

KLONDYKE WATER STORAGE FACILITY, SHEPHERDS BUSH, CANTERBURY: ARCHAEOLOGICAL ASSESSMENT

Report prepared for Ryder Consulting Ltd
and on behalf of
Rangitata Diversion Race Management Limited

By

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INTRODUCTION

Project Background

Rangitata Diversion Race Management Ltd (RDRML) are advancing resource consent applications necessary for a water storage facility to supplement the Rangitata Diversion Race (RDR). The result of consultation with stakeholders and interested parties has led to the decision to progress with an application for a 53 million cubic metres water storage facility. The Klondyke Water Storage facility is located on the river terraces at the upstream end of the RDR, with the Rangitata River to the west, Ealing Montalto Road to the east, and farmland south of Shepherds Bush Road to the south (Figure 1–Figure 3). The storage facility will improve security of water supply for irrigation customers in the area. Water will be available for purchase and use by others. Interest has been expressed by parties looking to use the water for irrigation south of the Rangitata River. Others have expressed interest in using water from the water storage for aquaculture. Ultimately the use of the water will be determined by the market conditions once it is consented. The facility will:

1. Have a total construction area of c.500 hectares of land, including the storage facility (286 hectares), temporary works, spoil disposal and pond outlet areas, that currently supports agricultural endeavour;
2. Be supported by a supplementary water take of up to 10 cubic metres per second from the same location as the existing RDR consented take from the Rangitata River.
3. Require the existing RDR canal to be widened and raised in height between the intake and the water storage facility to convey the supplementary water take and in accordance with the approach set out by the Rangitata Water Conservation Order.
4. Construct earth embankments that range from 2.5 metres in height to a maximum of 30.5 metres. The water storage facility will have a maximum water depth of 24 metres.
5. Require approximately 11 million cubic metres of excavated material, of which, 10 million cubic metres will be used during construction. 1 million cubic metres of surplus material will be spread across disposal areas to the north and south of the pond.
6. Contain an outlet at the southern end of the storage pond that conveys flow to the Mayfield Hinds Irrigation canal, which has been designed to include a recreational white water course that is available for public use.
7. Include a six-hectare ecological refuge including 1 ha of lizard habitat, 2 ha of native plantings and 3 ha of constructed wetland.
8. A new, permeable rock bund fish screen, located 1.8 km downstream of the RDR intake and immediately downstream of the existing bio-acoustic fish fence (BAFF) and sand trap.

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INTRODUCTION, CONTINUED

Project Background, *continued*

An archaeological assessment was commissioned by Ryder Consultants Ltd on behalf of RDRML to establish whether the proposed work is likely to impact on archaeological values. This report has been prepared as part of the required assessment of effects accompanying a resource consent application under the Resource Management Act 1991 (RMA) and to identify any requirements under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA). Recommendations are made in accordance with statutory requirements.

Methodology

The New Zealand Archaeological Association's (NZAA) site record database (ArchSite), Ashburton District Plan schedules and the Heritage New Zealand Pouhere Taonga (Heritage NZ) New Zealand Heritage List were searched to determine whether any archaeological sites had been recorded on or in the immediate vicinity of the property for information on sites recorded in the vicinity. Literature and archaeological reports relevant to the area were consulted (see Bibliography). Early plans held at Land Information New Zealand (LINZ) were checked for information relating to past use of the property.

A visual inspection of the property was conducted 16 May 2016 by Peter Mitchell. The field survey consisted of a drive-by survey and survey on foot. The lower terrace was not inspected in detail due to a known history of flooding on the terrace (see Background section). Where a walkover was undertaken, the ground surface was examined for evidence of former occupation (in the form of shell midden, depressions, terracing or other unusual formations within the landscape, or indications of 19th century European settlement remains). Photographs were taken to record the area, topography and features of interest.

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INTRODUCTION, CONTINUED



Figure 1. Location of the proposed storage facility to the east of the Rangitata River, Canterbury (source: Google maps)

