

RESEARCH ARTICLE

Tracing Opuatia: Repatriating and repurposing colonial land data

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Abstract

Māori land data produced through colonial systems of dispossession lack interoperability, preventing kin-based communities from tracking their land. Our novel approach to repatriate and harmonise historic land data traces the history of the 45,500 acre Opuatia Block allocated to hapū Ngāti Tiipa in 1866, following the confiscation of 1.2 million acres of Waikato land. Ngāti Tiipa resisted Crown and settler pressures for 30 years, but 80% of Opuatia was alienated within a decade. We discuss the devastation of 'judicial raupatu' and the implications of this work for hapū data sovereignty and wider international efforts to achieve Indigenous data sovereignty.

KEYWORDS

data sovereignty, hapū, Māori land data

1 | INTRODUCTION

In Aotearoa New Zealand, Māori land data produced as artefacts of colonial systems of dispossession are dispersed, often inaccessible, and lack interoperability (Shep et al., 2021). These barriers make it challenging for kin-based communities to track the alienation of their customary land and assess current holdings. In 2021, there were about 27,500 Māori freehold land titles comprising nearly 3.5 million hectares, 39 Māori customary land titles comprising just over 1200 hectares,¹ and over 3.8 million ownership records (Office of the Chief Registrar Māori Land Court, 2021). Because the Native Land Court (NLC hereafter) was a government tool for the alienation and fragmentation of Māori land (Williams, 1999), many of the present day blocks are the result of subdivision and partitions that have occurred over many decades. The vast majority of the Māori land blocks thus have long histories of connection and severance that remain hidden from the purview of current owners.

The dispossession of ancestral land through colonisation is not unique to Māori but is a shared experience of all Indigenous people in colonial settler states (Maaka & Fleras, 2005; Robertson, 2005; Smith, 1999). Cartographic map-making (Palmer, 2009) and the colonial data practices associated with it are inextricably linked to the colonial project (Cormack & Kukutai, 2022). This involves both the silencing of Indigenous geographies via the exclusion and erasure of Indigenous place names, and more directly through the land alienation process (Rose-Redwood et al., 2021). The data associated with land alienation hold important clues to these histories of dispossession but are often stored in state repositories in forms that are largely inaccessible to Indigenous peoples (Adberg et al., 2022; Shep et al., 2021). As a burgeoning research field and site of activism, Indigenous data sovereignty (IDSov hereafter) challenges taken-for-granted assumptions about government ownership and control of Indigenous data, including land data (Kukutai & Taylor, 2016; Russo Carroll et al., 2021; Te Mana Raraunga,

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2018; Walter et al., 2021; Walter & Suina, 2019). IDSOv recognises the inherent rights and interests that Indigenous peoples have in relation to the collection, ownership and application of Indigenous data (Kukutai & Taylor, 2016; Russo Carroll et al., 2019; Te Mana Raraunga, 2018; Walter et al., 2021) and is supported by Indigenous peoples' rights of self-determination and governance over their lands and resources, as described in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP hereafter) (Davis, 2016; Russo Carroll et al., 2019; Special Rapporteur on the right to privacy, 2018, 2019). As Lucchesi (2020) argues, incorporating the principles of IDSOv into geographic and cartographic work represents one of the most literal paths to decolonisation, as it requires wider conversations about land theft and occupation, land use, and how land-based knowledge and data can interact to support both colonial and Indigenous knowledge and power systems.

Using a case study approach, we describe a data sovereignty project involving Ngāti Tiipa, one of the 33 hapū (clans) and iwi (tribes) of the Waikato-Tainui confederation. The project involved developing a bespoke methodology to identify and harmonise land data that enabled us to trace the history of the Opuatia block, in northern Waikato, from its creation in 1866 to the present. Opuatia was allocated to Ngāti Tiipa following the raupatu (confiscation) of 1.2 million acres of Waikato land under the New Zealand Settlements Act 1863. While there is a substantial evidence base on raupatu enacted through the Act (O'Malley, 2016), far less is known about the portion of confiscated land that was subsequently returned to iwi and hapū. As the main political entities through which mana whenua (territorial rights) are expressed, hapū were the primary social unit connecting people to whenua (land), as well as the grouping through which concepts such as ahi kā (continuous occupation) and kaitiakitanga (customary custodian) endure (Ballara, 1998; Taonui, 2005; Waitangi Tribunal, 1985). This paper explores three questions: How much of the Opuatia block still remains in the possession of Ngāti Tiipa? What were the critical timepoints for the alienation and fragmentation of Opuatia? And who alienated the land?

We begin with a brief history of Ngāti Tiipa and their relationship to Opuatia. The machinations of the NLC are explored, with a particular focus on how the NLC expedited the alienation of land from Māori to feed demand from settlers and the government. We outline an approach to repatriating colonial land data, reconciling it with modern geospatial property datasets, and visualising this data to identify gaps, thereby allowing the life course of the Opuatia block to be traced. We find that, after successful resistance for 30 years, significant portions of Opuatia were alienated from Ngāti Tiipa early in Opuatia's history, with

the Crown acting as a key catalyst. We conclude with a discussion on the devastation of 'legislative raupatu' via the NLC and the contributions that anticolonial mapping can make to hapū data sovereignty.

