BEFORE AN EXPERT PANEL SOUTHLAND WIND FARM PROJECT

Under the FAST-TRACK APPROVALS ACT 2024

In the matter of an application for resource consents, a concession, wildlife

approvals, an archaeological authority and approvals relating to complex freshwater fisheries activities in relation to the

Southland Wind Farm project

By **CONTACT ENERGY LIMITED**

Applicant

SOUTHLAND WIND FARM TECHNICAL ASSESSMENT #13: ARCHAEOLOGY

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EXECUTIVE SUMMARY

- 1. The region immediately surrounding the Project Site (which encompasses the Wind Farm Site, transmission line, grid connection infrastructure and access roads) has been an important location of both settlement and travel for mana whenua both prior to and following the arrival of Europeans. A network of several ara tawhito converge to the north and a kāinga (village) known as Tuturau, also the location of a famous battle, was located approximately 12km northwest (**Figure 1**).
- 2. Archaeological sites relating to mana whenua land use have been identified both in the surrounding area and within the Project Site and are indicative of a well traversed and utilized landscape. An adze is recorded on the New Zealand Archaeological Association (NZAA) ArchSite as an artefact find (G46/13) within the Wind Farm Site. The current archaeological value of site G46/13 is considered low. This is the only known archaeological site that may be affected by the proposed works for the Project.
- 3. Following the arrival of Europeans, the land became primarily utilised for agricultural purposes, becoming Run 251, later named Venlaw Run, in 1858. The run would go through various license holders throughout the remainder of the nineteenth century. It is believed that the homestead and most associated station buildings would have been located outside of the Project Site. Two musterer's huts were recorded during the site survey (G46/17, in close proximity to the adze find at G46/13). The huts are located approximately 145m from the closest roadway, approximately 30m from the nearest transmission line, though 210m from the nearest transmission line pylon. As such they should not impacted in any way by the Project.
- 4. Based on the historic research the most likely archaeological deposits to be encountered during construction of the Project will be related to mana whenua land use. The nineteenth century agricultural run would have left minimal archaeological material outside of the immediate vicinity of the homestead and station buildings and therefore, except for the musterer's huts recorded during this assessment as site G46/17, these were most likely not present within the Project Site. In contrast, the surrounding landscape is dotted with archaeological sites relating to mana whenua. The density of sites mostly recorded in the mid to late twentieth century in an area where no substantial development has occurred hints that the density of sites is likely higher in the landscape than currently visible. There is a distinct potential for

- previously unidentified archaeological sites to be present within the Project Site.
- 5. No further archaeological material was identified within the Project Site, beyond sites G46/13 and G46/17. Some of the more elevated parts of Jedburgh Station is difficult to access. However, the highest potential locations were both accessible and not heavily vegetated, making them ideal for survey. Considering the area's history, and the various sites historically identified in and around the Project Site, there remains a real possibility that buried archaeological material is present that could be disturbed by the proposed earthworks.
- 6. Given the potential that buried archaeological material could be present, I recommend that a general archaeological authority is sought to cover the entire Project Site. I have prepared an Archaeological Management Plan to guide works in relation to the archaeological authority. As a first principle, every practical effort should be made to avoid damage to any archaeological site (including potential subsurface archaeological evidence associated with G46/13). The Archaeological Management Plan requires, among other matters, that earthworks within a 100m buffer zone of site G46/13 be monitored.

INTRODUCTION

7. My full name is Russell Fredrick James Cook. I hold the position of Principal Archaeologist at Origin Consultants Limited (**Origin Consultants**).

Qualifications and experience

- 8. I have the following qualifications and experience relevant to this assessment:
 - (a) I have a Bachelor of Arts majoring in archaeology from Wilfrid Laurier University and a Masters of Environmental Studies in Northern Environments and Cultures from Lakehead University (both in Ontario, Canada).
 - (b) I am registered as a member of the New Zealand Archaeological Association. I have over 14 years archaeology experience including 8 years in New Zealand.

- (c) I have held the position of Principal Archaeologist at Origin Consultants Limited since March 2023 when I began my employment at Origin Consultants.
- (d) Prior to joining Origin Consultants I was employed as a Principal Archaeologist at New Zealand Heritage Properties, Dunedin.

Code of conduct

9. I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023. This assessment has been prepared in compliance with that Code, as if it were evidence being given in Environment Court proceedings. In particular, unless I state otherwise, this assessment is within my area of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

Purpose and scope of assessment

- 10. The purpose of this assessment is to assess the potential effects of the Southland Wind Farm project on archaeological features to inform the applications under the Fast-track Approvals Act 2024 (FTAA) for resource consents and a site wide general archaeological authority.
- 11. The scope of the assessment includes:
 - (a) identifying the history and nature of any archaeological features that may be present at the Project Site;
 - (b) assessing the potential effects from the proposed earthworks; and
 - (c) providing recommendations for the mitigation and management of any potential effects.

THE SOUTHLAND WIND FARM PROJECT

- 12. Contact Energy Limited (Contact) is seeking various approvals necessary for the construction, operation and maintenance of a wind farm in Slopedown, Southland. The Project includes up to 55 wind turbines and associated infrastructure, including a 16km long transmission line and associated grid connection works.
- The full project description for the Project is provided in Part A of the AEE. I
 do not repeat it in my assessment.

METHODOLOGY

- 14. The first phase of assessment for the Project Site was carried out using desktop research methods to identify areas of archaeological potential. The desktop assessment consulted several historic sources to establish and clarify the historical development and chronology of the site. These included:
 - (a) online and physical archives, including PapersPast and reports held by Heritage New Zealand Pouhere Taonga;
 - (b) NZAA site records (via ArchSite), to identify the details of any previously recorded archaeological sites in the vicinity;
 - (c) historic survey plans (via QuickMap) and historic aerial photographs (via Retrolens); and
 - (d) modern aerial photographs (via Google Maps, Google Earth and Land Information New Zealand Data Service).
- 15. The second phase of assessment focused on the physical assessment of the Project Site using the results of this first phase as a guide. A site survey was completed on 19 and 20 September 2023.
- 16. Full details of the methodology, including the site survey and constraints and limitations, are set out in **Appendix One**.