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INTRODUCTION, CONTINUED

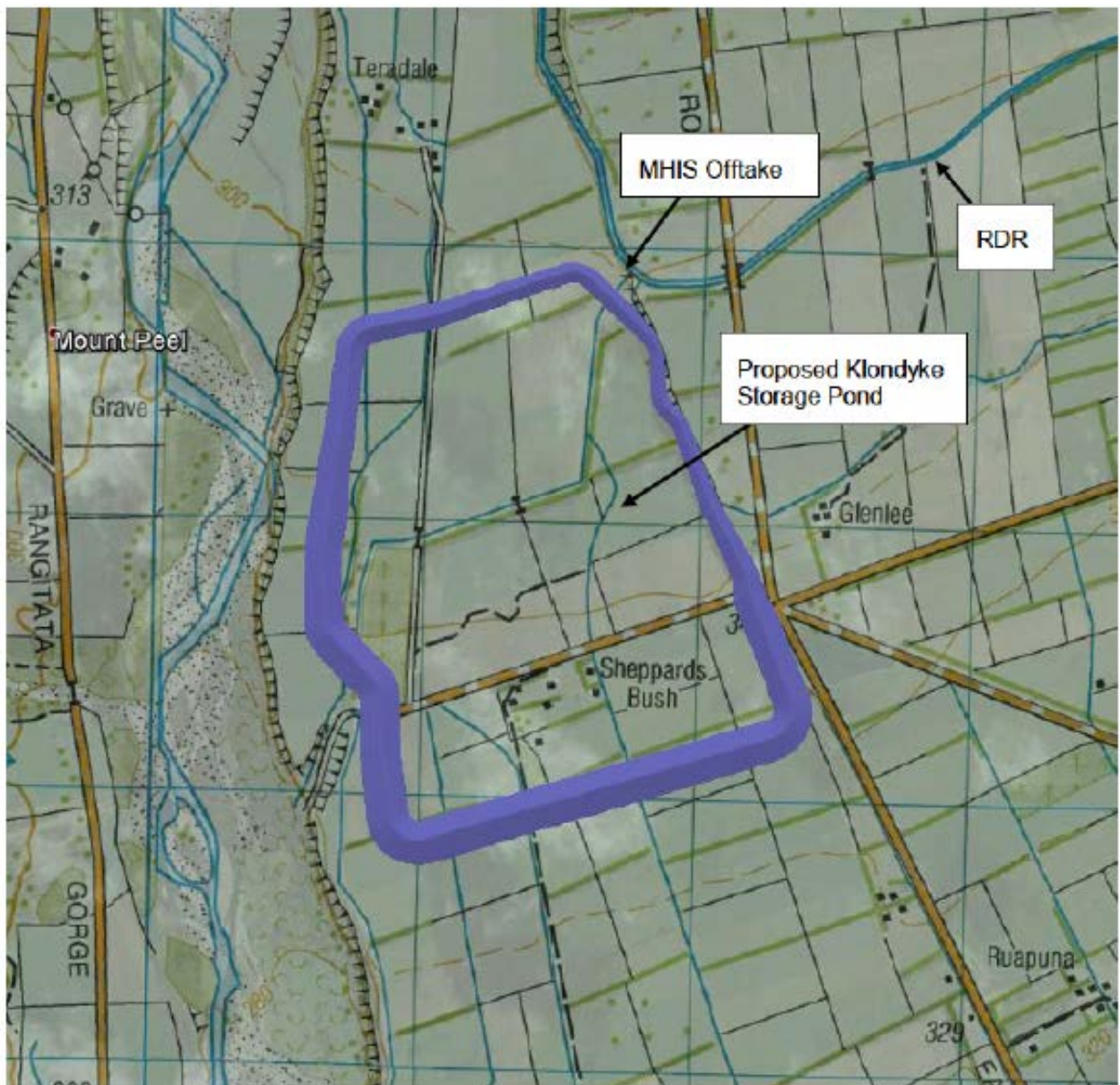


Figure 2. Location plan for the water storage facility

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Figure 3. Site layout for the Klondyke Water Storage Facility (source: MWH 2016)

RESULTS

Environmental Setting

The Rangitata River runs for around 105km from the confluence of the Havelock and Clyde Rivers to the ocean. The Havelock and Clyde Rivers have their headwaters on the Main Divide of the Southern Alps. The catchment area of the Rangitata River is 1,773km², and the upper parts of the river above the gorge drain mountainous country characterised primarily by greywacke and argillite of low to medium induration. The lower river reaches cross glacial outwash deposits of the Burnham formation (Sutherland 2006). The name Rangitata (Rakitata) has been translated as ‘close sky’, ‘day of lowering clouds’, and ‘the side of the sky’ (Te Ara 1966).

The Southern Alps, which comprise rocks laid down around 230 to 170 million years ago, are located to the north, and Mt Peel is located across the river to the west. The Southern Alps range as observed today is due to the uplift associated with the Kaikoura Orogeny that begun 24 million years ago and still continues today (University of Waikato 2010). Glaciation has occurred more than five times in the last 2 million years.