1.1 | Ngāti Tiipa and the Opuatia block

Like many other hapū, Ngāti Tiipa take their name from an eponymous ancestor. Tiipa was the son of Pāoa, the founding ancestor of Ngāti Pāoa, who lived with this first family at Kaitotehe, opposite Taupiri maunga (Kelly, 1940). After migrating to Hauraki, Pāoa met Tukutuku, a granddaughter of Tamaterā (Ngāti Tamaterā) and great-granddaughter of Marutūāhu and had a second family which included Tiipa. Paoa and his tuakana Mahuta (Ngāti Mahuta) were grandsons of Pikiao, the eponymous ancestor of the Arawa iwi Ngāti Pikiao, and Rereiao, a descendant of the famous Tainui ancestor Whatihua (Jones & Biggs, 1995). The people who now affiliate as Ngāti Tiipa are mainly the descendants of Tiipa's daughter Kura and her husband Tapaue (for a more detailed description of Tiipa's whakapapa (genealogical) connections, see Kukutai et al., 2021). For several centuries Ngāti Tiipa had a significant presence in Te Pūaha o Waikato—the area where the Waikato River meets the Tasman Sea—and northern Waikato generally, maintaining close relationships with their kindred hapū and iwi. In 1840 Tiipa's great-great-grandson Kukutai, and Kukutai's oldest son, Ngapaka Ngatete, signed the Waikato-Manukau copy of the Treaty of Waitangi on behalf of Ngāti Tiipa. Two of this paper's authors are direct descendants of Kukutai and current owners in Opuatia.

Ngāti Tiipa featured in a number of 19th-century enumerations including an 1844 'census' undertaken by missionary Robert Maunsell, and an 1858 follow-up count by Resident Magistrate Francis Fenton who later became the inaugural Chief Judge of the NLC (Fenton, 1859). Ngāti Tiipa also featured as a principal tribe with its own hapū in the censuses of 1874 and 1878 before being incorporated into Waikato 'principal tribe' from 1881 onwards. That Ngāti Tiipa were variously described as both an iwi and a hapū is unsurprising, given the dynamic nature of Māori political and social systems, and the ways in which colonisation acted as a catalyst for alternative forms of organisation and identification (Ballara, 1998). Perhaps the more salient point is that Ngāti Tiipa were recognised as having mana over their whenua.

Ngāti Tiipa were among a number of iwi and hapū that experienced raupatu under the 1863 Act but afterwards received land back. In 1866 the NLC awarded 45,500 acres known as the Opuatia block to Waata Kukutai and nine others from Ngāti Tiipa (Certificate of Title,

1866; Waikato Minute Book 1, 2022 pp. 27–28).² The so-called 10 owner principle effectively meant that each block of land could only have a maximum of 10 listed owners (Gilling, 1994; Taonui, 2012). Waata became the rangatira (principal chief) after his father's death in 1846 and was a controversial figure. He opposed the Kīngitanga (Māori King movement) established in 1858 to unify iwi and hapū in order to halt land alienation amidst the rapid expansion of the settler population. Waata also held several paid positions in the colonial administration and was often described as 'friendly' or 'loyal' (for more on Waata's leadership and legacy, see Ewe, 2020; Kukutai et al., 2021). However, like the supporters of the Kīngitanga, Waata was opposed to land-selling and had made this position clear in a rūnanga (council) proclamation published in 1857:

Ka puritia tenei whenua; ahakoa poka te tangata, ki te korero kia hokona ki te Pakeha, ekore e riro; ka tau te whakaaro o nga runanga ki te pupuru i nga whenua timata mai i te puaha: a, Pukekawa atu ana.

This land will be retained. Despite what people say or do, if it is said that it will be sold to the white man, it will not be given. It is the decision of the tribal council to hold on to the lands starting from the river mouth right through to Pukekawa (W. Kukutai, 1857).

When it came to matters of land, however, designations such as 'friendly' or 'loyal' appeared to offer little long-term protection. According to the Waitangi Tribunal (1995, p. 4) '... it mattered not whether one was 'rebel' or 'loyal', for at the end of the day the result for each was the same.' As this paper shows, this was certainly the case for Ngāti Tiipa.

1.2 | The native land court

'a veritable engine of destruction for any tribe's tenure of land, anywhere' (Kawharu, 1977, p. 15).

One of the key reasons that only 5% of land in Aotearoa remains in Māori ownership is that the NLC (and its successor the Māori Land Court)³ was an extremely efficient mechanism for land alienation. Williams's (1999) seminal book *Te Kooti Tango Whenua* details the workings and impact of the NLC between 1864 and 1909, laying bare the processes by which Māori customary title was extinguished, replaced with individualised titles vested in the Crown, and

alienated into Crown or settler ownership. The Court's main purpose was to clarify the ownership of Māori land so that clearly defined and tradable titles could be issued (Williams, 1999). This was closely tied to the objectives of colonisation, and the politician Dr. Pollen remarked in 1896 that the 'object and business in this Colony was to obtain possession of the lands of the Natives, *recte si possimus, si non quocunque modo* [legally, if possible; if not, by whatever means].' (Williams, 1999, p. 32).