EXISTING ENVIRONMENT

- 17. The Project Site consists of a hilly rural landscape with several steep changes in elevation. It is bounded on the northwest by rolling hills, crisscrossed by multiple small watercourses, in the north in part by a steep ridgeline and the Mimihau Stream, and further to the northeast by additional ridge lines. To the south, the Project Site is bounded by a notable slope leading to lower elevations. The interior of the Project Site consists of a hilly landscape cut by a multitude of varying watercourses.
- 18. Aerial photography shows that the forestry blocks have been harvested and are in the process of re-growing. The planting of forest plantations, their growth and harvest are all surface and subsurface disturbing activities. As such it is likely that any archaeological sites have been at least partially disturbed by this land use, if not outright removed, thereby reducing the archaeological potential of this portion of the Project Site.

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- 19. The landscape surrounding the Project Site appears to have always been sparsely occupied. Prior to the arrival of Europeans, mana whenua seem to have mostly used the immediate area as a transit point with one notable exception, being the nearby kāinga (village) known as Tuturau. However, this lack of permanence does not denote an absence of use, occupation, or importance.
- 20. The Project Site is situated next to what would have been a well-travelled crossroad. Just to the north is Ōteraia, a hill landmark which lies near the conjunction of several ara tawhito leading from the Catlins via the Ōwaka River, from Ōtepoti (Dunedin) via Waihola, and south/inland via the Waiharakeke, Mimihau and Mataura Rivers (Te Rūnanga o Ngāi Tahu, 2023). In addition to these ara tawhito a kāinga (village) known as Tuturau was located approximately 12km northwest of the Project Site. Tuturau was reportedly a kanakana (lamprey) fishing village, located on a hill next to the Mataura River and occupied year-round, possibly as late as the 1860s. The village was the site of the death of Te Pūoho, a leader of Ngāti Tama who was attempting to lead an attack on southern Ngāi Tahu (Anderson, 1998; Te Rūnanga o Ngāi Tahu, 2023).
- 21. The archaeological record of the surrounding area is also reflective of rich history. A total of 11 previously identified archaeological sites relating to mana whenua are noted as being under 8km from the Project Site, with a 12th site (G46/13) located within the Project Site. These sites consist of 8 oven sites and 4 adze find locations, including one instance of 6 adzes being recovered from the same location.
- 22. These sites demonstrate that the immediate area was likely used for frequent, relatively short-term occupations, likely a result of the location near the crossroads and Tuturau and the possible interactions that resulted from this. This number of sites has been identified despite the relative lack of development undertaken within the area and it is likely that the true density is higher than appears. G46/13 was unable to be located during the site visit due to vegetation coverage and the nature of the site.
- 23. After the arrival of European runholders, the Project Site and the surrounding landscape were made an official agricultural run numbered Run 251 and later named Venlaw Run.¹ The first operators were William and John

¹ The reason for this naming being unclear (Beattie, 1979).

- Dalrymple who received their depasturing license in 1858 and had 1510 sheep present by 1860 (Otago Witness, 1858, 1860; Beattie, 1979).
- 24. By 1861 Messrs Wilson and Pagan are noted as owners and operators of Venlaw with 2200 sheep, increasing to 3000 by the next year. Pagan and Wilson would dissolve their partnership in February 1867 with Pagan continuing as sole proprietor (Southland Times, 1867). The run is noted as having increased its flock to 4650 by 1868 and 5000 by 1869. In 1870, with the provincial entity of Southland being dissolved and the administration merging with Otago the run was brought under the new Southland Land District. Pagan is noted as still operating the run at this time with a flock of 6400 (Beattie, 1979).
- 25. The Thornhill Brothers who are reported to have operated multiple such runs throughout Southland, purchased the run license some time shortly before 1873 (Southland Times, 1873; Otago Witness, 1874). W.R. Thornhill would re-let the run independently in 1882 and would continue to operate the Venlaw Run until 1886, at which point the run was transferred to the Otago and Southland Investment Corporation (Otago Witness, 1882; Archives New Zealand, 1905). A Mr. Hugh F. Munro is noted as being the manager of the run from 1888 until about 1900 (Mataura Ensign, 1888).
- 26. The homestead is reported to have burnt down completely in 1890 with at least one nearby outbuilding being saved. It is not clear where the homestead was located exactly, as little documentation exists that mentions it or its associated buildings. An 1873 notice advertising studding services at the Venlaw Station indicates that a stable must have been present and was likely comparatively substantial to accommodate the working demands of the property. The South Eastern District Run Map shows a small area apparently cut from the left arm of the run and marked as "P.R" which may stand for Pre-emptive Right and likely marks the approximate location of the homestead (Figure 2) (Archives New Zealand, 1899). This is further reinforced in a 1906 map of the area which notes the new run holders, the Story's, as occupying the same plot of land (Figure 3) (Archives New Zealand, 1906).
- 27. While the main buildings were probably located within the P.R., it is likely that other buildings, such as wool sheds or shepherds' huts, were located within the Project Site. Archaeological site G46/17, recorded during the site survey, represents an example of such buildings, but is likely not the only example.

- Unfortunately, due to a lack of records the locations and fates of any unrecorded buildings is currently unknown.
- 28. In 1905 Alice Martha Story and Robert Douglas Story would take over the run license. They would continue to operate Venlaw Run until 1941 when their son Colin Roe Story took over the operation. It is not clear how long Colin operated at Venlaw Run (Archives New Zealand, 1905) however the current landowners of Jedburgh Station, the Story Family, are direct descendants of Colin Story. It is possible that the Story family sold part of their lease back to the government, although this is not confirmed. By 1972 Run 251 appears to have been broken up, with the portion the Project Site occupies becoming Run 620. The area would be gazetted for timber use and maintained as a forestry block through to present day (Government of New Zealand, 1972).
- 29. Today the Project Site is split between the Matariki forestry block in the east and continued pastoral use in the west.
- 30. Additional background to the Project Site is set out in **Appendix One**.

