will support the achievement of these intentions, or at the very least, will not undermine them.

Tūtohi 4: Extant native species associated with the surrounding area

Flora	Birds	Lizards	Freshwater species
Kahikatea	Australian bittern	Moko kākāriki	Galaxiids
Mataī	Black-fronted tern		Kanakana
Tōtara	Black-billed gull		Tuna
Harakeke	Banded dotterel		Koura
Tī kōuka	Marsh crake		Kākahi
Kānuka	Spotless crake		Īnaka
Mānuka	South Island fernbird		Bullies
Rātā	Kuruwheki		
Pīkao	Grey teal		
Mikimiki			
Raupō			
Swamp nettle			

3.7 Mahika Kai

Mahika kai refers to the places, practices, knowledge, and species associated with mahika kai. Although food security was a significant element of mahika kai, it extended well beyond food gathering to encompass the harvest of primary resources for the production of textiles, tools, and implements. Mahika kai practices underpin the Kāi Tahu relationship with Otago’s rivers, lakes, wetlands, moana, and the broader environment, which in turn is a bedrock for the cultural identity of Kāi Tahu. Mahika kai is a significant taoka to Kāi Tahu and was a substantive component of both Te Kēreme and the settlement with the Crown.²²

¹⁸ NZAA, 2023, H46/26; H46/32.

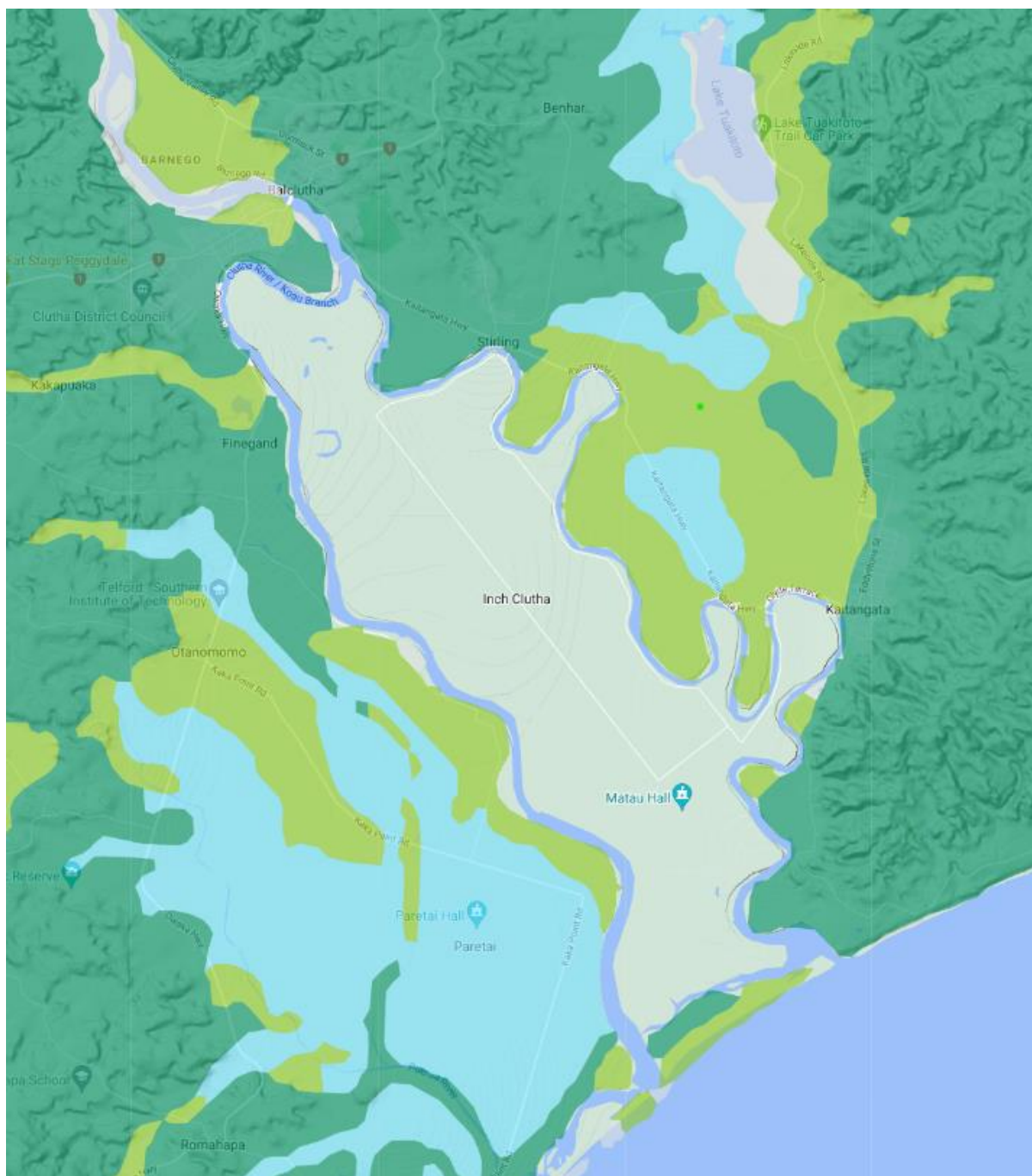
¹⁹ NZAA, 2023, H46/35.

²⁰ NZAA, 2023, H46/24.

²¹ NZAA, 2023, H46/27; H46/24; H46/26.

²² TRONT, 1997.

Whakaahua 8: Historic vegetation map



Mahika kai is a key value associated with the Mata-au catchment. Fundamental to Kāi Tahu culture is the ability to learn and practise customary gathering of food and other resources, to put kai on the table at the marae and at home, and to ensure that the knowledge of customary practices is passed on from generation to generation. For mahika kai to be sustained, diverse populations of species must be present across all life stages and must be plentiful enough for long term sustainable harvest. Beyond target species, tīpuna also recognised the importance of species in the wider food web as a significant identifier of ecosystem health and availability of species for harvest.

Mahika kai practices and the associated places, practices, knowledge, and species are significant taoka to Kāi Tahu whānui. Several species including flora and fauna are associated with the area (see Tūtohi 4 above). Mahika kai practices associated with the area include birding, eeling, and fisheries, and collection of raw fibres for textiles.

Travel along the ara tawhito like the Mata-au required ready sources of food and materials to resource travel parties. Historic vegetation mapping (see Whakaahua 7 above) reveals that the Mt Cooe site sat amongst a diverse indigenous forest zone above the Mata-au, and at the northern end of a significant wetland complex, encompassing the delta of the Mata-au. To the east, lay the lake known as Roto-nui-a-Whatu, separated from the delta by dunelands interspersed with stretches of estuary. To the west lay a significant estuarine area lined with dunelands stretching across to what is now the Puerua River.