The 1873 Native Land Act allowed the NLC to fragment ownership, replacing the 10 owner principle, and paving the way for the partition and re-partition of land. Between 1865 and 1900, around 13 million acres of Māori land passed through the Court, extinguishing Māori customary tenure and replacing it with freehold grants to Māori individuals (Williams, 1994; Boast, 2017). NLC processes expedited alienation in ways that enabled underhanded means. For instance, NLC rules meant that owners could be excluded from the titles of blocks if they were not present at the exact moment when the Court considered their claims. Since a claim could take weeks to be heard, individuals needed to wait near the Court, at a huge personal expense, inconvenience, and risk of illness or death.⁴ As a result, individuals were often trapped in debt by Pākehā traders, storekeepers, and land speculators who worked in collusion and then threatened Supreme Court action unless they were paid with land (Gilling, 1994). A further issue was the requirement for land to be surveyed before a claim would be heard. Surveyors often charged high prices, and since land was often the only asset of many Māori, large segments had to be sold simply to pay for having it surveyed. The 1865 Native Land Act allowed the Court to grant liens⁵ over land for survey costs, while the 1867 Execution of Judgements against Real Estate Act then meant that debtors could have their land seized and sold. The overall impact of these policies and pieces of legislation were that as hapū land passed through the NLC it was sold or seized as a result of debts accrued *because of* the Court process. Furthermore, as title was individualised, those individual owners could have their portion of land alienated for personal debts. The NLC process was closely associated with business interests and Boast (2017) argues that the particularly close connections between the Cambridge Court and 'Auckland capital' make it the site of an intersection between tenurial change and 'frontier capitalism' (also see Pool, 2015). There are also many examples of the Government buying Māori land at low prices, and quickly selling it on at a much higher price (Gilling, 1994).

Located at the junction of Auckland and Waikato, Opuatia was a highly desirable target for government and settlers alike. Oral histories from Ngāti Tiipa kaumātua (elders) have described the predatory techniques and

practices employed by Pākehā and local councils to acquire tracts of Opuatia during their lifetimes (Kukutai et al., 2021). These practices had long genealogies, with many reports in late 19th century newspapers highlighting the weight of collective local and national pressures exerted on Ngāti Tiipa to sell their land. For example, in 1892 the *New Zealand Herald* reported that a deputation of local settlers had lobbied Public Works Minister (and soon-to-be Premier) Richard Seddon to secure the 'very rich and valuable' Opuatia block to 'throw it open for settlement'. They also pushed for legislative change to enable greater settler control over local government affairs.⁶ The same settlers continued to petition the government for years to open up Opuatia.⁷ The Herald reported that various governments and land speculators 'cast covetous eyes on it, but the natives held to it tenaciously'.⁸ The following year the *Herald* reported that the government's attempts to secure Opuatia had fallen through - the situation was regrettable as all other government land in the area was taken and the Opuatia was among the best land in the province.⁹ Throughout 1894,¹⁰ numerous newspapers carried stories about the 'Opuatia Affair' and the ongoing resistance by some members of Ngāti Tiipa, and nearby Ngāti Te Ata, to the surveying of Opuatia for government roads. Arrests were made. Amidst the increasing pressure to sell, there were internal divisions within Ngāti Tiipa, with some supporting the development of the Opuatia block including surveys and the construction of roads. The government, meanwhile, pushed on with plans to alienate the land needed for roads under the Public Works Act. Eventually the government would acquire large tracts of Opuatia from Ngāti Tiipa at very low cost.¹¹

In 1895, one of Kukutai's great-grandsons wrote a letter to the editor of the *Herald*, complaining about the Government's racial double standard in relation to Opuatia and land matters in general:

Sir. This is my question to you: Can the Government break the law? We native owners of Opuatia have found Europeans who agree to lease our land, and the rent and all agreements have been arranged between us and these Pakehas. We wish to deal with our land according to law, but the Minister of Lands says: No, he won't agree to private dealings. Now this is my question: Is the Minister stronger than the law? We Maoris always thought Ministers were appointed to carry out the law ... the Government block the way, like a great stone in the road, and say, 'You Maoris must sell your land for 5s an acre'. They will give us 5s an acre, but give Pakehas in the other

Island, Waipounamu, £5 to £10 an acre. And yes they talk of one law for both races. Let there be one law for both races, and let the Minister obey the law (Karaka Te Aho, 1895).

Ultimately, the loss of land and authority was an inevitable result of legislation around the NLC. Indeed, Williams argues that its operations, policies, and practices represent a 'judicial raupatu' on hapū which was just as devastating as the 'legislative raupatu' of the 1863 Act (1999, p. 3). Next, we describe the methodology developed to map the impacts of these processes for Opuatia and Ngāti Tiipa.

2 | METHODS

2.1 | Key terms and definitions

A number of key terms are defined in Table 1 for the context of this paper.

2.2 | Data and sources

Datasets and other information used in this research came from four main sources: Te Kooti Whenua Māori - The Māori Land Court (MLC), Toitū te Whenua - Land Information New Zealand (LINZ), Te Rua Mahara o te Kāwanatanga - Archives New Zealand, and the New Zealand Gazette.

MLC data included the MLC Record Sheets, and a Māori Land Spatial Dataset (Māori Land Court, 2021a). The MLC office in each region holds paper-based 'Record Sheets' for each land block. These are a structured list of all 'subdivisions' that have passed through the NLC or MLC and been alienated. The Record Sheets include the subdivision name, the date when the Land Court order was made, the area of the land when it was surveyed (in acres, roods and perches), who the land was 'super-seded' to (this may be the name of an individual settler, a corporation, the Crown, or may just state 'European Land'), and an historic title for the land. The MLC Record Sheets are an important source that provide data on key dates and amounts of land that were alienated from Opuatia in a relatively accessible format. However, working with MLC Record Sheets poses some challenges. First, paper copies must be manually accessed in person from MLC offices, and each page photographed, and subsequently compiled into a digital database. MLC Record Sheets are historic documents, and in some cases information is incomplete or missing. The MLC has also dealt with the partitioning of Māori Land without leading to