To the north, south and east of the development site are the Canterbury Plains – Ka Pakihi Whakatekateka o Waitaha (O’Regan 2012), which extend to the east coast. The Plains were formed from quaternary moraine gravels deposited during glacial periods in the late Pleistocene around 3 million to 10,000 years ago (Gage 1969:35). The alluvial gravels were then reworked as shingle fans of some of the large rivers.

Māori Background

The Ashburton District fall within the rohe of Ngāi Tahu, and Te Rūnanga o Arowhenua are the kaitiaki Rūnanga for this area.

Waitaha, the first people of Te Waipounamu, journeyed on the Uruao waka and settled in Kā Pākihi Whakatekateka o Waitaha – the Canterbury Plains. Ngāti Māmoe and then Ngāi Tahu followed. Through warfare, intermarriage and political alliances a common allegiance to Ngāi Tahu was forged. Ngāi Tahu means the ‘people of Tahu’, linking them to their eponymous ancestor Tahu Pōtiki. Within the iwi there are five primary hapū being Kāti Kurī, Ngāti Irakehu, Kāti Huirapa, Ngāi Tūāhuriri and Ngāi Te Ruahikihiki (see <http://ngaitahu.iwi.nz/ngai-tahu/> for further details).

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RESULTS, CONTINUED

Ethnographies

Reference to the Rakitata (Rangitata) River can be found in the mid-late 19th century by early ethnographers such as Julius von Haast, William Taylor and Herries Beattie (as discussed in Brailsford 1984). Brailsford, in his book looking at trails used to procure pounamu (1984:162), refers to Beattie when discussing the Sealy Pass, where he discusses a report from Beattie who noted that a Maori told him:

‘His father used to say there was a track for fast trips into Westland from Temuka by following up the Rakitata River to a pass. You watched a peak and went by its signs. Fog on one side meant you couldn’t get through; fog on the other side warned you not to attempt to cross the pass’ (Beattie 1945: 68; cited in Brailsford 1984:162).

Brailsford states that ‘the use of Rakitata for Rangitata is the southern Ngai Tahu dialect coming through’.

In a newspaper article published in the 1930s additional ‘fragments’ of information relating to the trail are evidenced:

‘The pre-Pakeha tribes of South Island Maoris tramped by this route to the West Coast in quest of the valued pounamu, or greenstone. They followed the Havelock branch of the river, and , after passing the Godley Glacier on the right, crossed the Bealey (?Sealy) Pass and followed down the South Wanganui (?Wataroa) River to the West Coast beach, thence north to the Arahura River, where they procured green jade’ (Beattie 1945: 68; cited in Brailsford 1984: 162).

Brailsford (1984:162) concludes that the Sealy Pass is the only likely route between Whitcombe in the north and the Haast in the south and it was on line for the Maori of the Rangitata System.

High mobility was characteristic of the southern Māori, who would undertake seasonal expeditions over considerable distances, utilising the overland tracks in order to obtain resources throughout the island (Anderson 1998: 118).

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RESULTS, CONTINUED

Land Purchase and European Settlement

The government purchased most of the Canterbury region from Ngāi Tahu in Akaroa in 1848, which is known as the Kemp Purchase after Commissioner Henry Tracy Kemp.¹ Sixteen out of 24 Ngāi Tahu chiefs signed the purchase, and £500 out of the £2000 Kemp originally offered was paid. The purchase allowed the Māori to keep their settlements and resource sites as well as additional reserves. However, when the land was surveyed later that year, many reserves that had been agreed in the Kemp purchase were ignored or reduced² (O'Regan 2001: 16-19).

European settlement in the Canterbury region³ was late to bloom, with initial settlements in the 1830s characterised by small whaling and farming communities in the Banks Peninsula. Larger scale settlement came only with the Canterbury Association, which was founded in 1848 in England to start a settlement in New Zealand (McAloon 2001). The Canterbury settlement centred on Christchurch was founded as an Anglican settlement to be developed in accordance with Edward Gibbon Wakefield's theory of systematic colonisation. Following the Kemp Purchase, the Canterbury Association sent a total of 25 immigrant ships carrying 3,549 passengers between 1850 and 1853, and over 400 land purchasers emigrated, most being farmers (McAloon 2001: 33).