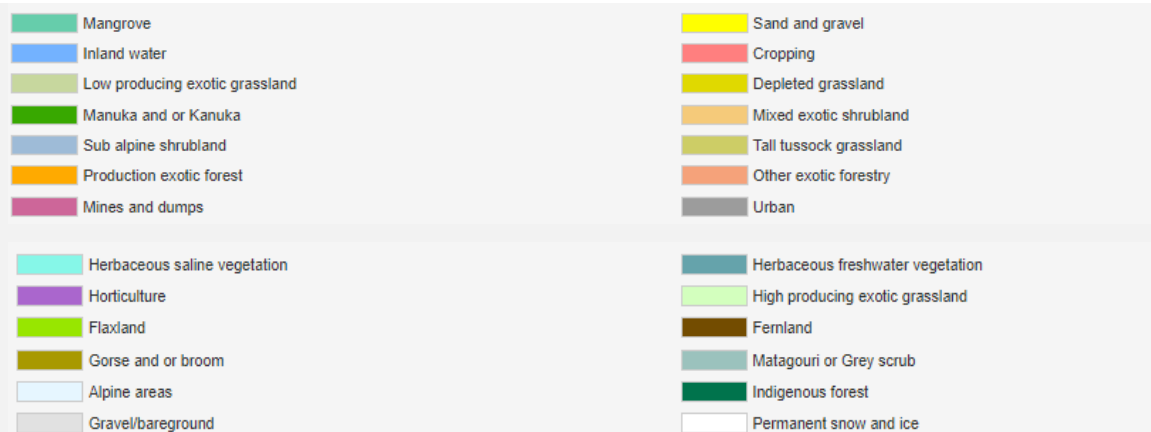
Wetlands and dunelands are recognised for the diversity of the species they support, including endangered and rare tussocks, grasses, lichens, and fungi, highly diverse invertebrate populations, and populations of forest and seabirds, lizards, indigenous freshwater fish. Tussock and grasses provide excellent nesting conditions for all manner of birdlife, meaning that from August to April each year, the area was likely to have been an excellent source of eggs and juvenile birds.

Natural fibres found in abundance in the area may well have provided another important resource for tīpuna, as the area was likely to have been thick with pīkao and raupō and studded with harakeke and tī kōuka. These plants were primary resources for textile production. Of particular note, tī kōuka and harakeke were commonly used to weave travelling footwear called paraerae (see Whakaahua 9 below). These hard-wearing materials would last a day or two on the feet of each traveller, before being discarded for another pair. Consequently, the weaving of paraerae was an ongoing task over each journey.

Mātauraka Kāi Tahu is the bedrock of mahika kai practices. Mātauraka encompasses the cultural memory and knowledge base of Kā Rūnaka, which has been developed, deepened, and expanded over generations. The transmission of this mātauraka necessitates whānau being able to access healthy mahika kai to carry out customary practices; however, this opportunity is extremely limited in Balclutha and the surrounding area. The awa and surrounding landscape has been significantly modified since settlement, to the point that the ancient landscape known to tīpuna is unrecognisable.

The environment today is very changed, with contemporary vegetation maps showing a preponderance of exotic pasture and very little native flora (see Whakaahua 8 above). The wetlands, estuaries, and dunelands of the area are now gone. The complex and diverse ecosystem that would have been located there is barely visible in the contemporary landscape.

Whakaahua 9: Contemporary vegetation map



Dunelands and wetlands are now exceedingly rare in Aotearoa; it is estimated that 70% of dunelands and 90% of wetlands have been lost.²³ From the 1920s, these areas were considered waste land, so wetlands were drained and dunelands were flattened to make way for settlement, farming, and forestry. Indeed, in the area around the Mt Cooee Landfill site, much of Balclutha and all of Inch Clutha are established on drained wetlands, as is much of the surrounding farmlands.

Whakaahua 10: Paraerae sandals



Human activity, land usage practices, and landscape modification have led to the degradation and loss of these taoka in the Balclutha area. For Kā Rūnaka, the re-establishment of mana whenua values for the natural environment within their takiwā remains a key aspiration and intention for the future. There is a risk that the Mt Cooee Landfill's operation and use could negatively impact on these aspirations and intentions. Consequently, it is the expectation of Kā Rūnaka that significant effort is put into protecting te taiao from the impacts on mana whenua values and prioritising opportunities for restoration of this site. Remaining wetland ecosystems, however small, are a priority for Rūnaka, as they signify an opportunity from which the biodiversity that has been lost could begin to be restored, and the remaining values can be protected and retained.

²³ Holdaway, Wiser, & Williams, 2012; MfE, 2020.

4.0 E rite ana ki te karo o te moa: The Kāi Tahu history of loss

Te Tiriti o Waitangi was signed by representatives of Kāi Tahu whānui in late May and early June of 1840.²⁴ Subsequently, from 1844 to 1864, Kāi Tahu agreed a series of land sales with the Crown. The Otago Deed was signed at Kōpūtai Port Chalmers on 31 July 1844. The terms of the purchase agreement provided for the sale of more than 400,000 acres of Kāi Tahu land to the New Zealand Company for £2,400.²⁵

Kāi Tahu withheld from sale lands at Taiari, Ōtākou and Te Kāroro, an area totalling approximately 9,600 acres²⁶ In addition, Kāi Tahu understood that they would retain their valued lands, mahika kai, and sea fisheries, in addition to “ample reserves” for their present and future needs.²⁷ Such promises were not fulfilled, and further lands were not reserved to Kāi Tahu.²⁸

Over time the ancestral lands were surveyed, sold, and settled and it was increasingly difficult to follow kā ara tawhito and to access wāhi tīpuna and wāhi mahika kai. Changes in the ancestral landscape and the loss of mahika kai resources impacted on Kāi Tahu communities, contributing to the displacement of whānau, loss of knowledge and identity, and economic hardship.

The significance of mahika kai as a cornerstone of Kāi Tahu identity cannot be overstated. It was through these practices that knowledge and skills were handed down, and through the seasonal practice of heke that the relationship with whenua and wai māori was sustained. This continued reaffirmation of ahikāroa across the seasons was required to affirm rakatirataka and mana, but also provided opportunities for reconnection with the deeds, stories, and learning of tīpuna.

European settlement in the Balclutha area dates back to the early 1850s, when the first ferries started to operate on the Mata-au near the town’s contemporary site.²⁹ The first ferry was established in 1857, with accommodation for a keeper, Mr John Barr, who later purchased the 100 acres of flat land that became the Balclutha township. The development of the town was steady from that point onwards.³⁰ Increased traffic through the area led to the purchase of a punt in 1861, but this was replaced in 1863, following several accidents and deaths. From 1863, stores, hotels, and other services began to be established at the river crossing, with sections auctioned that same year forming the basis of the township proper.³¹

Historic accounts from 1859-1860 may explain the origins of the name ‘Mt Cooe,’ with the following account from a descendant of Agnes Archibald whose family settled at Inch Clutha from Edinburgh.

My grandfather Andrew Smaill... went off south to spy out the land for a suitable locality to start their lives in New Zealand. My grandfather had a friend from Edinburgh, who had already settled at Inchclutha [sic], and possibly influenced him to emigrate. After a journey of 50 miles, they received a great welcome from the Pillans who had gathered other Edinburgh settlers... [who] did everything to help them in their search. Away they went towards the bush-clad Kaitangata

²⁴ Waitangi Tribunal, 1991, s4.2.

²⁵ When the land was surveyed in the following years, the actual extent of the Otago Block came to 534,000 acres. Rakiura Māori Land Trust, 2013, p. 26; TRONT, 1997.

²⁶ Waitangi Tribunal, 1991, pp. 30-31.

²⁷ Several witnesses also recalled that Kāi Tahu were promised ‘tenths’, in a similar scheme to the ‘tenths’ allocations that were sanctioned at the Whakatū sale and at other sales in the North Island. Evison, 2007; see also Dacker, 1994.

²⁸ Dacker, 1994, p. 21.

²⁹ MacKinnon, 2009.

³⁰ The Cyclopedia Company Limited, 1905.