TABLE 1 Key terms and definitions

Term	Definition
Alienation	The transfer of Māori Land out of Māori ownership (Office of the Auditor General, 2021). In the context of this report, alienation is the transfer of land in Opuatia to new owners who are not Ngāti Tiipa members.
Fragmentation	The ongoing subdivision of land that leads to increasingly smaller land parcels (Hart et al., 2014).
Partition	The separation of a parcel of Māori Freehold Land into two or more parcels, with new titles being created for each parcel (Office of the Auditor General, 2021). Partitioned land remains in Māori ownership.
Parent block	In the context of this report, parent blocks (1–17) are the large blocks of land within the original Opuatia which were surveyed and mapped soon after the first title to Opuatia was issued.
Subdivision	In the context of this paper, this refers to the dividing of parent blocks into smaller parcels of land that were alienated.
Succession	According to Te Ture Whenua Māori a succession is where an interest in land is transferred from a person who has died to the successors who are entitled to take the deceased person's property (Community Law, 2021).
Superseded	In the context of this report, succession in the MLC Record Sheets identifies the individual or organisation to whom Ngāti Tiipa land was 'superseded' or transferred. In this context this represents the alienation of Ngāti Tiipa land by an individual or organisation.

alienation, and these records are also included in the record sheet (often without a 'superseded' name recorded). Finally, the historic land titles listed in the record sheet have usually been replaced by newer titles and therefore cannot be directly linked to a current legal title and associated parcel of land. The Māori Land Spatial Dataset represents current Māori Land in the form of a Geographic Information Systems (GIS) shapefile. While these data were last updated in June 2017, it still provides a good representation of current Māori Land in Opuatia.

Five datasets were accessed via *Land Information New Zealand (LINZ)*. The *NZ Parcels* dataset (Land Information New Zealand, 2020a) is a shapefile that provides all cadastral land parcels in Aotearoa as well as some

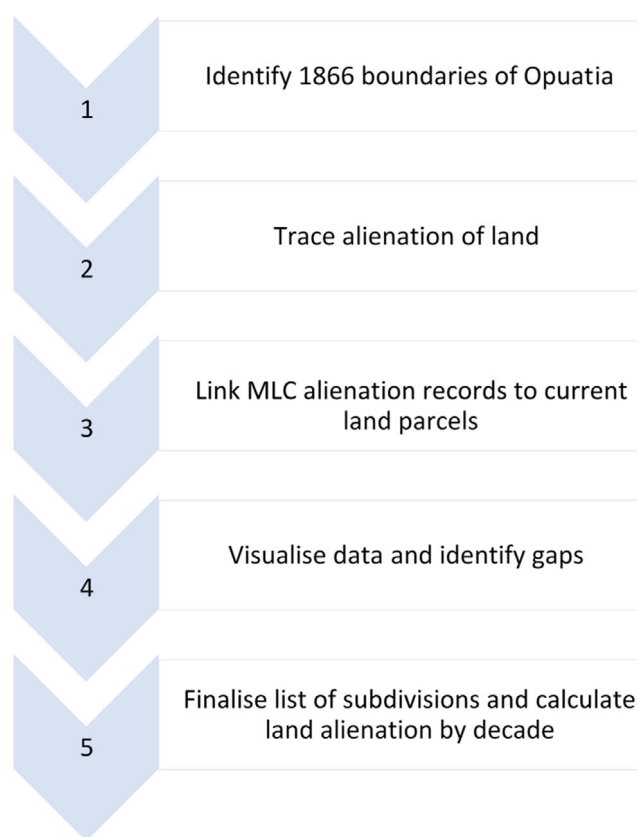


FIGURE 1 Key steps in visualising the history of Opuatia

associated descriptive data for each parcel, including a list of associated titles and surveyed land area. This can be linked to the *NZ Property Titles List* (Land information New Zealand, 2020b), which is a table providing general information on Records of Title such as the title number, the type of title (e.g., Freehold, Cross Lease, etc.), and the number of registered owners. The *Landonline: Title Hierarchy* dataset (Land Information New Zealand, 2020c) lists all prior references for a current title, and therefore provides a link between the current NZ Parcels shapefile and the historical titles listed in the MLC Record Sheets. The Title Hierarchy dataset therefore is a vital component of this research. *Individual land titles* were purchased from LINZ as they show the ownership of land and the rights and restrictions that apply to it. Current records of title were used to determine whether General Land may be owned by Ngāti Tiipa members. Land owned by members of Ngāti Tiipa but classed as General Land was likely subject to compulsory Europeanisation under the Maori Affairs Amendment Act 1967, which declared any Māori land with fewer than four owners to be general land. Historic records of title can, in some cases, provide information that is missing from the MLC Record Sheets and were used to estimate a date when land was likely to have been alienated out of Ngāti Tiipa

ownership. *ML* and *SO* survey plans often show the boundaries of 'parent blocks' or 'subdivisions' within the original Opuatia and were useful for identifying parcels of land that could not be linked to the MLC record sheet through a historic title.

Data from *Archives New Zealand* (such as court records, newspaper articles, and written correspondence) was accessed to provide richer information about how and why land was alienated. It also is the source of some historic maps and plans of both the entire Opuatia block and parent blocks.

The New Zealand Gazette, published since 1841, is the official Government newspaper and journal of constitutional record, and it provided useful additional information about land in Opuatia, which was alienated by the Crown.

2.3 | Analysis

The approach developed to answer the research questions contains several key steps which are outlined in Figure 1.