ARCHAEOLOGICAL CONTEXT

Archaeological sites recorded on NZAA ArchSite

- 31. Prior to the site survey, NZAA's site recording scheme, ArchSite, indicated that thirteen sites have been recorded near the Project Site (Figure 4).

 Twelve of these sites are related to mana whenua land use, with eight of those being the remains of oven sites while the remaining four are adze find locations with one site, F46/10, being the location of six adze finds.
- 32. The location of two musterers huts recorded during the site survey are now recorded on NZAA ArchSite as G46/17. These huts had not been officially documented prior to the survey. One hut reportedly dates to the 1860s while the other dates to the 1920s. One site, the location of the Redan Flax Mill (F46/36), is a flax milling site that dates to 1907 and is not technically archaeology under the Heritage New Zealand Pouhere Taonga Act 2014.
- 33. Most of these sites were located primarily as finds reported by local farmers, with most being recorded in the mid to late twentieth century. Several sites were not locatable during a 2006 survey which sought to update the local site inventory. However, this appears to have been at least partially attributed to changes in vegetation growth, likely obscuring sites which are typically identified as comparatively subtle landscape features. These sites should

serve to illustrate that there is potentially a notable density of archaeological sites in the surrounding landscape, however it may prove challenging to identify some sites based on vegetation and local topography.

Table 1: Table of recorded archaeological sites in the vicinity of the proposed wind farm.

Site number	Site Name	Site Type	Details
F46/10	N/A	Artefact Find	Adze find location, 6 adzes total
F46/11	N/A	Midden/Oven	Intact oven
F46/24	N/A	Midden/Oven	Intact oven
F46/27	N/A	Midden/Oven	Intact oven
F46/31	N/A	Artefact Find	Adze find location
F46/36	Redan Flax Mill	Flax Milling	Flax mill operating from 1907-1972
G46/1	N/A	Midden/Oven	Intact oven
G46/2	N/A	Midden/Oven	Intact oven
G46/3	N/A	Midden/Oven	Intact oven
G46/4	N/A	Midden/Oven	Intact oven
G46/12	N/A	Midden/Oven	Intact oven
G46/13	N/A	Artefact Find	Adze find location
G46/15	N/A	Artefact Find	Adze find location, reported nearby ovens
G46/17	Venlaw Musterer's Huts	Agricultural/pastoral	Two wooden and iron musterer's huts

34. The location of site G46/13 within the NZAA database may be incorrect as the site record form, while bare on details, mentions the find being near a crossing, which would likely place at the crossing south of Mimihau Stream, south of the site marker. No other archaeological work has been previously undertaken.

Archaeological and other values

- 35. I have specifically assessed the archaeological values of site G46/13, which will be the only known archaeological site that may be directly affected by the Project. Six main criteria have been used for assessing the archaeological values of site G46/13. These are:
 - (a) condition the physical condition of the site and any associated features;
 - (b) rarity/Uniqueness the degree of rarity of the site within its immediate and/or wider contexts;
 - (c) contextual the contribution of the site to its broader contextual situation (eg. cultural, local, and archaeological contexts);
 - (d) information potential the potential for additional information to be recovered by archaeological means and its nature;
 - (e) amenity the potential contribution of the site as a local amenity; and
 - (f) cultural associations the cultural associations of the site.
- 36. Overall, as site G46/13 currently only represents the finding of a single adze with no association to any other site the total value is considered low. However, this value is subject to change should any additional material be found during earthworks and that the presence of the adze illustrates the use of the Project Site by mana whenua.

Table 2: Assessment of archaeological values for G46/13

Site	Value	Assessment
G46/13	Condition	The adze was removed from site in 1987. If any remaining features or artefacts are present, they are subsurface in nature. Assessment – below surface
	Rarity/Uniqueness	Adze find locations are relatively common throughout the South Island, with 102 such finds recorded on the NZAA database for Southland and southern Otago. Assessment – Low
	Contextual Value	This specific adze has not been attributed to another site or location, with the closest site being a potential umu located a little over

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Site	Value	Assessment
		2km away. This lack of association limits its contextual value. Assessment – Low
	Information Potential	Unless additional features are identified, there is no further information potential to be found at this location. Assessment - Low
	Amenity Value	Any remains will be below surface and are not visible. Assessment – None
	Cultural Associations	Assessment – Māori

37. The wider area is understood to be of cultural value to mana whenua. This assessment seeks to understand and address only the archaeological potential for the Project Site. Any assessment of mana whenua cultural values, and the potential effects of the Project on these values, is beyond the scope of this report. Te Ao Marama Inc. is best placed to provide additional and further information regarding the heritage values relating to mana whenua.

ASSESSMENT OF EFFECTS

- 38. The details of the extensive earthworks required for the Project and construction, including foundations, are set out in Technical Assessment #9: Construction Effects. Vegetation clearance is addressed in Technical Assessment #5: Terrestrial Ecology and Wetland Effects. I rely on those assessments in considering the full scope of works. In summary, earthworks are required in various locations across the Project Site for:
 - (a) permanent metalled roadways large enough to facilitate the construction and maintenance of the turbines;
 - (b) the establishment of turbine platforms and the installation of the turbines within the platforms themselves; and
 - (c) the establishment of transmission lines and a substation.
- 39. Site G46/13 is the only site which lies within the path of development, being near a proposed road alignment and a pylon for the transmission line (Figure

- 5, Figure 6, Figure 7). This site is the location of a single adze found on the surface. While no additional above surface material was noted during the survey it is possible that subsurface deposits related to this surface find are present within the vicinity. If deposits such as umu or other artefacts are in the path of the proposed roadway there is a high potential for them to be disturbed or removed during works.
- 40. The current archaeological value of site G46/13 is considered low. If no additional archaeological material is encountered, then these works are expected to have a negligible overall impact on the values of the site. However, this scale of impact will increase notably should any additional material be encountered.
- 41. While G46/17, the musterer's huts, were recently recorded, the huts are located approximately 145m from the closest section of the proposed road alignment and approximately 30m from the proposed transmission line route, though approximately 210m from the nearest pylon. As such they will not be impacted in any way by the Project (Figure 8).
- 42. Earthworks elsewhere on the Project Site could disturb archaeological material (if present). This is because the expected depths of such features would be relatively shallow, and the extensive earthworks required in some places for the formation and upgrading of roads and/or turbine platforms. The presence of unrecorded archaeological sites within the wider Project Site is considered likely due to the density of archaeological sites within the surrounding landscape and the lack of previous development and research into localised site distribution which would help to locate said sites.
- 43. Fill disposal will involve adding material rather than conducting earthworks and as such will not disturb any subsurface features.