³¹ Clutha District Libraries, 2023.

hills. Struggling through the undergrowth, they arrived at the highest point where they had a complete view of the winding Clutha River and the plains, stretching towards the Kōau branch on the other side of the island. They also saw a building about two miles from the river mouth, the only signs of life. Pushing their way down through the bush, they arrived at the river opposite the dwelling and saw a boat on the beach. “Cooee”-ing, a woman came towards the boat with a lantern. More “cooee”-ing, she persuaded two Maoris [sic] to push off and cross the river to take them across.³²

The account goes on to describe the clearing of harakeke and tī kōuka, and the felling of a stand of tōtara for fenceposts. Clearing and fencing set the scene for pastoral farming, with the land then sowed with wheat and potatoes, which were delivered by boat to nearby towns and as far afield as Dunedin. By 1860, the account reveals that “all the best land [on Inch Clutha] seemed to have been taken up [by farming],” leading settlers to establish themselves in nearby Kaitangata and Stirling.³³ One can assume that much of the draining of wetlands and estuaries was commenced during this period.

Whakaahua 11: The Balclutha Bridge



The first bridge over the Mata-au in the area was built in 1868; however, following the ‘great flood’ of 1878, significant river-works were undertaken, including the rebuilding of the bridge that had been swept away, and erecting of flood banks to protect the town.³⁴ Modification of the Mata-au has been

³² Smail, n.d.

³³ Ibid.

³⁴ ‘Great flood hits South Island,’ 2020.

a continuing theme ever since, through wetland drainage, river channelling, urban development, infrastructure servicing, and upstream construction of major hydro dams. The Roxburgh dam was opened in 1959, followed by the Clyde dam built further upstream and coming online in 1992. The operation of the hydro dams has heavily influenced the flow of the awa, with frequent daily fluctuations resulting from hydroelectric power generation activities.³⁵

The economy in Balclutha today is predominantly based on primary industries at a rate that is around three times the average across the country and equating to 15.4% of the total economy in 2022.³⁶ Major industries in the area include Silver Fern Farms and the operation of the Finegand meat-works plant near Balclutha, and the Fonterra operations at Stirling.³⁷ The impact for whānau was the loss of the extensive wetland and duneland areas that supported a wealth of indigenous biodiversity, including mahika kai and taoka species. The loss of these values underpins the deprivation suffered by Kāi Tahu over this time, encompassing not only the material loss of land as an asset base and seasonal mahika kai resources, but the loss of a spiritual connection to te taiao, of the ability to exercise rakatirataka (a fundamental building block of Kāi Tahu life and identity), and the transmission of mātauraka.³⁸

The loss of connection to the whenua that took place as a result of the Otago Deed, coupled with the visible deterioration, degradation and modification of lakes, rivers, waterways, and estuaries since that time, is a source of great mamae for mana whenua. This is particularly true given the obligations on mana whenua as kaitiaki whenua in their takiwā, mō tātou, ā, mō kā uri a muri ake nei.

³⁵ Olsen, & Stowe, 2019.

³⁶ Infometrics, 2022.

³⁷ Clutha Development (2023).

³⁸ Waitangi Tribunal, 1991.

5.0 He Ara Poutama: Statutory framework

There are a number of statutory and policy frameworks that are relevant to this application. This section is not exhaustive but provides a brief description of specific guidance in the statutory frameworks with respect to the cultural values discussed above.

5.1 Resource Management Act 1991 (RMA)

The management of natural and physical resources in New Zealand is governed by the Resource Management Act (RMA) 1991. Part 2 of the RMA specifically speaks to the importance of recognising tangata whenua values.

The relationship of Kāi Tahu with the Mata-au is a matter of national importance that must be recognised and provided for in managing natural and physical resources.³⁹ The depth and breadth of the deep and longstanding relationship of mana whenua with the Mata-au and the surrounding area is discussed in Section 3.

In achieving the purpose of the Act, particular regard must be had to kaitiakitaka.⁴⁰ Kāi Tahu whānau exercise kaitiakitaka in this catchment. Maintaining a balance between the right to access and use natural resources, and the responsibility to care for te taiao, with a focus on providing a sustainable base for future generations, is implicit in kaitiakitanga. This is the underpinning meaning of the whakataukī, Mō tātou, ā, mō kā uri a muri ake nei.

The principles of the Treaty of Waitangi (Te Tiriti o Waitangi), including the principles of active protection of mana whenua interests,⁴¹ recognition of rakatirataka,⁴² and partnership⁴³ must also be taken into account.⁴⁴ Involvement of mana whenua in the future management of the landfill site, including co-design of rehabilitation and restoration of the wetlands and planting, is an important means of implementing these principles.

5.2 Ngāi Tahu Claims Settlement Act 1998 (NTCSA)

The NTCSA was a product of the long and arduous claim journey that Ngāi Tahu endured over generations, some of the events which are described in Section 4. Statutory acknowledgements are recorded in the NTCSA for several water bodies, mountains, and coastal features in the Otago Region, including the Mata-au which is set out as a Statutory Acknowledgement under Schedule 40. These statutory acknowledgements recognise the relationship of Kāi Tahu with these areas and assigns certain responsibilities to councils in providing for that relationship.

³⁹ Resource Management Act 1991, section 6(e).

⁴⁰ Resource Management Act 1991, section 7(a).

⁴¹ New Zealand Māori Council v Attorney-General, 1987.

⁴² Waitangi Tribunal, 1993, p. 51.

⁴³ Te Rūnanga o Wharekauri Rekohu v Attorney-General, 1993.

⁴⁴ Resource Management Act 1991, section 8.

5.3 Kāi Tahu ki Otago Natural Resource Management Plan 2005 (NRMP)

The NRMP is the operative Iwi Management Plan which sets out Otago Papatipu Rūnaka aspirations in relation to natural resource management in their takiwā (area). The NRMP is founded in the concept of 'Ki Uta ki Tai,' which emphasises the holistic te ao Māori.

The provisions of the NRMP provide important guidance as to what is needed to fulfil the obligations of sections 6(e), 7(a) and 8 of the RMA. Relevant provisions of the NRMP are set out in Appendix 2. The provisions are wide-ranging, but emphases include:

- Recognition of the spiritual and cultural significance of wai to Kāi Tahu.
- Reduction in contaminants being discharged directly or indirectly to water.
- Restoration of the mauri of wai māori and coastal waters.
- Rehabilitation of contaminated environments.
- Protection of wetlands.
- Protection of the habitats and wider needs of mahika kai and taoka species, and restoration and enhancement of indigenous biodiversity.
- Recognition and support for the rakatirataka and kaitiakitaka of Kāi Tahu in resource management, including through:
 - involvement in development of monitoring programmes,
 - collaborative research and participation in management of mahika kai, and
 - recognition of rakatirataka by empowering mana whenua interpretation of their histories and associations with wāhi tīpuna.

5.4 National Policy Statement for Freshwater Management 2020 (NPSFM 2020)

The concept of Te Mana o te Wai has been part of the NPSFM since 2014. However, Te Mana o te Wai was brought to the forefront of freshwater management in Aotearoa through NPSFM 2020.

Te Mana o te Wai recognises that protecting the health of freshwater (te hauora o te wai) protects the health and wellbeing of the wider environment (te hauora o te taiao). The NPSFM 2020 recognises the relationship of mana whenua with freshwater and requires that Māori freshwater values are provided for and that mana whenua are actively involved in freshwater management processes.⁴⁵

Policy 6 requires that there is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted. The NPSFM 2020 and the related National Environmental Standards for Freshwater 2020 (NESF) provide for operation of landfills in and near wetlands in some circumstances, but require that, if adverse effects on the wetland cannot be avoided, they are managed in accordance with an effects management hierarchy.⁴⁶

⁴⁵ NPSFM 2020 Clause 1.3(4)(a)-(c), Policy 2, Clause 3.4.