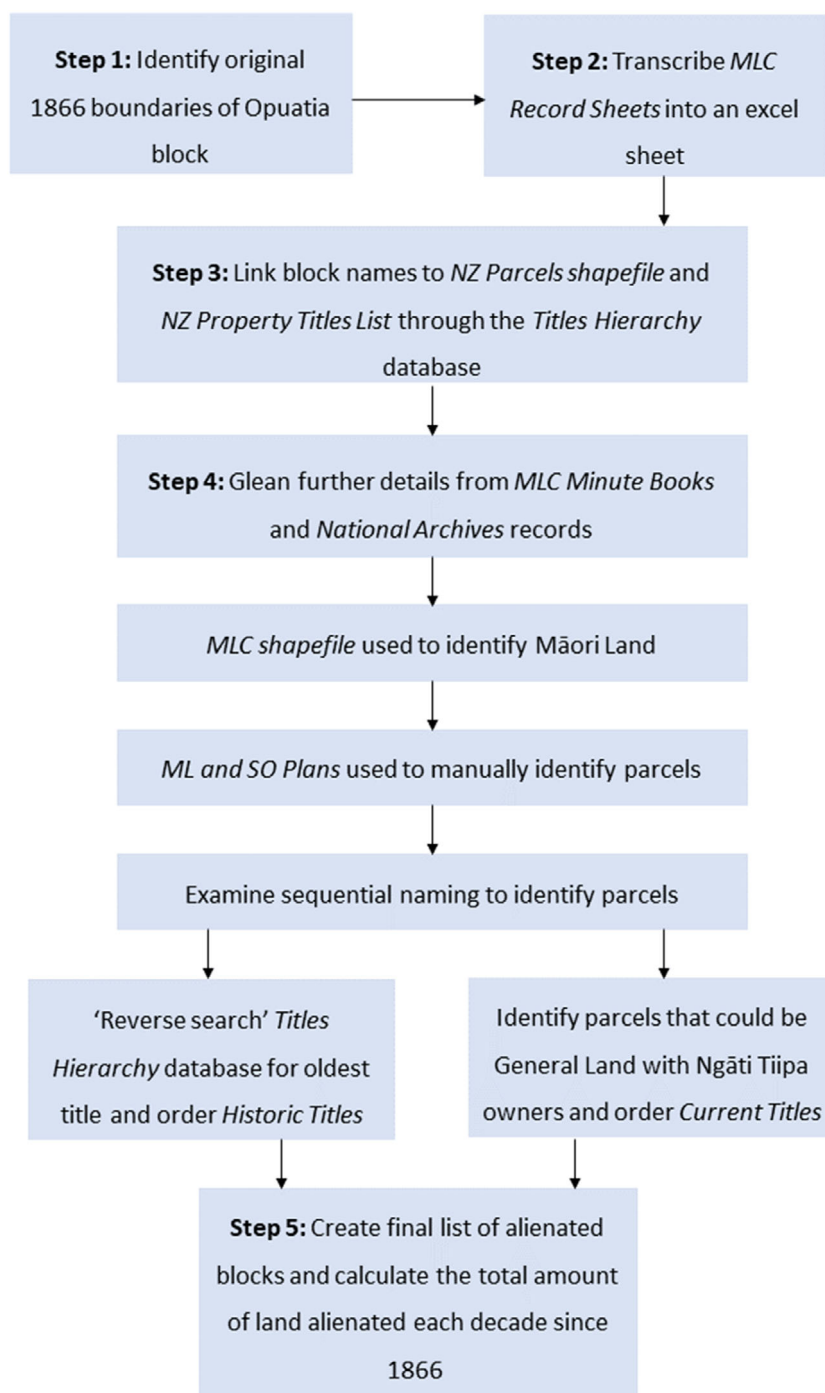


FIGURE 2 Flow chart of steps and datasets involved in repatriating data and calculating land alienation

These steps are described in detail in the subsections below, and a more detailed flow chart of methods and data sources is provided in Figure 2.

2.3.1 | Step 1: Identifying boundaries

The boundaries of the Opuatia block that was awarded to Waata and others in 1866¹² were identified from several sources including individual ML and SO plans of Opuatia subdivisions, and the earliest available Land Information New Zealand Certificate of Title, 1891 (dated 24th September 1891)¹³ for Opuatia which included a map of the block boundaries and a list of owners. The boundaries of parent blocks or subdivisions within the original Opuatia block were identified through ML and SO plans. The area and distribution of current Māori owned land was identified from the MLC shapefile.

2.3.2 | Step 2: Tracing land alienation

The alienation of land was traced and quantified through the Opuatia MLC Record Sheets, which were manually transcribed into an excel spreadsheet so that this data could be more efficiently searched, queried, and linked to spatial datasets such as the NZ Primary Parcels shapefile.

2.3.3 | Step 3: Linking datasets

The historic title recorded for each parent block and subdivision was linked to a current title through the Title Hierarchy dataset. Each historic title listed in the MLC Record Sheets was searched in the Title Hierarchy dataset. If the historic title was recorded in the dataset, then the next title in the 'chain' would be returned. Each title in the 'chain' was searched until a likely 'current title' was reached. This current title was then verified in the NZ Property Titles List to ensure that it was for land in Opuatia. If accurate, this 'current title' was then recorded in the excel spreadsheet. In many cases, several current titles were associated with a single block name as land must have been further subdivided and sold over the decades. Therefore, all relevant 'current titles' were recorded for each block name. When a 'current title' could not be found an alternative approach of searching for the block name in the *estate description* field of the NZ Property Titles dataset was used. In this way, current titles for the subdivided blocks were identified and recorded, and could also be linked to the NZ Parcels geospatial dataset.