While the initial focus of settlement was on crops, pressure from sheep farmers (sheep farming was proving to be highly successful in Australia at the time) led to a change in the settlement profile. John Robert Godley, Resident Chief Agent for the Canterbury Associates, soon noted that Canterbury required more than agriculture to flourish, and he had made provision for pastoral runs by the end of 1851 (Holland & Hargreaves 2001: 44). New sheep farmers moved into the area from Australia, the Wairarapa, and Marlborough, initially settling in the plains, with later arrivals going further inland to exploit the mountains (Figure 4). Much this land was unoccupied, and boundary points were registered, grazing licences applied for and stock raised.

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¹ <http://www.TeAra.govt.nz/en/canterbury-region/8>

² <http://www.TeAra.govt.nz/en/canterbury-region/8>

³ The history provided here is a summary – the full history of the Canterbury region is beyond the scope of this report. The emphasis here is on general settlement and development of the land.

Run 40 NZR⁴ Shepherds Bush

The development area was originally part of Run 40 NZR, subsequently named Shepherds Bush. The application of Benjamin and Thomas Moorhouse for this land was notified in the *Canterbury Gazette* on 1 November 1854. It was an area of 40,000 acres and lay between the Rangitata and South Hinds rivers. Benjamin Moorhouse soon bought his brother's interest in the run and was living there in February 1856 'in a tent with a chimney at one end'. The site of this first house was beside the Rangitata River and it eventually grew to 16 rooms, before being washed away in 1888. The next house was built close to the terrace and was eventually pulled down and the remains burnt. The woolshed on the property had also been on the lower terrace, although this was dismantled and re-erected on top of the terrace. It has since been removed from the site. There was a small patch of bush near the homestead, so when Mrs Moorhouse came to live on the station she named it Shepherd's Bush in allusion to the bush and their occupation as shepherds (Acland 1946: 287).

Between 1861 and 1862 the run went through a rough patch with 5000 of Moorhouse's 6000 sheep declared scabby. He was fined £200. The flock was declared clean in 1863 (Acland 1946: 288). The first show held by the Canterbury Pastoral Association was held at Shepherds Bush on Wednesday 14 September 1859.

In 1872 Dr Moorhouse died, aged 42, and after his death his widow carried on the station until 1885, when it was taken over by the National Mortgage and Agency Company (Acland 1946: 288).

In the 1870s David Morrow freeholded 7300 acres in the middle of Run 40, and formed the Montalto estate, at the time when some of the land was also sold to farmers and which became Ruapuna. Acland (1946: 289) states:

'In 1889, when the runs were put up to auction, Morrow also out-bid the company for leasehold country—the hill part of the run. This left the company with a freehold station of five or six thousand acres running up the Rangitata, across the foot of the hills, and down the South Hinds—shaped like a horse-shoe. It was, of course, the freehold frontage which Dr Moorhouse had bought to protect his run. This carried about 5000 sheep and the company went on with it until 1902, when they began selling off the land in blocks. A year or so later they sold the homestead and the last of their land to Donald Frazer, who had managed Shepherd's Bush for them for many years.'

Continued on next page

⁴ This section is largely derived from Watson 2013, with some new research also included.

RESULTS, CONTINUED

Run 40 NZR⁵ Shepherds Bush, *continued*

Another estate bordering the site area is the Ruapuna or Ballyntine Estate founded by J. Ballantyne & Co Ltd. Ballantyne who bought the Thirleston block (362 Shepherds Bush Road) of 1076 acres in 1882. The estate also included the Staple block of 990 acres purchased in 1878, 900 acres of Yarra and the 1000 acre Ettrick block, purchased in 1889. In 1892, 165 acres were added to the Staple block and 300 acres to the Yarra block (see Watson 2013 for further details).