⁴⁶ NPSFM 2020 Clause 3.22(1)(f); NESF Clause 45B.

5.5 Proposed Otago Regional Policy Statement (PORPS)

The objectives relating to Te Mana o te Wai in the PORPS were developed in consultation with mana whenua, as required by the NPSFM 2020, and reflect the Kāi Tahu ki Otago perspective on wai māori as follows:

5.5.1 LF-WAI-O1 Te Mana o te Wai

The mauri of Otago's water bodies and their health and well-being is protected, and restored where it is degraded, and the management of land and water recognises and reflects that:

1. water is the foundation and source of all life - na te wai ko te hauora o ngā mea katoa,
2. there is an integral kinship relationship between water and Kāi Tahu whānui, and this relationship endures through time, connecting past, present and future,
3. each water body has a unique whakapapa and characteristics,
4. water and land have a connectedness that supports and perpetuates life, and
5. Kāi Tahu exercise rakatirataka, manaakitaka and their kaitiakitaka duty of care and attention over wai and all the life it supports.

Te Mana o te Wai policies require that:

- The environmental, social, cultural and economic relationships of Kāi Tahu with water bodies are sustained and mātauraka is incorporated into freshwater decision-making, management and monitoring processes (LF-WAI-P2)
- The habitats of mahika kai and taoka species associated with water bodies are sustained and restored (LF-WAI-P3).

This policy direction is also reflected in the long-term freshwater vision for the Clutha Mata-au Freshwater Management Unit (FMU),⁴⁷ and in the objective for natural wetlands (LF-FW-O9).

5.6 Regional Plans

Both the Regional Plan: Water for Otago and Regional Plan: Waste for Otago are relevant to this application.

5.6.1 Regional Plan: Waste for Otago

The provisions for landfills in the Regional Plan: Waste do not refer to Kāi Tahu values, but Chapter 3 Manawhenua Issues describes mana whenua concerns about waste management and includes objectives requiring that:

- The quality of Otago's natural and physical resources is not degraded by wastes (3.3.1)
- The mauri of waste-affected resources is restored (3.3.2)
- Waste management practices are compatible with Kai Tahu values (3.3.3)
- A holistic approach is taken to waste management (3.3.4).

⁴⁷ Proposed Regional Policy Statement, 2022, see LF-VM-O2 (3) and (4).

The policies for contaminated sites are relevant to guide longer term management of the site. Policy 5.4.1 requires recognition of the relationship of Kai Tahu with natural and physical resources by:

- Carrying out remediation and mitigation of contaminated sites in a manner that takes into account Kāi Tahu cultural values;
- Protecting wāhi tapu and wāhi taoka, and access to them by Kāi Tahu, from the effects of contamination;
- Acknowledging that future generations will inherit the results of work carried out to remedy or mitigate contaminated sites; and
- Consultation with Kāi Tahu on issues relating to site contamination.

Policy 6.3.2 requires that effects of hazardous substances and hazardous wastes on traditional water, land and mahika kai values of importance to Kāi Tahu are avoided, remedied or mitigated, and Policy 6.4.12 includes similar direction to that in Policy 5.4.1 for contaminated site management.

5.6.2 Regional Plan: Water for Otago (RPW)

Schedule 1D in the RPW identifies spiritual and cultural beliefs, values and uses of significance to Kai Tahu in respect to specified water bodies, and these are required to be maintained or enhanced.⁴⁸ Schedule 1D identifies the following values associated with the lower Mata-au as it crosses through Balclutha:

- Kaitiakitaka
- Mauri
- Wāhi tapu and/or waiwhakaheke (wāhi tīpuna)
- Wāhi taoka
- Mahika kai
- Kohanga (nursery/spawning areas for indigenous species)
- Trails
- Cultural materials.

5.7 CDC District Plan

The Mt Cooee Landfill is provided for by a designation (designation number 120) under the Clutha District Plan for “refuse disposal” purposes.⁴⁹

⁴⁸ Regional Plan: Water, Objective 5.3.2.

⁴⁹ Clutha District Plan, 1998.

6.0 He Mahi Kai Hōaka: Cultural Impact Assessment

Actions, decisions, and responses in te ao Māori are governed by tikaka, which encompasses the law and lore of the Māori world. The term ‘tikaka’ refers to the customs, ethics, and cultural practices of the Kāi Tahu people, based on the two underpinning principles of tika, that which is correct, and pono, that which is authentically based on mātauraka. The practice of tikaka emphasises the protection and enhancement of wellbeing and is an expression of Kāi Tahu cultural identity.

Whanaukataka is a central component of tikaka Māori, which places obligations on individuals to uphold the collective wellbeing of the community. Aroha tētahi ki tētahi is an expression of this ethos, is that it refers to the goodwill that we show to others in our community by showing respect and generosity. Māori culture is strongly premised on interconnections between people and collective rights were considered paramount over the rights of individuals. This is expressed in the following whakataukī, which references the strength and wellbeing that can be derived from a collective and unified identity.⁵⁰

*He manawa tahi, he manawa ora, he manawa toa, he manawa Kāi Tahu.
A united heart, a vibrant heart, a determined heart, this is the heart of Kāi Tahu.*

However, these principles extend beyond Kā Rūnaka. All New Zealanders are required to comply with environmental and resource management legislation, standards, and policies that place obligations on us as citizens to adhere to certain standards in our interactions with te taiao, for the benefit of everyone in our community. This is expressed through the guiding whakataukī of Kāi Tahu whānui,

*Mō tātou, ā, mō kā uri a muri ake nei.
For us and for our children after us.*

The use of the word ‘tātou’ meaning ‘all of us’ in this whakataukī is key to the way these obligations are seen by Kā Rūnaka as being relevant to everyone, not just mana whenua. This wording emphasises that Kāi Tahu recognise the obligation, and the power that they hold as an entity with significant mana, to pursue environmental aspirations and intentions that benefit all of us. When assessing a proposal, especially one which deals with the management of contaminants such as this application, a key motivation for Kā Rūnaka is ensuring that future generations will not have to bear the burden of decisions we make today. This is a standard that mana whenua hold for themselves, and for everyone in our community. The breaking of this compact that we share with others is a significant offence against that community, which under tikaka Kāi Tahu, would require action to resolve, a process that is governed under the principle of utu.

The term utu is often wrongly interpreted as ‘revenge;’ however, a better definition of utu is as “a means of seeking, maintaining, and restoring harmony and balance,”⁵¹ indicating meanings such as reciprocity, reparation, or restitution. Moreover, utu is closely linked to mana, in that utu could be required in order to uphold and express mana.⁵² Another significant link is to the concept of haere whakamua, which focuses on future-making, and ensuring that future efforts are aligned with the values, aspirations, and intentions of Rūnaka.

⁵⁰ MOJ, 2001.

⁵¹ Ibid, p. 3.

⁵² Ibid.

Within this context, the activities associated with the Mt Cooe Landfill require utu in response to their impacts on the whakapapa, mana, tapu, and mauri of te taiao, and significantly in this area, that of the Mata-au, which are outlined below.

It has been made clear throughout this CIA, that in terms of tapu and tikaka, it is not tika to construct and operate a landfill by a waterway, especially one of great significance such as the Mata-au. As discussed in section 3 of this CIA, the Mata-au was a significant traditional mahika kai trail. Generations of whānau travelled the length of the Mata-au on foot and by mōkihi taking food and other resources like pounamu back with them to the coast. The lower Mata-au and its tributaries were particularly rich in taoka species and supported significant mahika kai activity. These species included īnaka, waterfowl, and tuna. The Mata-au still holds great significance for mana whenua today, and as the landfill is only 60m from the awa, it is imperative that robust measures are in place to ensure that potential adverse effects on the mana whenua values identified in section 3 are avoided.