2.3.4 | Step 4: Filling gaps through spatial data visualisation

Some block names listed in the MLC Record Sheets were missing information such a historic title or description of who the land was 'superseded' to. Other block names were unable to be linked to a current title via the Title Hierarchy dataset. These types of records were reviewed and more details sought from the MLC Minute Books and National Archive sources. If these sources did not provide additional information, ArcGIS was used to examine the spatial location of these records. Some parcels were Māori owned land and were therefore tagged as such and removed from any calculations of land alienation. A manual approach was then used to complete missing data about land parcels that were unable to be directly linked to the MLC record sheet. The ML and SO Plans of block names in the MLC Record Sheets which had not been linked to a current title were reviewed. This allowed the spatial location of such land to be identified. Information about land alienation for that subdivision could then be manually added to the ArcGIS attribute table. This manual linkage was validated by checking whether the total surveyed area (in m²) of land recorded in the current parcels LINZ dataset aligned with the surveyed area (in acres) recorded on the MLC Record Sheets and the ML or SO Plans. When ML or SO plans were not available, an alternative approach was followed whereby all subdivisions in a block were reviewed and patterns of sequential naming were identified (e.g., 6A1, 6A2, 6B, etc.) to identify a likely current parcel for the record. This was confirmed by comparing the area of surveyed land in the record sheet (e.g., for subdivision 6C) against the Primary Parcels dataset.

When block names and current parcels of land could not be linked through the above approaches, the Title Hierarchy dataset was used to search for the oldest 'historic' title and a copy was ordered from LINZ. The historic title included the name of the owner at the time, a map of the boundaries, the surveyed size of the land, and a date when the title was issued. Although this information is not the same as a record of alienation, it does provide evidence of a point in time when a parcel of land was no longer in Ngāti Tiipa ownership, making it possible to estimate the decade when the land was alienated. There is some land within Opuatia that is classed as General Land but is owned by Ngāti Tiipa whānau. Land that may fit this description was identified from the record sheet as it did not record a name in the 'Superseded' column. Additionally, title records were ordered for parcels of land without records of alienation, that were not classed as Māori Land, and that had more than four owners. A list of land owners

was derived from these titles and provided to haukāinga researchers (home people) working on the project. Any parcels of land owned by Ngāti Tiipa whānau were flagged and removed from the excel sheet used to perform land alienation calculations.

2.3.5 | Step 5: Calculate land alienation by decade

The final stage was to quantify land alienation each decade since 1866 using our excel sheet of land alienation records from the MLC, which had been updated through other sources. The total number of acres, roods, and perches alienated each decade was calculated, and converted to m² so that the proportion of land alienated could be calculated. Finally, key factors in the alienation of Opuatia were identified through the 'superseded' column, and the total size and proportion of land that these parties alienated was calculated.

3 | RESULTS

The first question we sought to address was how much land remained in current Ngāti Tiipa ownership. Table 2 details the amount of land alienated in Opuatia from the

first transaction occurring in 1896 to the last one appearing in the Opuatia MLC Record Sheets in 1967. Due to the vast amount of data (almost 150 alienation orders over the 71-year period), we have condensed this information into a summary for each decade across the period. Within each decade we summarise the total amount and proportion of land that was alienated. In Table 3, we outline the total amount of land within Opuatia, the total amount of land alienations recorded in the Record Sheets, as well as remaining Māori Land and Ngāti Tiipa owned General Land in the Record Sheets. It also includes an estimate of land that is unaccounted for in the Record Sheets.

Our results show that a huge proportion of Opuatia changed hands from Ngāti Tiipa to settlers and the Crown, and that only an estimated 2455 acres (952 ha) of Opuatia land was classed as Māori Land by the end of the focal period, representing just over 5% of the original block.¹⁵ Only a very small proportion (<1%) was in Ngāti Tiipa ownership but designated General Land. A further 7% of the original Opuatia block (3300 acres) was unaccounted for in the MLC Record Sheets, highlighting some of the issues of working with historic records. However, we can be fairly confident that this is General Land not owned by Ngāti Tiipa whānau. Our method for checking the current ownership and alienation history of each parcel of land was robust, detailed and used a range of

TABLE 2 Land alienation in Opuatia by decade from the 1890s to the 1960s

	Number of alienation orders	Acres	Roods	Perches	Total land area in m ² (% of alienated land)
1890s	20	25,125	29	289.7	101,714,031.2 (63.6%)
1900s	42	8269	60	398.9	33,534,278.6 (20.7%)
1910s	39	3444	53	644.6	14,007,318.5 (8.8%)
1920s	15	1040	27	235.9	4,241,993.7 (2.7%)
1930s	4	240	6	66	978,985.8 (0.6%)
1940s	9	502	9	82.4	2,042,702.9 (1.3%)
1950s	8	508	3	29	2,059,573.4 (1.3%)
1960s	8	342	12	123	1,399,277.3 (0.9%)
Unknown date	1	9	0	23	37,003.4 (0.02%)

TABLE 3 Summary of land alienation calculations

	Acres	Roods	Perches	Square metres
Total estimated land in Opuatia (1866)	45,500	0	0	184,132,130 m ²
Total alienated land in MLC Record Sheets	39,479	199	1892.5	160,015,190m ² (87% of all Opuatia)
Remaining Māori Land in MLC Record Sheets	2455	91	1199	10,057,430 m ² (5.5% of all Opuatia)
Ngāti Tiipa owned General Land in MLC Record Sheets	252	3	93.3	1,025,195 m ² (0.5% of all Opuatia)
Land unaccounted for in MLC Record Sheets	3314	293	3184.8	13,788,274m ² (7% of original survey)