MEASURES TO REMEDY OR MITIGATE ACTUAL OR POTENTIAL ADVERSE EFFECTS

- 44. Given the potential for archaeological material to be present at the Project Site, I recommend that:
 - (a) a general archaeological authority is obtained to cover earthworks across the Project Site (including but not limited to works that may affect potential archaeological evidence associated with G46/13);

- (b) as a first principle, every practical effort should be made to avoid damage to any archaeological site; and
- (c) the excavation contractor(s) must be informed of the requirements of any authority issued and briefed by the archaeologist about the site's archaeological values and the possibility that archaeological material may be uncovered during excavation works.
- 45. I have prepared an Archaeological Management Plan to guide works in relation to the archaeological authority, including:
 - (a) protocols for the discovery of archaeology during the construction of the Project;
 - (b) monitoring of earthworks within a 100m buffer zone around the site marker and stream crossing location for site G46/13;² and
 - (c) involvement of Te Ao Marama Inc in respect of mana whenua sites, such as:
 - (i) the presence of a representative of Te Ao Marama Inc during works within the 100m buffer zone for site G46/13; and
 - (ii) notification of Te Ao Marama Inc in the first instance if additional features are found at G46/13.

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 $^{^{2}}$ The relevant buffer zone is shown on Figure Archaeology $-\,2$, in Part G of the application documents.

APPENDIX ONE: METHODOLOGY AND HISTORICAL BACKGROUND

Constraints and limitations

- The key constraints and limitations on the archaeological assessment for the Project are:
 - (a) all areas were surveyed to the greatest extent possible within the bounds of the physical limitations present (the Matariki forestry block and portions of the pastoral properties were subject to dense ground cover which limited the capabilities of the survey);
 - (b) no images have been able to be located that clearly show the site prior to 1900; and
 - (c) the scope of the history was limited by reasonable time.

Historical background

- 2. The earliest human occupation of the South Island is considered to be by Polynesian settlers dating from around 1280AD who quickly spread across the region, developing different types of settlement sites dependent on the available local resources and environmental conditions (Wilmshurst et al.. 2008). These included settled village sites along the coast adjacent to rich and sustained food resources such as seals and moa; seasonal inland sites for collecting stone resources and hunting; and comparable seasonal coastal sites for 'fishing and moa processing' (Hamel, 2001).
- 3. Such settlement was not without its impacts however, with much of the forest along the coastal region reduced in extent, changes in patterns of hunting and fishing, and the use of smaller, more mobile occupation sites by the 16th and 17th centuries. This was followed by further changes in subsistence, based on organised food gathering and processing that created settled village communities along the Otago coastline from the mid-18th century onwards (Hamel, 2001). Settlement in Southland centred around Foveaux Strait with most individual settlements located along the coast of both Murihiku (Southland) and Rakiura (Stewart Island). Populations shifted around considerably after the arrival of Europeans, with the population of Foveaux Strait reportedly increasing from the period of 1810-1828, possibly to take advantage of potential trade with European sealers (Anderson, 1998).

- Very few direct observations regarding life in Southland during the early period of Māori-European interactions survive. Most first-hand accounts of mana whenua activity in Southland that are not related to trade primarily discuss the gathering of titi and lamprey fisheries as well as some journeys inland to gather weka. The remainder of first-hand observations from this period focus on activities introduced from contact with Europeans, primarily that of gardening of potatoes and sometimes wheat. Populations remained somewhat fluid up into the mid nineteenth century as patterns of local economics shifted. Many mana whenua settlements around the river mouth appeared to decline with the people concentrating around Rakiura and Aparima (Anderson, 1998). Te Ao Marama Inc. is best placed to provide additional and further information regarding the connections of mana whenua to the area.
- Europeans first laid eyes on Southland in 1770 with the arrival of Captain Cook's first expedition. He would be followed by other European explorers throughout the late eighteenth century (Lund, 2006). European interactions with Southland would then be limited to sealers beginning around 1803 with gangs established around Rakiura and eventual settlements sprung up at Port Pegasus and nearby Whenua Hou (Hall-Jones, 1945). From the 1820s-1830s whaling superseded sealing as the primary driver of European interests and led to the establishment of a plethora of whaling stations. Preservation Bay was one of the first of such onshore whaling stations established in 1829 or 1830 with Aparima (Riverton) becoming one of the first truly permanent European settlements (McNab, 1909; Hall-Jones, 1945).
- 6. The first survey of the area was conducted by Captain John Stoked who took a boat up the Oreti River in 1850. After completing his survey, he ventured to Wellington where he reported to Lieutenant Governor Eyre that the land could be purchased from mana whenua for a sum of £2000 (Lund, 2006). This would eventually lead to the Murihiku Purchase in 1853 and the establishment of the pastoral runs that would come to dominate the economy of Southland. While some runholders had established themselves prior to the purchase the majority would arrive in a short period between the mid to late 1850s, with most runs being taken up by the late 1850s (Hall-Jones, 1945; Hamilton, 1952).
- Southland would become independent from Otago in 1861 and soon after experience its own goldrush, primarily around Riverton and the Waikaia River. This goldrush would be relatively short lived and the region would

- transition back to a primarily agriculture driven economy shortly thereafter. The pastoral runs and their outputs would be the underpinning of much of Southland for the remainder of the nineteenth century, aided by the introduction of refrigerated shipping of dairy and meat in the 1880s (Lund, 2006).
- 8. The pastoral runs proved to be a surprisingly diverse place. The runs employed a range of people from a variety of nationalities and backgrounds. A larger ratio of Māori and other nationalities worked these runs than other regions of the South Island as well as other far-flung nationalities not often associated with Otago and Southland. This included Polynesians, Australian Aboriginals, African Americans and Mexicans amongst others (Beattie, 1947).
- 9. Railways would be established from Invercargill to Bluff in 1867 and Winton in 1870 and in 1879 the Main South Line connected Southland to the rest of the South Island. Throughout the nineteenth and into the early twentieth century agriculture would continue to be the dominant force behind Southland, with the runholders at the centre of much of this (Lund, 2006).