The potential for contaminants to leach from the landfill and into the Mata-au is a primary concern that mana whenua have regarding this application. To Kāi Tahu, wai is a taoka under their mana and rakatirataka. Rather than employing an economic model of ownership, mana whenua view the protection and enhancement of wai as part of their role as kaitiaki, a role which is inherited through whakapapa and that is exercised as an expression of mana. While few restrictions existed around placing landfills adjacent to waterways in the 1980s, these practices are inconsistent with the principle of 'Te Mana o Te Wai,' which now pervades freshwater management in Aotearoa. This concept places the health and well-being of the waterway as the first priority. Involvement of Kā Rūnaka is vital to the implementation of Te Mana o Te Wai, an approach that has been applied to the development of the PORPS, which affirms the Kāi Tahu ki Otago interpretation of Te Mana o Te Wai in their takiwā. The whakapapa of water is a core consideration when assessing a waterway through a Te Mana o Te Wai lens. As explained in section 3, in the case of the Mata-au, its whakapapa is rooted in the Kāi Tahu whakapapa that traces the genealogy of water.⁵³ As such, Kā Rūnaka are deeply committed to protecting the mana and mauri of the Mata-au.

With a catchment area of 21,022 km², and a mean annual flow of 575 m³/s, the Mata-au has the largest catchment area and flow volume in the country.⁵⁴ This results in a dilution effect, where water quality testing will determine that there are negligible effects on the awa, just as set out in the memo on the assessment of effects on Clutha River water quality. However, assessing an activity through a Te Mana o Te Wai framework requires that we move away from a mindset where we accept adverse effects to a certain standard. Instead, it directs us to adopt a more positive approach where we must ensure that any activity undertaken does not impact on the mauri and health and well-being of the waterway. This means that no leachate should be entering the Mata-au at any level and dilution should not be seen as part of a solution.

Manawhenua understand that the existing cells do not have a base lining and that leachate is primarily controlled by the sheet pile cut-off wall and leachate collection system which conveys leachate through a series of perforated pipes to the Balclutha WWTP for treatment. It is understood that new cells will be lined, and that any leachate will travel by gravity to the existing pump station for treatment at the WWTP, with a contingency pond or tank storage for leachate in the event of extreme rain or leachate transfer pump outage.⁵⁵ Manawhenua are supportive of all new cells being appropriately lined before receiving waste and ensuring that areas of waste are covered with intermediate cover or

⁵³ NTCSA 1998, Schedule 40.

⁵⁴ LAWA, 2023.

⁵⁵ WSP Ltd., 2023 [unpublished material].

final capping as soon as is practicable, to prevent water permeating through placed waste and to ensure that as much water as possible is diverted to the leachate collection system. While manawhenua understand that the state of the Balclutha WWTP is external to this application, as kaitiaki, it would not be appropriate if they did not consider it, given that leachate from the landfill will ultimately end up at the WWTP, and treated effluent is eventually discharged to the Mata-au. As explained above, any direct discharge of wastewater to water, regardless of its quality, is inconsistent with Te Mana o Te Wai.

Manawhenua support locating the new cells to the southeast of the existing cells, further away from the awa. However, as the ORC has identified the lower lying areas of the site to be at risk of flooding⁵⁶, it is imperative that further investigations regarding the flooding risk of the site are conducted to ensure that appropriate flood protection measures are implemented. Monitoring and providing for the impacts of climate change are a key focus for manawhenua. If the landfill were to become inundated, and waste and contaminants swept into the Mata-au, this would be catastrophic to the mana, tapu and mauri of the awa, as discussed in section 3.

The following recommendations also reflect the concept of utu explained above, which is realised through a commitment from the applicant to embark on a journey of restoration alongside manawhenua.

Recommendations:

- That the applicant engages with manawhenua through Aukaha to discuss a more appropriate consent term than the 35 years being sought.
- That all practicable measures are taken to prevent leachate entering the Mata-au.
- That all practicable measures are taken to prevent any cross-contamination of the leachate and stormwater systems.
- That leachate quality and quantity is regularly monitored and recorded before being discharged to the Balclutha WWTP from the landfill leachate collection system.
- That all monitoring reports are sent to Kā Rūnaka through Aukaha.
- That the Landfill Management Plan is sent to mana whenua through Aukaha.
- That the applicant works together with Kā Rūnaka through Aukaha to decide on appropriate restoration efforts that can be undertaken, particularly regarding the unnamed waterway and the two natural wetlands that are located within the landfill designation site.
- Mana whenua support the recommendation in the Sheet Wall Cut-off Review Report to conduct regular monitoring of wells to monitor for potential leachate escape through the weathered bedrock below the toe of the wall.
- Mana whenua support further investigation during the detailed design of flooding risk, which is also referred to in the Stormwater Design Memorandum, and the implementation of appropriate flood protection measures.

⁵⁶ Stormwater Design Memorandum.

- That the granting of consents for the expansion of the landfill is subject to a bond to secure the long-term monitoring and maintenance of the landfill after closure.
- That the applicant engages with manawhenua through Aukaha on a post-closure Rehabilitation Plan.
- That the applicant engages with manawhenua through Aukaha on the development of long-term options for the disposal of waste within the Clutha District beyond the life of the Mt Cooee Landfill.

7.0 He Kupu Whakamutuka: Conclusion

The Clutha District Council is applying for resource consents to enable the continued operation and expansion of the Mt Cooee Landfill and the development of a new Resource Recovery Centre and Transfer Station.

The mauri of the Mata-au and the associated waterways and wetlands is unable to protect itself against unnatural actions and interventions such as diversions, altered flow regimes, discharges, and reclamation. The protection of the mauri of the Mata-au through this project is sought by mana whenua.

A collaborative process of engagement with the Clutha District Council has enabled Te Rūnanga o Ōtākou, Hokonui Rūnanga and Waikoau whānau to identify potential impacts on cultural values from the expansion of the Mt Cooee Landfill. The aspiration of Te Rūnanga o Ōtākou, Hokonui Rūnanga and Waikoau is to incorporate mana whenua values in a tangible way through this project.

This is the wero laid down by Kā Rūnaka to CDC for the construction and ongoing operations of the landfill, in order to protect our environment and the Mata-au for the future, as expressed in the whakataukī, 'Mō tātou, ā, mō kā uri a muri ake nei.'