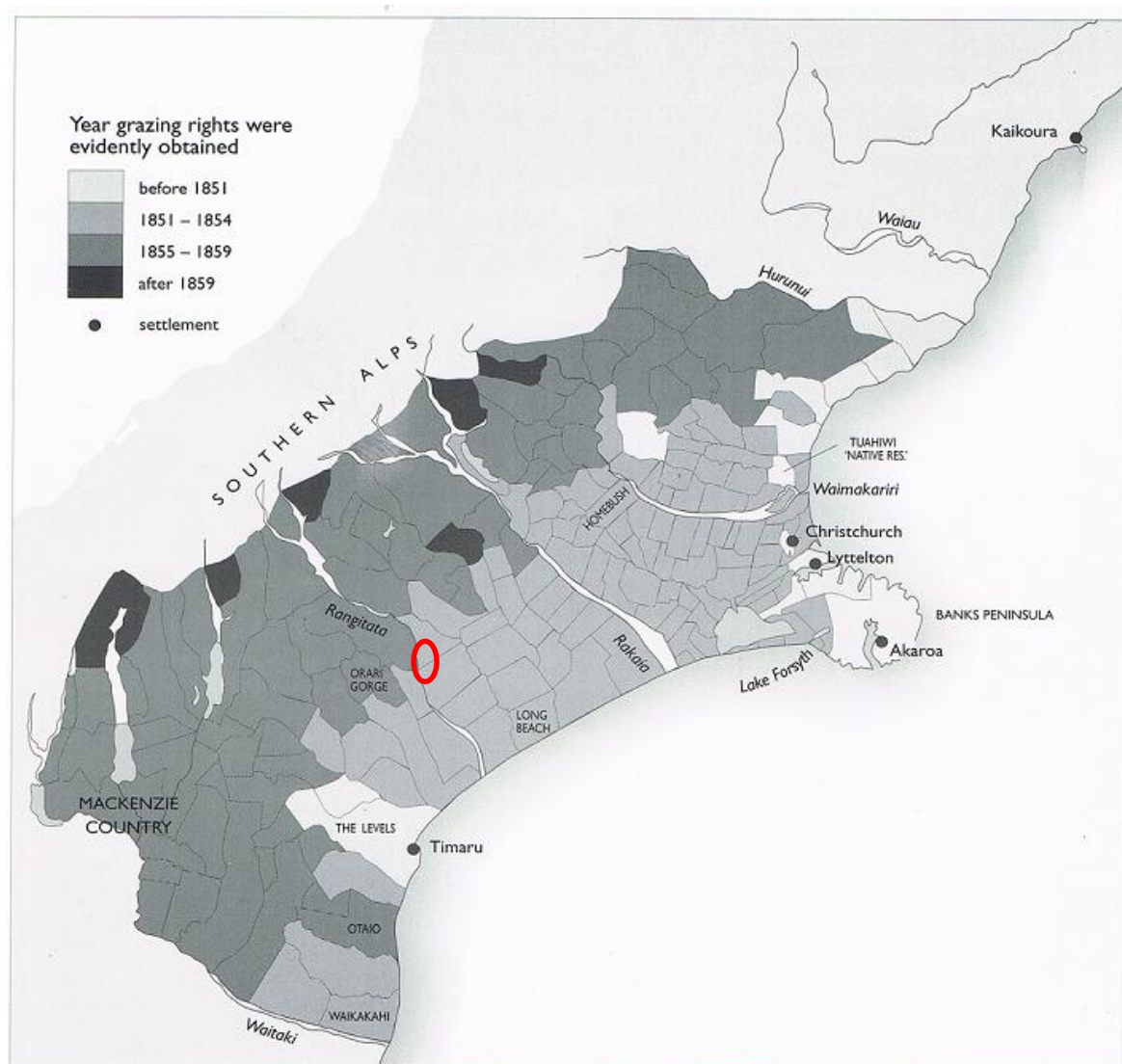


Figure 4. Map illustrating the years in which grazing rights were obtained in the Canterbury region. Grazing rights in the area of the proposed development began in 1851–1854 (circled). Map from Holland & Hargreaves 2001: 44 (derived from Acland & Scotter (1975) and Pinney (1971))

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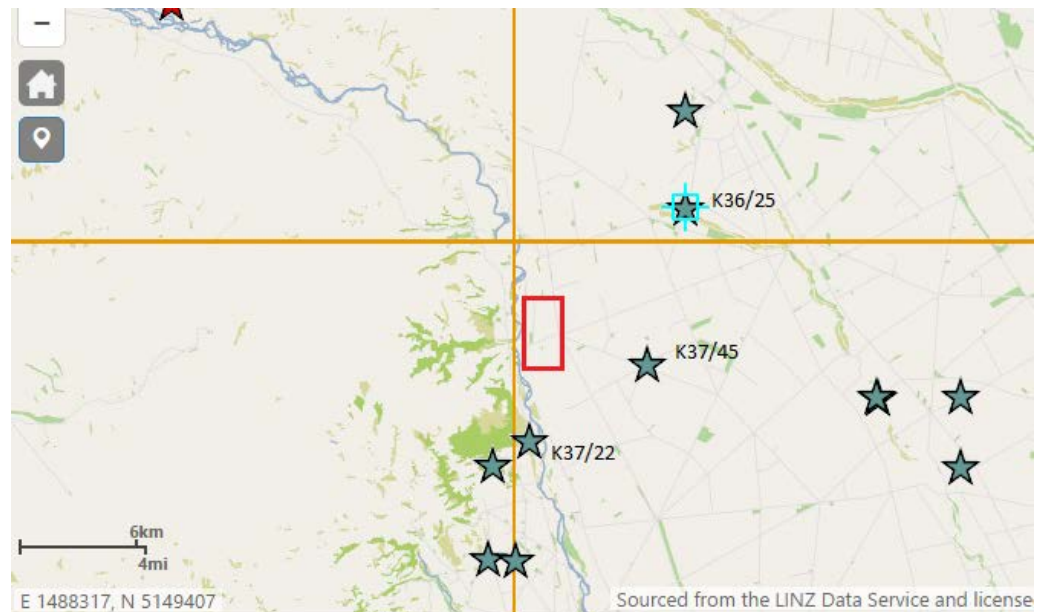
⁵ This section is largely derived from Watson, K. 2013. 362 Shepherds Bush Road, Ruapuna: An Archaeological Assessment, with some new research also included.