Site survey

- 10. A site survey was conducted over two consecutive days, September 19 and 20 2023. The property was surveyed with the assistance of an ATVU allterrain vehicle. The Project Site was broken up into two distinct sections with the west consisting of the Matariki forestry block and the east consisting of agricultural land used for grazing.
- 11. As much of the proposed road routes and turbine locations were driven as were accessible and areas of higher potential were surveyed on foot. Areas of potential were identified prior to the survey via GIS mapping. Areas of interest were chosen based on criteria which were shared by archaeological sites in the surrounding area such as elevation, topography and proximity to water sources. Consideration was also given to the ground cover and potential to uncover archaeological material.
- 12. A higher priority was given to the western portion of the Project Site as these areas were typically at a lower overall elevation with a more accessible landscape, increasing the chances of past human occupation, and generally lied closer to the known ara tawhito. Additionally, these areas were generally well grazed and clear of ground cover which greatly increased visibility.

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- 13. Much of the central and eastern portions of the Project Site were given a lower priority as the generally steeper and less accessible terrain decreased the chances of encountering archaeological material while the surrounding landscape of these sections were largely overgrown with pine or various forms of scrub which made identifying archaeological features or material extremely challenging.
- 14. Regardless of priority all areas were surveyed to the greatest extent possible within the bounds of the physical limitations present.

Constraints and Limitations

- 15. Much of the terrain of the Project Site was inaccessible beyond the roadways due to dense vegetation while some portions had no access available. Inaccessible portions are highlighted in the area specific maps in **Appendix Two** (Figure 12, Figure 13).
- 16. The eastern portion of the Project Site consists of the Matariki block, a maintained forestry operation. Nearly the entire block was covered in either dense forest or gorse scrub (Figure 11). While the access roads were kept in good order recent wind events had caused tree fall which blocked access to the eastern portion of the property (Figure 9).
- 17. Other portions along the south of the property lie through dense forest with no access to the proposed roading alignments or turbines.
- 18. The western portion of the property consisted of agricultural land used for sheep and cattle grazing. While portions of this property were ideal for survey, with grass grazed to a very short length, a large portion of the higher elevation sections bordering Matariki were covered in dense manuka scrub which made the identification of potential archaeological features nearly impossible (Figure 10).
- 19. Inaccessible portions of the property are highlighted in Figure 12 and Figure 13. While a drone was used to record the topography and vegetation cover at one location within the Matariki block extreme high winds made it impossible to use at any other time during the survey.

Matariki Forestry Block

20. The eastern portion of the Project Site is taken up by the Matariki forestry block. The terrain in this area consisted of heavily wooded hills generally

rising in elevation towards a high ridge line to the south. As noted above, the primary issue experienced in surveying the forestry block was the dense vegetation cover which was present over the entire area except for the forestry access roads. One archaeological site, G46/13 was previously identified within the property, as was the presence of two musterers huts not previously recorded (and which were subsequently added to the NZAA database as site G46/17).

- 21. One location of high interest was identified near the crossing of the Mimihau Stream South Branch while the remainder of the property was classified as medium to low potential due to the landscape form, being mostly steep hills, and vegetation growth which made any identification impossible. A visual inspection of the property was conducted via ATVU with pedestrian surveys made of the areas surrounding the accessible points noted on Figure 12.
- 22. Areas within the blue hashed areas were not accessible due to the above limitations. The above-mentioned musterer's huts were recorded as site G46/17. The site consisted of two musterer's huts relating to the use of the property as part of the Venlaw Run. This site is discussed in greater detail below. No further archaeological materials or features were identified.

G46/13

23. Site G46/13 was surveyed on foot. The site, marking the location of an adze find is located uphill from the roadway within forestry pine trees (Figure 14, Figure 15). The area of the marker was walked, and no material was found, though any such search was impeded by heavy ground cover. The nearby crossing, which is likely true location of the adze find, was also examined and was somewhat clearer than the pine stand, though still overgrown with high grasses. No archaeological materials or features were identified.

G46/17

- 24. The site consists of two musterers huts related to the historic function of the property as part of the Venlaw Run. The more modern of the huts was reportedly built circa 1920 according to the Story family who have been operating the run since 1906. The older hut was reportedly built circa 1860 as part of the original run operations which began in 1858. Both huts have had modern upgrades made, replacing various exterior elements.
- 25. The building materials of the 1860s hut are mostly un-milled timber posts and beams with hand tool marks visible (Figure 22, Figure 23, Figure 24,

Figure 25, Figure 26). The only exceptions are the remaining weatherboards of the southwest wall (Figure 18, Figure 25). Nails appear to be forged, though all were in-situ and so cross-sections could not be examined. The northwest and southeast walls are corrugated metal which appear to have been added to the exterior to replace the degraded weatherboards. The interior has a cobble floor with material likely sourced from the nearby stream. The northeast wall has been removed with the posts being bare. The roof is also corrugated metal and appears to have been very recently replaced. Further signs of structural intervention include the presence of modern timber bracing in the walls and metal banding in the roof which also appears to have been recently added (Figure 17, Figure 22).

26. The 1920s hut is entirely clad in galvanized corrugated metal sheeting with a brick chimney (Figure 29, Figure 30). The interior is clad, ceiling walls and floor, with tongue and groove boards (Figure 31, Figure 32).