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Appendix 1: Glossary of Māori terms

Āhua	Shape, appearance, condition, character
Ahikāroa	The long-burning fires of occupation
Ara hikoi	Traditional travel routes
Ara tawhito	Ancient trails and networks of significance that provided connections to places of importance for gathering, harvesting, producing, tribal sustenance and economy. The trails connected significant sites of permanent and seasonal occupation.
Aroha tētahi ki tētahi	Goodwill between people, including those in a community
Hapū	Clan, sub-tribe
Harakeke	New Zealand flax
Heke	Migration, movement
Heretaunga	Hastings
Kāi Tahu whānui	The collective hapū that make up the Kāi Tahu iwi, including the Waitaha, Kāti Māmoe, and Kāi Tahu lines of migration and settlement
Kāika	Village, villages
Kāika mahika kai	Settlements associated with food-gathering practices
Kai	Food
Kaitiaki / Kaitiaki whenua	Trustees, guardians recognised by mana whenua as having a mandate for environmental protection in their takiwā
Kaitiakitaka	The exercise of guardianship by the mana whenua of an area in accordance with tikaka Māori in relation to natural and physical resources, and includes the ethic of stewardship
Karae	Seabird, petrel
Kaumātua	Elders
Ki Uta ki Tai	From the mountains to the sea
Kō	Digging stick
Kōrero	Story, oral history, conversation
Mātauraka	Indigenous knowledge, wisdom, skill
Mahika kai	Practices, knowledge, places, and activities related to resource gathering, and a descriptor for target resources and species
Mamae	Pain, distress
Mana	Influence, Authority, Prestige, Power
Mana whenua	Customary authority exercised by an iwi or hapū in an identified area

Manawhenua	The people mandated by iwi or hapū to exercise mana whenua status
Maumaharataka	Memorial, memory, recollection
Mauri	Life giving force, life essence
Mokopuna	Grandchildren, descendants
Mōkihi	Raft, rafts made of bundles of raupō, flax stalks, or rushes
Murihiku	The area of Te Waipounamu south of the Waitaki River
Noa	Free from the extension of tapu, unrestricted
Nohoaka	Site of settlement, sites of settlement
Oraka	Shelter, Rest, Recuperation
Ōtepoti	Dunedin
Pā	Fortified village, fortified villages
Pātiki	Flounder
Pūrākau	Stories and narratives
Rāhui	A temporary ritual prohibition, closed season, or reservation placed on an area, resource, or waterway as a conservation method
Rakatira	Chief
Rakatirataka	Chiefly authority
Takaroa	Atua or deity of the sea and fish
Takiwā	District, territory
Taoka	Treasure
Tapatapa	Protocols associated with naming
Tapu	Sacred state, Be Sacred, Prohibitive, Restrictive
Tauraka waka	Canoe mooring site
Te ao Māori	Māori worldviews
Te Kāroo	Molyneux
Te taiao	The natural environment
Tī kōuka	Cabbage tree
Tīpuna	Ancestors
Tīpuna mauka	Ancestral mountains
Tikaka	Appropriate actions, correct procedures
Tipuna	Ancestor
Tōhuka	Cultural and spiritual experts
Tuna	Eel
Tūturu te noho	Mana established through ongoing occupation

Utu	Reciprocity, redressing imbalances
Wāhi mahika kai	Places where resource-gathering practices were undertaken
Wāhi tīpuna	Ancestral landscape of significance to iwi
Wai	Water
Wai māori	Freshwater
Waka	Canoe
Wero	Challenge
Whakapapa	Genealogy or lineage, layers. Whakapapa literally translates to 'place in layers' and refers to both human genealogical connections and the connections between humans and ecosystems.
Whakataukī	Proverb
Whakatipu-wai-māori	Lake Wakatipu
Whakatū	Nelson
Whanaukataka	A sense of family connection
Whenua	Land

Appendix 2: Acronyms and abbreviations

CDC	Clutha District Council
KTKO	Kāi Tahu ki Otago (now trading as Aukaha (1997) Ltd.)
LAWA	Land Air Water Aotearoa
NBEB	National and Built Environments Bill (exposure draft released 2021)
NPS-FM 2022	National Policy Statement for Freshwater Management 2022
NRMP	Natural Resource Management Plan
NTCSA 1998	Ngāi Tahu Claims Settlement Act 1998
NZAA	New Zealand Archaeological Association
ORC	Otago Regional Council
ORPW 2022	Otago Regional Plan for Water 2022
PORPS 2021	Proposed Otago Regional Policy Statement 2021
RMA 1991	Resource Management Act 1991
TRONT	Te Rūnanga o Ngāi Tahu
WasteMINZ	Waste Management Institute New Zealand

Appendix 3: KTKO NRMP 2005

SECTION 5 OTAGO REGION TE ROHE O OTAGO	
Section 5.2 Overall Objectives	
i.	The rakatirataka and kaitiakitaka of Kāi Tahu ki Otago is recognised and supported.
ii.	Ki Uta Ki Tai management of natural resources is adopted within the Otago region.
iii.	The mana of Kāi Tahu ki Otago is upheld through the management of natural, physical and historic resources in the Otago Region.
iv.	Kāi Tahu ki Otago have effective participation in all resource management activities within the Otago Region.

Section 5.3 Wai Māori	
Section 5.3.2 Wai Māori General Issues	
<ul style="list-style-type: none"> • Current water management does not adequately address Kāi Tahu ki Otago cultural values. • Cross mixing of water. • Deteriorating water quality. <p>Discharges:</p> <ul style="list-style-type: none"> • Cumulative effects of discharges. • Discharge of human waste and other contaminants from point and non-point source discharges to water. <p>Land Management and Use including:</p> <ul style="list-style-type: none"> • Draining of wetlands. • Lack of proper riparian management throughout an entire catchment. • Sedimentation from land use and development. • Accidental discovery of cultural materials or sites from changed land use. 	
Section 5.3.3 Wai Māori General Objectives	
i.	The spiritual and cultural significance of water to Kāi Tahu ki Otago is recognised in all water management.
ii.	The waters of the Otago Catchment are healthy and support Kāi Tahu ki Otago customs.
iv.	Contaminants being discharged directly or indirectly to water are reduced.

v.	Flow regimes and water quality standards are consistent with the cultural values of Kāi Tahu ki Otago and are implemented throughout the Otago Region and lower Waitaki Catchment.
Section 5.3.4 Wai Māori General Policies	
1.	To require an assessment of instream values for all activities affecting water.
2.	To promote the cultural importance of water to Kāi Tahu ki Otago in all water management within the Otago Region and Lower Waitaki Catchment.
4.	To protect and restore the mauri of all water.
Discharges:	
10.	To encourage all stormwater be treated before being discharged.
11.	To encourage identification of non-point source pollution and mitigate, avoid or remedy adverse effects on Kāi Tahu ki Otago values.
12.	To encourage Kāi Tahu ki Otago input into the development of monitoring programmes.
13.	To require monitoring of all discharges be undertaken on a regular basis and all information, including an independent analysis of monitoring results, be made available to Kāi Tahu ki Otago.
14.	To encourage Management Plans for all discharge activities that detail the procedure for containing spills and including plans for extraordinary events.
15.	To require all discharge systems be well maintained and regularly serviced. Copies of all service and maintenance records should be available to Kāi Tahu ki Otago upon request.
16.	To require re-vegetation with locally sourced indigenous plants for all disturbed areas. Re-vegetation should be monitored by an assessment of the vegetative cover at one growing season after establishment and again at three seasons from establishment.
17.	To require visible signage informing people of the discharge area; such signs are to be written in Māori as well as English.
18.	To require groundwater monitoring for all discharges to land.
River and Instream Works:	
36.	To require that any works be undertaken either before or after spawning season of potentially affected species as identified by the affected Papatipu Runaka.
37.	To require that all practical measures are taken to minimise sedimentation or discharge of sedimentation.
38.	To require that all practical measures are undertaken to minimise the risk of contamination to the waterway.

40.	To require that machinery enters the dry bed of the waterway only to the extent necessary, to carry out as much of the work as possible, using one corridor for entering and exiting.
41.	To discourage machinery operating in flowing water.
42.	To require that all machinery is clean and well maintained before entering the work site; refuelling is to be done away from the waterway.
Bank Erosion:	
44.	To encourage the planting of indigenous vegetation from the local environs to help reduce continual erosion of the edge of rivers.
Land Use and Management:	
56.	To oppose the draining of wetlands. All wetlands are to be protected.
58.	To promote integrated riparian management throughout entire catchments.