TABLE 4 Key organisations, individuals and families that alienated land in Opuatia

Actors	Acres	Roods	Perches	Size in m ² (% of alienated land)
The Crown	18,463	7	57	74,725,700 m ² (47%)
Settlers	17,738	161	1486.6	71,983,694 m ² (45%)
A. Cameron, E. Cameron, D. Cameron	2432	10	67	
J. H. Eyre, I. A. Eyre	1791	0	0	
L. Forgie	932	7	53	
B. J. Walter, B. M. Walter, G. Walter	894	13	164	
R. H. Cathcart	852	3	12	
F. I. Rutherford	818	4	67	
W. J. Logan, J. Logan	805	3	40	
J. Macauley	601	0	0	
A. Muir, M. Muir, T. Muir, O. Muir	533	10	112.6	
A. Crawford, S. H. Crawford Jnr	475	3	37	
Corporations	868	2	23.2	3,515,280 m ² (2%)
Pukekawa Co.	686	2	18.2	
Onewhero Land Co.	164	0	0	
M & B Products Ltd.	18	0	5	
Unknown	2863	34	325.7	11,628,802 m ² (7%)
Total alienated land	39,932	204	1892.5	160,015,190 m ²

sources and techniques. This included ordering titles for unlinked parcels of land to develop a list of current owners, which haukāinga researchers reviewed.

The decadal analysis in Table 2 clearly shows that the bulk of Opuatia alienation occurred in the 1890s, with almost two thirds passing out of Ngāti Tiipa ownership between 1896 and 1899. After 30 years of keeping the block intact, a veritable land frenzy was unleashed. Another fifth of Opuatia land was alienated in the decade from 1900, and just under 10% between 1910 and 1919. From 1920 onwards, transactions petered out; by that stage there was little left of Opuatia to alienate.

Table 4 shows the key organisations and individuals that acquired parts of Opuatia. The Crown was clearly the single largest actor, alienating more than 18,000 acres of land, most on a single day in 1896. Parent block 1 appears to have been used by the Crown for forestry,¹⁵ while parent block 2 was likely sold on to settlers. The *Auckland Star* reported on the 8th of June 1896 that the Crown had recently acquired thousands of acres of Opuatia ‘... from the Maoris [sic] at a very low price.’ It went on to state that ‘... a large portion of this land was really good and likely to be disposed of by the Crown at a considerable profit’. Given the persistent and organised efforts of settlers to acquire land in the area, it is unsurprising that large parts of Opuatia ended up in settler ownership. Although some settlers only appear once in

the MLC Record Sheets, others are recorded multiple times and amassed large blocks of land over a period of several years. There are clear patterns to the settler acquisition of land in Opuatia and many settler families and individuals appear to have targeted blocks in a particular area. For instance, the Cameron family carried out five alienations of land in parent blocks 5 and 6; the Eyres focused on two lots in parent block 4; Forgie alienated land in subdivision 6D; the Walters alienated seven sections of parent blocks 4 and 5; Cathart alienated a single large subdivision, 7D; the Logans focussed on parent blocks 8 and 12, which are geographically proximate; the Muir family alienated six sections of land in parent blocks 11 and 16, which are also proximate¹⁶; the Crawford family and Rutherford respectively acquired two and four sections of land in parent blocks 4 and 5. Three corporations appear in the MLC Record Sheets and together came to own 2% of alienated land.

4 | DISCUSSION

Government-held data produced as an artefact of colonisation contain important insights into its inner workings but are often inaccessible to those most impacted. In the case of Māori land data, current geospatial datasets and land records were not designed to be integrated with

historic records of land alienation. Some land datasets are contained within proprietary software or different, incompatible, information systems that are difficult to work with for those lacking the capacity and resources. The practice of updating data by overwriting historical records makes tracking data provenance extremely difficult (Shep et al., 2021) and there are also issues with accuracy that require laborious triangulation. In addition, archival materials and land alienation records have not been systematically digitised or indexed, and paper copies must be accessed in person. In order to verify land ownership, we were required to purchase current and historic titles from LINZ at a fee of \$15 per title. The time required and difficulty involved in accessing these materials, along with the cost, can act as a significant barrier for hapū and whānau wishing to investigate the administrative history of their whenua. In the context of IDSOv, it also raises questions about the appropriateness of Māori having to pay to access information relating to their own land.

Our novel methodological approach to tracing the history of Opuatia attempts to overcome these issues. Through this approach we were able to quantify the amount of Opuatia land remaining in Ngāti Tiipa ownership, and identify critical timepoints for its fragmentation and alienation. The results are sobering, but not surprising. After successfully resisting pressures to 'open up' Opuatia, the 1890s were a devastating decade for Ngāti Tiipa. Almost two-thirds of Opuatia were alienated in just three years. The Crown was the catalyst for this early alienation, but by the start of the 20th century individual settlers replaced the Crown as the driving force behind land transfers. By the end of the 1910s more than 90% of land alienations in Opuatia had already been completed.