RESULTS, CONTINUED

Archaeological Background

There are no recorded archaeological sites within 4km of the proposed development area (Figure 5). The nearest sites are a 19th century farmhouse (K37/45; see Watson 2013); 11 saw pits located on the west side of the Rangitata River (K37/22); and Maori ovens located to the northeast (K37/25). There have been no previous archaeological investigations within the boundaries of the proposed development area.

Figure 5. NZAA map showing the proposed development area (red rectangle) and distribution of sites in the wider area. The nearest site at over 4km away is K37/22



Early Plans and Maps

A selection of early plans and maps were obtained from LINZ dating from 1905 to 1996 which were checked for evidence of structures or historical information of relevance to the proposed development site. However, nothing was found.

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RESULTS, CONTINUED

Field Survey

On 16 May 2015 Peter Mitchell (Underground Overground Archaeology) undertook a field survey of the area to be inundated by the proposed water storage facility. This involved driving around the perimeter of the area (as much as was possible), and some walking to check for the presence or absence of possible pre-1900 building foundations, standing buildings or archaeological material, particularly at 917 Shepherds Bush Road (Figure 6 to Figure 10). The lower terrace was not inspected in detail as it is considered to have low potential for any archaeological features visible above ground, due to a flooding event known to have washed away the former homestead, and the land use history, which has seen the land in pasture for sheep farming for over 100 years. Due to there being a thunderstorm in the area at the time visibility was poor, although the ground visibility was good.

The terrain is undulating down land that slopes gradually toward the Rangitata River gorge (Figure 6 and Figure 7). There are river terraces nearer the river and the land then slopes steeply down into the Rangitata gorge itself. The predominant vegetation is pasture with shelter belts of pine trees and the occasional macrocarpa hedge (Figure 8).

No plans were recovered during historical research to indicate a clear location for the Shepherds Bush homestead on the lower terrace prior to it being washed away during flooding, and on inspection no pre-1900 standing remains or building foundations were visible in the area (Figure 9 and Figure 10). The houses at 917 Shepherds Bush Road are mid to late 20th century and the associated farm buildings are also mid to late 20th century. These buildings were not photographed.

At the northern end of the area to be affected by the proposed earthworks is a water management system of ponds and channels that is of 20th century date (Figure 11). There is a bridge at the western end of Shepherds Bush Road that also appears to be of 20th century construction (Figure 12). There are numerous fences on the properties, mostly barbed wire with timber fence posts, which all appear 20th century in date.

There do not appear to be any extant archaeological features on the surface within the area of proposed works. There may be in situ subsurface archaeology such as buried rubbish pits or the long drop toilet associated with the original homestead on the site, but as the original location of the homestead is not known, it is not possible to establish exactly where these possible features may be located.

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RESULTS, CONTINUED

Figure 6.
Looking west
from the
intersection of
Moorhouse Road
and Shepherds
Bush Road. The
flat river plains
are obvious in
this area



Figure 7.
Looking
southwest from
the corner of
Moorhouse Road
and Shepherds
Bush Road,
illustrating the
southern area of
the proposal



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RESULTS, CONTINUED

Figure 8. View of the northern area of the proposal, looking northwest from the intersection of Moorhouse Road and Shepherds Bush Road



Figure 9. Looking southwest towards the lower terrace



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RESULTS, CONTINUED

Figure 10.
Looking west
towards the
lower terrace



Figure 11. The
water storage
and management
system located at
the north end of
the proposed
works. This is a
20th century
feature. Looking
west



Continued on next page

RESULTS, CONTINUED

Figure 12. The bridge at the western end of Shepherds Bush Road, which appears to be an early 20th century feature



DISCUSSION

Summary of Results

The proposed Klondyke Storage Facility and associated structures/features is located in an area that has no recorded archaeological sites within the project footprint, and none within 4km. There are no historic heritage sites listed on the Ashburton District Plan.