Agricultural Properties

- 27. The agricultural properties that make up the western portion of the Project Site can be broadly divided into two distinct areas. The first is characterized by gently rolling hills cut by small waterways, present mostly in the north and west of this section, and a more steeply elevated portion covered with manuka scrub and with notably wetter soils, dominating the south and east of the properties.
- 28. Several high potential points of interest were identified prior to the survey. These areas were located in the west and north where the proposed roadways and turbine locations were noted to cross water courses surrounded by low hills often topped with flat plateaus. This topography was deemed to have a higher chance of containing archaeological sites given its relative accessibility, abundant access to water sources, and comparatively well-draining and flat elevated areas in proximity to the identified ara tawhitos. The survey was assisted by the lands being well grazed, meaning vegetation cover was at a minimum, consisting almost entirely of short grasses (Figure 34, Figure 35). Every point of high potential/priority was investigated, and no archaeological features were identified.
- 29. Points 41-46 were surveyed. The area was heavily obscured by manuka scrub and consisted of steeper changes in elevation than the open areas to the west (Figure 36). The ground here was also considerably more

waterlogged where the changes in elevation were less pronounced. The area immediately surrounding the proposed substation was incredibly boggy despite being the point of highest elevation (Figure 37). The far south and east of this area were not accessible due to a lack of roads and the sodden soils which made the terrain dangerous to traverse, even for the ATVU. No archaeological materials or features were identified in this area.

APPENDIX TWO: FIGURES

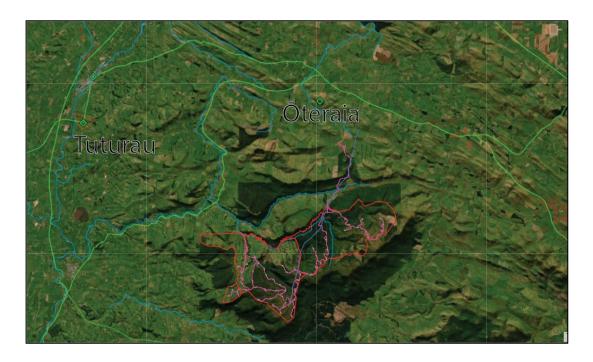


Figure 1 Map showing Project Site in proximity to ara tawhito (green lines) and Tuturau (Te Rūnanga o Ngāi Tahu, 2023 - modified)

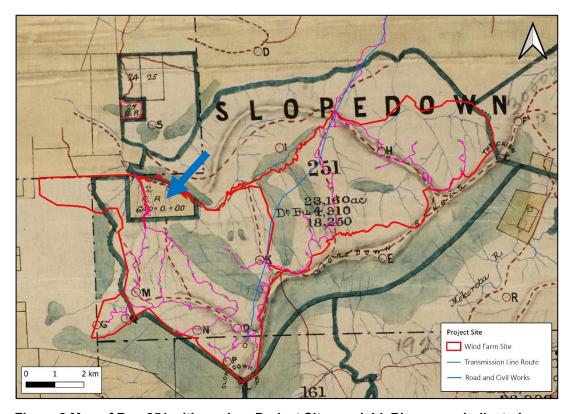


Figure 2 Map of Run 251 with modern Project Site overlaid. Blue arrow indicated location of Pre-Emptive Right and likely homestead location (Archives New Zealand, 1899).

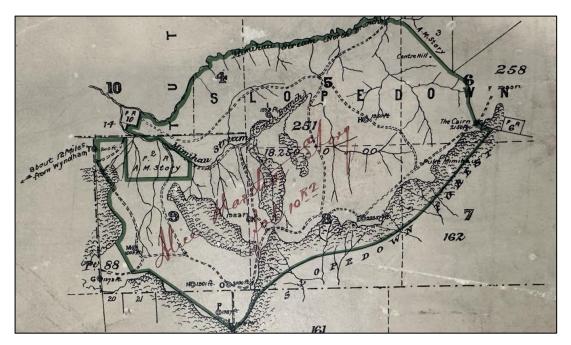


Figure 3 1906 map of Run 251 with Pre-emptive Right noted as occupied by the Story's, the runholders at the time.

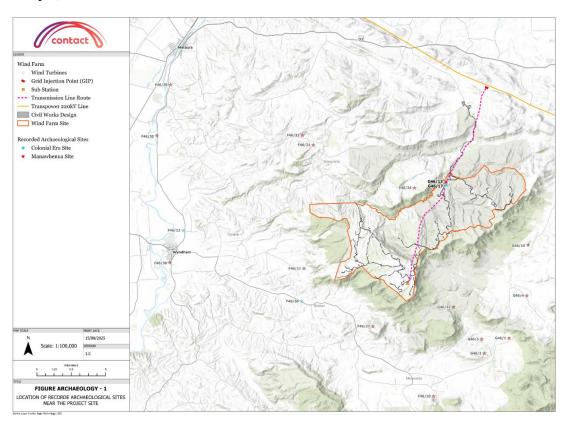


Figure 4. Locations of known archaeological sites in vicinity of Project Site. *Included in the Project figure set (Part G) as Figure Archaeology-1.*

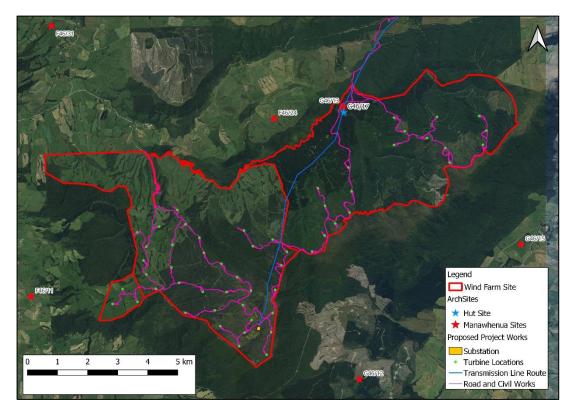


Figure 5 Map showing location of roads and turbines in overall Project Site.