Section 5.4 Wāhi Tapu	
Section 5.4.2 Wāhi Tapu General Issues	
<ul style="list-style-type: none"> • Destruction and modification of wāhi tapu through the direct and indirect effects of development and resource use. • Contamination by discharges and other activities seriously erodes the cultural value and integrity of wāhi tapu. • The resurfacing of kōiwi takata through natural and human-induced processes. • Access to culturally important sites has been impeded. • Misinterpretation of the status and importance of wāhi tapu. • Inappropriate and inaccurate recording of wāhi tapu and the use of such information. 	
Section 5.4.3 Wāhi Tapu Objectives	
i.	i. All wāhi tapu are protected from inappropriate activities.
ii.	Kāi Tahu ki Otago have access to wāhi tapu.
iii.	Wāhi tapu throughout the Otago region are protected in a culturally appropriate manner.
Section 5.4.4 Wāhi Tapu General Policies	
1.	To require consultation with Kāi Tahu ki Otago for activities that have the potential to affect wāhi tapu.
2.	To promote the establishment of processes with appropriate agencies that: <ul style="list-style-type: none"> i. enable the accurate identification and protection of wāhi tapu.

	<p>ii. provide for the protection of sensitive information about the specific location and nature of wāhi tapu.</p> <p>iii. ensure that agencies contact Kāi Tahu ki Otago before granting consents or confirming an activity is permitted, to ensure that wāhi tapu are not adversely affected.</p>
Earth Disturbance	
5.	To promote the use of Accidental Discovery Protocols for any earth disturbance work.
6.	To require all Māori archaeological finds to remain the cultural property of Kāi Tahu ki Otago.
Discharges	
7.	To discourage all discharges near wāhi tapu.
Historic Places Trust (HPT):	
11.	<p>To require the HPT to inform the appropriate Rūnaka and/or whānau where there is the potential for any activity to result in the disturbance of wāhi tapu , including:</p> <p>i. an archaeological find; and/or</p> <p>ii. the disturbance of any archaeological site; and/or</p> <p>iii. the discovery of human remains.</p> <p>Further disturbance should be prohibited until clearance has been obtained from the Papatipu Rūnaka.</p>
13.	To recognise Kāi Tahu ki Otago kaitiakitaka over the protection and recording of archaeological sites.

Section 5.5 Mahika Kai and Biodiversity

Section 5.5.2 Mahika Kai and Biodiversity General Issues

- Point and non-point source discharges impacting on mahika kai.
- Continued urban spread encroaching on mahika kai sites.
- Access for Kāi Tahu ki Otago to mahika kai sites.
- Customary accessibility of mahika kai species.
- Research undertaken in isolation from Kāi Tahu ki Otago interests has had the effect of marginalising cultural interests.
- Loss of indigenous biodiversity in the region.
- Loss of species of particular importance.

- Loss of indigenous flora and fauna remnants and lack of co-ordinated management of native corridors.
- Poorly managed landfills, industrial sites and waste disposal sites have created contaminated soils.
- Kā Paptipu Rūnaka believe that inappropriate use and development will adversely impact on:
 - the diversity & abundance of terrestrial and aquatic species;
 - the ability to access & gather mahika kai resources; and
 - the ability to educate future generations in significant mahika kai practices

Section 5.5.3 Mahika Kai and Biodiversity Objectives

i.	Habitats and the wider needs of mahika kai, taoka species and other species of importance to Kāi Tahu ki Otago are protected.
ii.	Mahika kai resources are healthy and abundant within the Otago Region.
iii.	Mahika kai is protected and managed in accordance with Kāi Tahu ki Otago tikaka.
iv.	Mahika kai sites and species are identified and recorded throughout the Otago Region.
v.	Indigenous plant and animal communities and the ecological processes that ensure their survival are recognised and protected to restore and improve indigenous biodiversity within the Otago Region.
vi.	To restore and enhance biodiversity with particular attention to fruiting trees so as to facilitate and encourage sustainable native bird populations.
ix.	To create a network of linked ecosystems for the retention of and sustainable utilisation by native flora and fauna.

5.5.4 Mahika Kai and Biodiversity General Policies

1.	To promote catchment-based management programmes and models, such as Ki Uta Ki Tai.
4.	To require Kāi Tahu ki Otago participation in the management of mahika kai, both introduced and indigenous.
5.	To identify mahika kai sites and species of importance to Kāi Tahu ki Otago.
6.	To protect and enhance physical access for Kāi Tahu ki Otago to mahika kai sites.
7.	To require that all assessments of effects on the environment include an assessment of the impacts of the proposed activity on mahika kai.
8.	To promote the protection of remaining indigenous fish habitat by: <ul style="list-style-type: none"> i. Identifying waterways that exclusively support indigenous fish.

	<ul style="list-style-type: none"> ii. Prohibiting the introduction of exotic species where they currently do not exist. iii. Ensuring fish passage (both ingress and egress). iv. Removing exotic species from waterways of particular importance where this is achievable and appropriate according to Kāi Tahu ki Otago.
9.	To promote the protection of traditional breeding stocks.
10.	To encourage the transfer of knowledge through generations.
12.	To protect and enhance existing wetlands, support the reinstatement of wetlands, and promote assistance for landowners for fencing-off wetlands.
16.	To require that hazardous operations and the use, transportation and storage of hazardous substances are not to impact mahika kai and other cultural values.

Section 5.6 Cultural Landscapes

Section 5.6.2 Cultural Landscapes General Issues

- There is a prevailing view that Kāi Tahu ki Otago interests are limited to Statutory Acknowledgements, Tōpuni, and Nohoaka sites.
- Land management regimes have failed to adequately provide for Kāi Tahu ki Otago interests in cultural landscapes.
- Extension and maintenance of infrastructure (e.g. transport, telecommunications) can affect cultural landscapes.
- The lack of use of traditional names for landscape features and sites.
- The building of structures and activities in significant landscapes.
- Inability to address indirect and/or cumulative effects means that many issues of significance to Kāi Tahu ki Otago, such as linkages, are not addressed during resource management processes.

Section 5.6.3 Cultural Landscapes Objectives

- | | |
|------|---|
| i. | The relationship that Kāi Tahu ki Otago have with land is recognised in all resource management activities and decisions. |
| ii. | The protection of significant cultural landscapes from inappropriate use and development. |
| iii. | The cultural landscape that reflects the long association of Kāi Tahu ki Otago resource use within the Otago region is maintained and enhanced. |

Section 5.6.4 Cultural Landscapes General Policies

- | | |
|----|--|
| 1. | To identify and protect the full range of landscape features of significance to Kāi Tahu ki Otago. |
|----|--|

Place names:	
7.	To encourage and promote the importance of traditional place names.
8.	To promote the use of traditional place names through official name changes.
Earth Disturbance:	
19.	To require all earthworks, excavation, filling or the disposal of excavated material to: <ul style="list-style-type: none"> i. Avoid adverse impacts on significant natural landforms and areas of indigenous vegetation; ii. Avoid, remedy, or mitigate soil instability; and accelerated erosion; iii. Mitigate all adverse effects.
Roading:	
20.	To require an accidental discovery protocol for all road realignments and widening and forest harvest roads and to avoid any sediment run-off during earthworks and road construction to avoid contamination of waterways.
21.	To require indigenous re-vegetation with locally sourced species for all disturbed areas. Revegetation should be monitored by an assessment of the vegetative cover at one growing season after establishment and again at three seasons from establishment.
Landfills:	
22.	To require site rehabilitation plans for land contaminated by landfills, tip sites, treatment plants, industrial waste, and agricultural waste.
23.	To require monitoring of methane levels for all closed landfills and that analysed data be sent to KTKO Ltd.
Structures:	
24.	To discourage the erection of structures, both temporary and permanent, in culturally significant landscapes, lakes, rivers or the coastal environment.