No archaeological sites were identified during the field survey. A farming landscape dominates the area and this is consistent with the historical use of the land for sheep farming, initially as Run 40 Shepherds Bush. The closest site relating to Maori occupation is over 4km to the northeast, although a subsidiary walking track to the Southern Alps to source Pounamu was possibly located somewhere near the river.

Maori Cultural Values

This is an assessment of effects on archaeological values and does not include an assessment of effects on Maori cultural values. Maori cultural values may encompass a wider range of values than those associated with archaeological sites.

A Cultural Impact Assessment is being completed by Te Rūnanga o Arowhenua, who are kaitiaki for the area. The CIA will establish how any activity in their takiwā impacts upon their cultural values, beliefs and practices.

Survey Limitations

It should be noted that archaeological survey techniques (based on visual inspection and minor sub-surface testing) cannot necessarily identify all sub-surface archaeological features, or detect wahi tapu and other sites of traditional significance to Maori, especially where these have no physical remains. The storm did affect visibility during field survey, but ground visibility was good.

Archaeological Value and Significance

The proposed areas of works for the Klondyke Water Storage Facility have no known archaeological value or significance. There is low potential for any unidentified subsurface remains, as no sites were identified during the field survey and the land has a history of sheep farming, which would not be expected to leave much archaeological evidence. While the original Shepherds Bush homestead is reported historically to have been located on the lower terrace, the original homestead was washed away in a flood, and research did not identify a plan indicating exactly where its location was; no archaeological remains were observed during the field survey.

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DISCUSSION, CONTINUED

Effects of Proposal

Construction of the proposed Klondyke Water Storage Facility and associated buildings/features (including the ecological refuge, fish screen and white water course) will have no effect on any known archaeological sites, and the potential for unrecorded archaeological sites is considered low due to the history of the site for sheep farming. While a 19th century homestead was said to be located in the area of the lower terrace at Shepherds Bush, its exact location is not known and it was reportedly washed away during flooding in the 19th century. There may be associated surviving subsurface features such as rubbish pits or a latrine, but the likely location of such possible features is not known.

In any area where archaeological sites have been recorded in the general vicinity it is possible that unrecorded subsurface remains may be exposed during development. While it is considered unlikely in this situation due to the pastoral history of land use across most of the area, and the fact that part of the development site is located on a low river terrace which has been subject to flooding (with a house having been washed away in the 19th century), the possibility can be provided for by following Accidental Discovery Protocols ensuring that the Council, Heritage NZ and Iwi (if remains relating to Maori occupation are exposed) are contacted should this occur.

Archaeological features and remains can take the form of burnt and fire cracked stones, charcoal, rubbish heaps including shell, bone and/or 19th century glass and crockery, ditches, banks, pits, old building foundations, artefacts of Māori and early European origin or human burials.

Resource Management Act 1991 Requirements

Section 6 of the RMA recognises as matters of national importance: *‘the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga’* (S6(e)); and *‘the protection of historic heritage from inappropriate subdivision, use, and development’* (S6(f)).

All persons exercising functions and powers under the RMA are required under Section 6 to recognise and provide for these matters of national importance when *‘managing the use, development and protection of natural and physical resources’*. Archaeological and other historic heritage sites are resources that should be sustainably managed by *‘Avoiding, remedying, or mitigating any adverse effects of activities on the environment’* (Section 5(2)(c)).

Historic heritage is defined (S2) as *‘those natural and physical resources that contribute to an understanding and appreciation of New Zealand’s history and cultures, deriving from any of the following qualities: (i) archaeological; (ii) architectural; (iii) cultural; (iv) historic; (v) scientific; (vi) technological’*. Historic heritage includes: *‘(i) historic sites, structures, places, and areas; (ii) archaeological sites; (iii) sites of significance to Maori, including wahi tapu; (iv) surroundings associated with the natural and physical resources’*.

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DISCUSSION, CONTINUED

**Resource
Management
Act 1991
Requirements,
*continued***

Regional, district and local plans contain sections that help to identify, protect and manage archaeological and other heritage sites. The plans are prepared under the rules of the RMA. The Ashburton District Plan relevant to the proposed activity, but no scheduled historic heritage sites are located within the proposed development area or in the near vicinity.