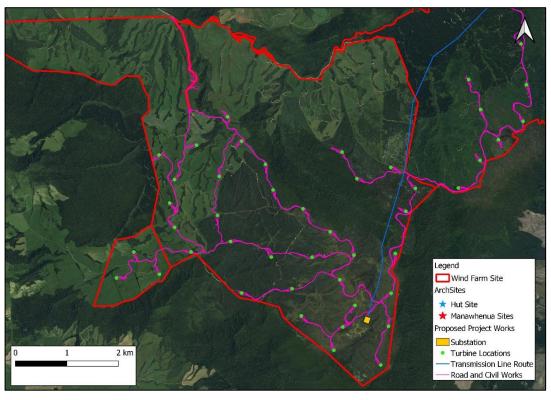


Figure 6 Map showing western works in greater detail.

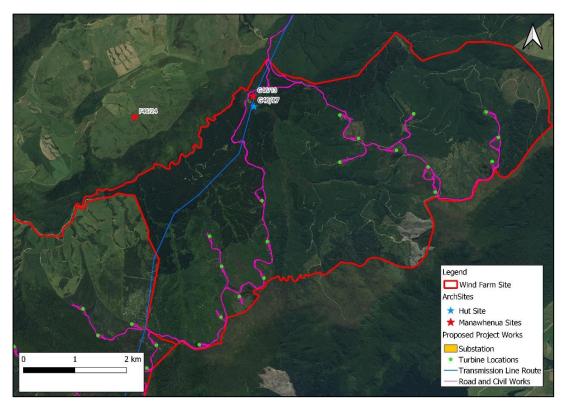


Figure 7 map showing central works in greater detail.



Figure 8 Location of huts in relation to proposed works. Purple line indicates road alignment while blue line indicates overhead line location.



Figure 9 Example of dense forest and downed trees blocking access within Matariki.



Figure 10 Manuka scrub cover present at higher elevation areas in agricultural sections.



Figure 11 Two primary vegetation cover types observed within the Matariki forestry block. Taken at point 67 on Figure 14.

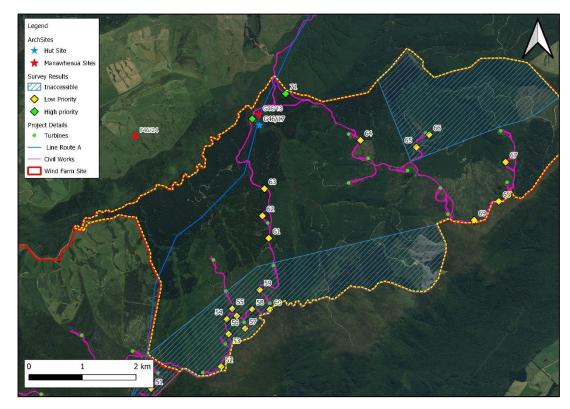


Figure 12 Focus map of survey points on Matariki forestry block outlined in yellow.



Figure 13 View of dense cover near Point 71 on Figure 14.



Figure 14 View looking towards marker G46/13 from roadway.

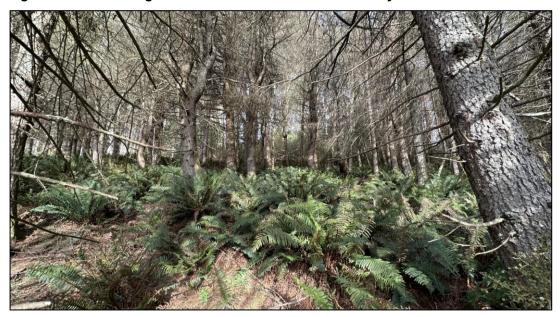


Figure 15 Overgrown underbrush around site marker G46/13.



Figure 16 Photo looking south towards northeast wall.



Figure 17 Photo looking west.



Figure 18 Photo looking north.



Figure 19 Close up of weatherboards and nails.



Figure 20 Interior looking northwest.



Figure 21 interior looking southeast.

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Figure 22 Roof framing looking northwest.



Figure 23 Interior framing on southeast wall.



Figure 24 Framing of southeast wall.

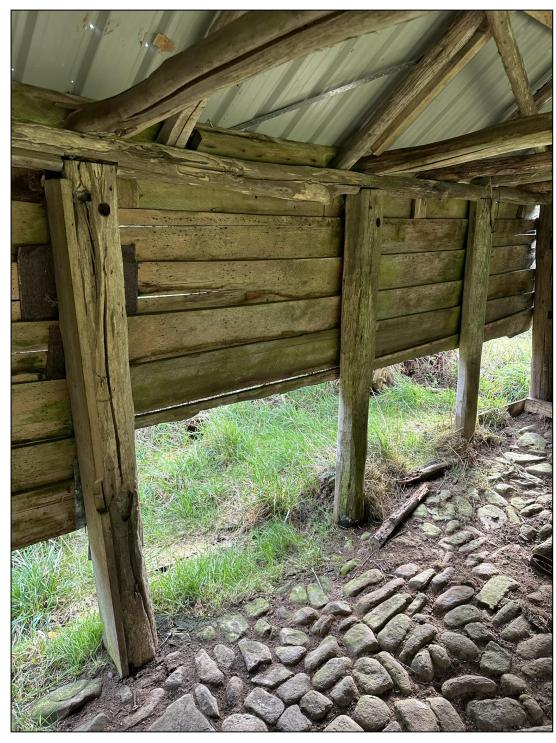


Figure 25 Internal view of southwest wall.



Figure 26 Post of northeast wall.



Figure 27 Nail in framing of southeast wall.



Figure 28 Cobble floor interior.



Figure 29 Photo looking north.



Figure 30 Photo looking south. Note 1860s hut in background.

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Figure 31 Interior facing northwest.