Section 5.7 Air and Atmosphere

Section 5.7.1 General Issues

- The cultural impacts of air pollution and discharges to air are poorly understood and seldom recognised.
- Discharges to air can adversely affect health and can be culturally offensive.
- Insufficient data has been collected and distributed about the effects of air discharges.
- Depletion of the ozone layer and high levels of solar radiation.

<i>Mahika Kai and Biodiversity</i>	
<ul style="list-style-type: none"> • Clean air is important to the health of mahika kai 	
<i>Cultural Landscapes:</i>	
<ul style="list-style-type: none"> • Impact of urban settlement and discharges to air on the visibility of cultural landscape features including the moon, stars and rainbows. • Dust and the impact on people’s health and traditional Māori rock art. 	
Section 5.7.2 Objectives	
i.	Kāi Tahu ki Otago sites of significance are free from odour, visual and other pollutants.
ii.	Kāi Tahu ki Otago are meaningfully involved in the management and protection of the air resource.
iii.	The life supporting capacity and mauri of air is maintained for future generations.
Section 5.7.3 Policies	
1.	To require earthworks and discharges to air consider the impact of dust and other air-borne contaminants on health, mahika kai, cultural landscapes, indigenous flora and fauna, wāhi tapu and taoka.
3.	To require Cultural Assessments for any discharges to air including agrochemical.
5.	To promote the planting of indigenous plants to offset carbon emissions.

Section 10 CLUTHA/MATA-AU CATCHMENTS TE RIU O MATA-AU	
10.2 WAI MĀORI	
10.2.2 Wai Māori Issues in the Clutha/Mata-au Catchment	
Land Use:	
<ul style="list-style-type: none"> • Existing sewage schemes are not effectively treating the waste and do not have the capacity to cope with the expanding population. • Sedimentation of waterways from urban development. 	
10.2.3 Wai Māori Policies in the Clutha/Mata-au Catchment	
5.	To discourage activities that increases the silt loading in waterways or reaches of waterways.
8.	To discourage any inappropriate flushing of sediment at times of low flow or where the impacts are not of a temporary nature.
10.3.2 Wāhi Tapu Issues in the Clutha/Mata-au Catchments	
<ul style="list-style-type: none"> • Historic and continuing loss of wāhi tapu sites of significance within the Clutha/Mata-au 	

Catchment from:

- land use intensification
- Inappropriate use of wāhi tapu information.

10.3.3 Wāhi Tapu Policies in the Clutha/Mata-au Catchment

- | | |
|----|---|
| 1. | To require that wāhi tapu sites are protected from further loss or destruction. |
| 2. | To require accidental discovery protocols for any earth disturbance activities. |

10.4 MAHIKA KAI AND BIODIVERSITY TE REREKA KĀTAKA O KĀ KAIAO ME TE MAHIKA KAI

10.4.2 Mahika Kai and Biodiversity Issues in the Clutha/Mata-au Catchment

- Availability of mahika kai and the experience of collecting mahika kai has been affected by modifications in the Clutha/Mata-au Catchments.





10.5 CULTURAL LANDSCAPES KĀIKA KANOHI AHUREA

10.5.1 Cultural Landscapes in the Clutha/Mata-au Catchments

- Lack of recognition and implementation of the Cultural Redress components of the Ngāi Tahu Claims Settlement Act 1998 by local authorities, namely :
 - Statutory Acknowledgements.
 - Place names.
 - Nohoaka sites.
- Modifications throughout the catchment have resulted in a disassociation between the landscape, the stories and place names.
- Limited recognition of cultural landscapes and Kā Papatipu Rūnaka interests and values in the landscape.

Appendix 4: Incorporation of Mana Whenua Values through Design

The aspiration of Te Rūnanga o Ōtākou and Hokonui Rūnanga is to incorporate mana whenua values and pūrākau associated with the cultural landscape surrounding the Mt Cooee Landfill in a tangible way through design opportunities. Examples of how design can reflect and provide for manawhenua values and pūrākau are outlined below but should be considered as indicative. Through a co-design process manawhenua will guide how these values and associations can be represented in a culturally meaningful way while keeping the interpretation and development in the hands of its custodians.

Values and Customary Practices	How this could be integrated	Examples
Mana	The inclusion of cultural markers such as Pou Whenua or Tohu Whenua, or significant entrances to reinstate Mana Whenua presence in the landscape	
Whakapapa, Rākaihautū, Matamata, Wāhi Tūpuna	<p>Inclusion of interpretation panels to share narratives.</p> <p>Incorporation of quotes in low lying walls</p> <p>Highlighting/mapping areas that are part of Kāi Tahu traditions</p>	
Mauri, Utu, Oraka	<p>Riparian Planting to restore original landscapes and rebalance mauri</p> <p>Historical information about the site and future management for the community</p>	
Tapu, Tikaka	<p>Indications of restrictions with markers, panels, entrance markers.</p> <p>Explanation of kawa within the area – why is it restricted?</p>	

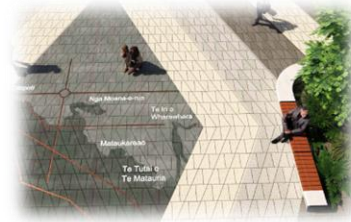
Tapatapa

Signage and Naming Opportunities.
Celebrating original names.



**Kaika, Ara Hikoī,
Ara Tawhito**

Highlighting narrative in pathways, panel
information, wayfinding, map features



Mahika Kai

Incorporation of visual design of
important species in various elements
such as paving, low lying walls,
interpretation panels.



Taoka

Features which might celebrate
particular Taoka



Appendix 5: Tables and figures

Tūtohi: List of Tables

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2	Wāhi Tīpuna in the area surrounding the Mt Cooee Landfill site	TRONT, 2023, Kā Huru Manu.	21
3	Known Māori archaeological sites in the area surrounding the Mt Cooee Landfill site	NZAA, 2023	22
4	Extant native species associated with the surrounding area	Coastal Restoration Trust, 2023; Manaaki Whenua, 2023; ORC, 2023a; ORC, 2023c; TRONT, 2023.	23

Whakaahua: List of Figures

Number	Title	Reference citation	Page
Cover	Aerial image of Mt Cooee Landfill and the Kōau branch of the Mata-au	WSP Ltd., 2023 [unpublished material].	Cover
1	Poupoutunoa, a range of hills near Clinton	South Otago Kindergartens, 2023.	4
2	Location of the Mt Cooee Landfill	WSP Ltd., 2023 [unpublished material].	5
3	Location of two natural wetlands and small waterway on-site	4Sight Consulting Ltd., 2023.	6
4	Mt Cooee Landfill design plan	WSP Ltd., 2023 [unpublished material].	8
5	Aerial image of Inch Clutha, 1946	Retrolens, 2023.	12
6	Aerial image of the site (1946) with contemporary aerial image (2022) inset	Google, 2022; Retrolens, 2023.	14
6	Cultural values and associations with the lower Mata-au	Mana Ahurea, 2023 [unpublished material].	16
7	Historic vegetation map	Manaaki Whenua, 2023.	24
8	Contemporary vegetation map	Manaaki Whenua, 2023.	26
9	Paraerae sandals	Tūhura Otago Museum, 2023.	27
10	The Balclutha Bridge	Young, 2007.	29