This assessment has established that the proposed activity will have no effect on any known archaeological remains, and has little potential to affect unrecorded subsurface remains. If resource consent is granted, consent conditions relating to archaeological monitoring or protection would therefore not be required. A general condition relating to the accidental discovery of archaeological remains is proposed, requiring that if any archaeological remains are exposed during development, work should cease in the immediate vicinity and the Council and Heritage NZ (and Iwi if the remains relate to Maori occupation) should be informed.

**Heritage New
Zealand
Pouhere
Taonga Act
2014
Requirements**

In addition to any requirements under the RMA, the HNZPTA protects all archaeological sites whether recorded or not, and they may not be damaged or destroyed unless an Authority to modify an archaeological site has been issued by Heritage NZ (Section 42).

An archaeological site is defined by the HNZPTA Section 6 as follows:

‘archaeological site means, subject to section 42(3), –

(a) any place in New Zealand, including any building or structure (or part of a building or structure) that –

(i) was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and

(ii) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and

(b) includes a site for which a declaration is made under section 43(1)’⁶

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⁶ Under Section 42(3) an Authority is not required to permit work on a pre-1900 building unless the building is to be demolished. Under Section 43(1) a place post-dating 1900 (including the site of a wreck that occurred after 1900) that could provide ‘significant evidence relating to the historical and cultural heritage of New Zealand’ can be declared by Heritage NZ to be an archaeological site.

DISCUSSION & CONCLUSION, CONTINUED

**Heritage New
Zealand
Pouhere
Taonga Act
2014
Requirements,
*continued***

Authorities to modify archaeological sites can be applied for either in respect to archaeological sites within a specified area of land (Section 44(a)), or to modify a specific archaeological site where the effects will be no more than minor (Section 44(b)), or for the purpose of conducting a scientific investigation (Section 44(c)). Applications that relate to sites of Maori interest require consultation with (and in the case of scientific investigations the consent of) the appropriate iwi or hapu and are subject to the recommendations of the Maori Heritage Council of Heritage NZ. In addition, an application may be made to carry out an exploratory investigation of any site or locality under Section 56, to confirm the presence, extent and nature of a site or suspected site.

An archaeological authority will not be required for the Klondyke Water Storage Facility and associated structures/features as no known sites will be affected, and it is unlikely that any undetected sites are present. However, should any sites be exposed during development the provisions of the HNZPTA must be complied with. The Accidental Discovery Protocol proposed as a condition of consent would ensure that an appropriate process is in place to inform Heritage NZ if archaeological sites should be unearthed.

Conclusion

The proposed activity will not affect any known archaeological remains, and there is low potential for undetected subsurface Maori or European settlement remains to be present within the proposed development area. While the Shepherds Bush homestead was known to be located on the lower terrace prior to it being washed away during flooding, the exact location is not known and therefore the location of any possible subsurface features related to the homestead cannot be specified. The known adverse effects on archaeology are therefore considered to be less than minor.

There are therefore no statutory requirements relating to archaeology under the RMA or HNZPTA. However, in the unlikely event that pre-1900 sites are exposed during construction, an Accidental Discovery Protocol should be followed and the provisions of the HNZPTA will apply.

RECOMMENDATIONS

It is

Recommended:

- That there should be no constraints on the proposed Klondyke Water Storage Facility and associated structures/features on archaeological grounds, since no archaeological sites are known to be present and it is considered unlikely that any will be exposed during development.
 - That Accidental Discovery Protocols consistent with the requirements of the HNZPTA, Protected Objects Act 1975 and Coroners Act 2006 are developed in consultation with Te Rūnanga o Arowhenua, and are applied during the construction phase of the project.
 - That if subsurface archaeological evidence should be unearthed during construction (e.g. intact shell midden, hangi, storage pits relating to Maori occupation, or cobbled floors, brick or stone foundation, and rubbish pits relating to 19th century European occupation), work should cease in the immediate vicinity of the remains and the Council, Heritage NZ and Iwi (if the remains relate to Maori occupation) should be notified.
 - That if modification of an archaeological site does become necessary, an Authority must be applied for under Section 44(a) of the HNZPTA and granted prior to any further work being carried out that will affect the site. *(Note that this is a legal requirement).*
 - That in the event of koiwi tangata (human remains) being uncovered, work should cease immediately in the vicinity of the remains and the tangata whenua, Heritage NZ, NZ Police and Council should be contacted so that appropriate arrangements can be made.
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