That Ngāti Tiipa were allocated Opuatia for their support of the government, but still ended up owning only the shadow of the land, supports others' observations that hapū and iwi designations as 'loyal' or 'rebel' were ultimately of little consequence. The eventual outcome is that most Māori ended up landless. The Crown's direct involvement in alienating huge sections of Opuatia which were sold on to settlers at a significant profit was a strategy replicated across Aotearoa (Gilling, 1994). The pace of alienation in Opuatia also appears to be consistent with the experiences of other hapū and iwi. The NLC had the largest impact between 1864 and 1909, and land alienation only slowed in the 1910s due to a lack of remaining Māori Land (Williams, 1999). The accumulation of land by individual settlers and their families was likely to be linked to a business strategy of developing the land for agriculture. Mahuta (2008) argues that while the Crown claimed that raupatu in Waikato was as punishment for 'rebellion', the main factor was the desire to

control the huge thriving agricultural industry on fertile Waikato land. The Pukekohe market gardens area which extends to include Te Kohanga in Opuatia is the largest in the country (Gillingham, 2008).

In addition to the substantive findings of this research, the methodology that we have developed also advances hapū data sovereignty, allowing hapū to benefit from the repatriation and repurposing of colonial data. Indigenous data sovereignty is both a growing field of scholarship (Kukutai & Taylor, 2016; Walter et al., 2021) and a site of data activism and advocacy which sees sovereignty over data as a critical enabler of tribal nation re-building which includes rights and responsibilities to lands and waters (Robinson et al., 2021; Russo Carroll et al., 2019; Walter et al., 2021). While the rights and interests of Māori and iwi to access, control and use Māori and iwi data has received significant attention (Gifford & Mikaere, 2019; Te Mana Raraunga, 2018; Te Kāhui Raraunga, 2022), the implications for hapū data sovereignty have been hitherto poorly understood.

This work relates to international literature on Indigenous land loss and the intersection with the broader IDSOv movement (Adberg et al., 2022; Lucchesi, 2020). It highlights again the challenges involved in accessing and using Indigenous data that are stored in government repositories and controlled by state institutions. This work is also a pivot away from much of the Māori mapping work to date in this area, which has focussed on quantifying land confiscation at an iwi level, and within the context of a Waitangi Tribunal claim (for example, see Belgrave et al., 2006; Ellis et al., 2003; Heinz, 2008). Crown preferences for dealing with larger iwi groupings mean that hapū aspirations for the data collected and produced in the process of developing Waitangi Tribunal reports can be lost. Our approach involving the repatriation and harmonisation of Opuatia land data re-centres hapū as the main political entity for expressing mana whenua, and the primary social unit connecting people to whenua. This work can sit alongside other hapū mātauranga and the Indigenous mapping of sites of significance. Indeed, the work undertaken for this paper sits within a wider project involving the mass repatriation of Ngāti Tiipa whakapapa and whenua data and its location within a hapū-controlled digital repository for the benefit of current and future descendants (Kukutai, 2022; Kukutai et al., 2021). We hope that our methods can also be adapted and used by other hapū interested in developing their own digital and data infrastructure so as to reclaim control over data relating to their whenua, as supported by Article Two of Te Tiriti o Waitangi, the UNDRIP, and Indigenous data sovereignty.

4.1 | Statement on data sharing

While the source data used in this paper were accessed from repositories that were either open source or accessible for a fee, the resulting dataset upon which the analysis is based is property of Ngāti Tiipa and subject to their tikanga and kawa. As such, this dataset is not available for use by other researchers without the express permission of Ngāti Tiipa.

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ENDNOTES

- ¹ Māori Customary Land is land that: (1) has not had its ownership investigated and determined by the Māori Land Court; (2) has not been acquired by the Crown; (3) does not have a Land Transfer Act title or Deed; and (4) continues to be held in accordance with tikanga Māori. In comparison, Māori Freehold land has been investigated by the Māori Land Court and a freehold order has been issued. Māori Freehold Land is held by individuals who have shares together (Māori Land Court, 2021b). General land owned by Māori means privately owned freehold land that is owned either by one Māori person or by a group of people, the majority of whom are Māori (Te Puni Kōkiri, 2021).
- ² In his evidence to the NLC, Waata stated that the Crown had abandoned its claim to Opuatia in the Compensation Court in 1865.
- ³ The Native Land Court was renamed the Māori Land Court in 1954.
- ⁴ Sorrenson (1956) has linked the alienation of tribal land and subsequent European settlement to Māori depopulation, both nationally and for Waikato iwi.
- ⁵ A lien is a right for a creditor to retain possession of a debtor's property until the satisfaction of that debt (McLintock, 1966).
- ⁶ New Zealand Herald, 1892.
- ⁷ Auckland Star, 1894.
- ⁸ New Zealand Herald, 1894.

- ⁹ New Zealand Herald, 1893.
- ¹⁰ Otago Daily Times, 1894.
- ¹¹ Auckland Star, 1896.
- ¹² Waata Kukutai paid for the block to be surveyed according to his specifications, as described in the Native Land Court (Waikato Minute Book 1, pp. 27–28).
- ¹³ Kukutai's grandson, Tuteranganini Poutaua Kukutai, appeared before the Compensation Court in July 1868 and lodged a list of Ngāti Tiipa claimants, many of whom appear in the 1891 Certificate of Title.
- ¹⁴ According to information held by Māori Land Online (2021)
- ¹⁵ Opuatia 1 includes the Onewhero Forest which was subsequently returned to Waikato-Tainui as part of the 1995 Deed of Settlement.
- ¹⁶ It is important to note that, as Shep et al. (2021) argue, colonial data sources are often incomplete and at times contradictory. As an example, documents at Archives New Zealand provide evidence that Alexander Muir also alienated more than 600 acres of land in parent block 6.

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