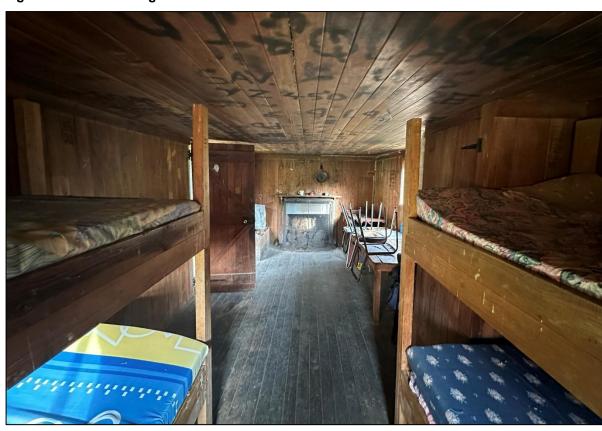


Figure 32 Interior facing southeast.

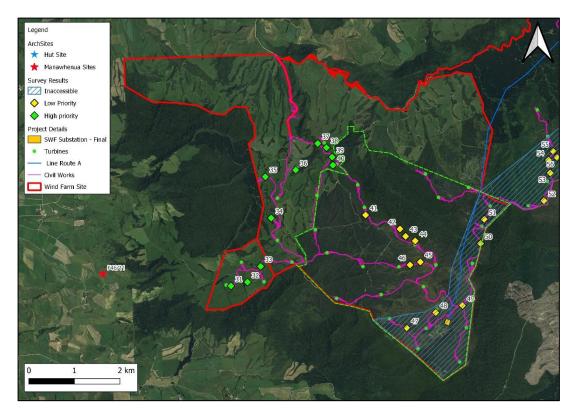




Figure 34 Photograph taken near point 39.

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Figure 35 Photograph taken near point 32.



Figure 36 Photo taken near point 46 showing scrub and wet soils.



Figure 37 Photo taken near existing radio mast.

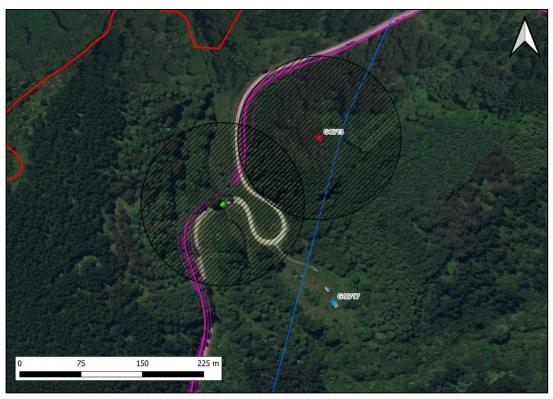


Figure 38 Focused map showing 100m buffers around site marker for G46/13 and crossing where find was most likely made.

APPENDIX THREE: SITE RECORD FORMS

NEW ZEALAND ARCHAELOGICAL ASSOCIATION



Summary Site Record

NZAA SITE NUMBER: G46/13

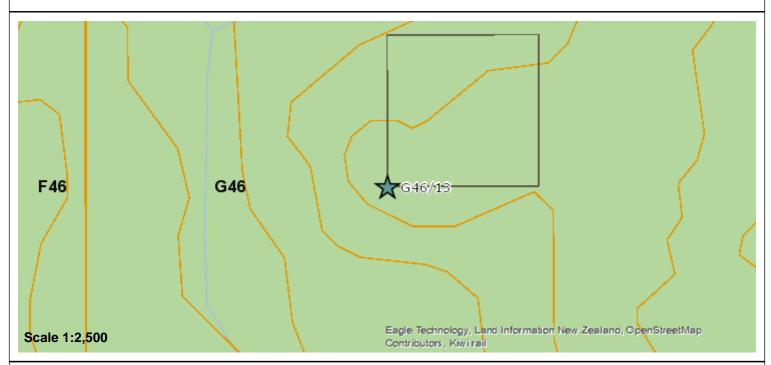
SITE TYPE: Artefact find

SITE NAME(s):

Record last updated: 01/10/2005

SITE COORDINATES (NZTM) Easting: 1300463 Northing: 4866145 Source: CINZAS

IMPERIAL SITE NUMBER: \$178/11 METRIC SITE NUMBER: G46/13



Finding aids to the location of the site

Venlaw Road, by crossing.

Brief description of the site

Findspot for adze. Duff type 2, pale blue-green Dart River source nephrite. Blunt cutting edge. Matt polish with some pitting and scar at pointed poll. Maximum length 10.6cm.

Condition of the site when last visited

This report contains a summary of the information about this site held in ArchSite.

For a complete Site Record Form containing all the recorded information, please contact the ArchSite Coordinator.

For further information please contact:

ArchSite Coordinator, PO Box 6337, DUNEDIN

admin@archsite.org.nz

Printed by: russellcook 01/11/2023



Summary Site Record

NZAA Site Number: G46/17 Site Coordinates (NZTM)

Imperial Site Number: Easting: 1300473

Site Type: Agricultural/ pastoral Northing: 4865956

Site Name(s): Venlaw Musterer's Source: Handheld GPS



Finding Aids to the Location of the Site:

Clearing immediately southeast of road on hairpin turn in logging road. Note that future plans involve straightening the hairpin turn, although at time of recording it is unclear when this will take place. Huts are clearly visible from the roadway.

Brief Description:

Two wooden and iron musterer's hut, built c.1860 and 1920. Constructed of timber and corrugated iron, with stone cobble floors

Condition of Site when last visited:

Fair

This report contains a summary of the information about this site held in ArchSite.

For a complete Site Record Form containing all the recorded information, please contact the ArchSite Coordinator.

For further information please contact:

ArchSite Coordinator, PO Box 6337, DUNEDIN

admin@archsite.org.nz

APPENDIX FOUR: PARCEL MAP AND LIST

The parcels are shown in Figure Project Description-2 (Part G) and listed in the table below.

Legal Owner	Legal Description and Title Reference
Norman James Elder, Timothy Colin Story	Section 3 Block IX Slopedown Survey District, RT SL9D/824
Norman James Elder, Timothy Colin Story	Section 2 Block IX Slopedown Survey District, Section 1 Survey Office Plan 9639 and Section 1 Survey Office Plan 10255, RT SL8D/456
Norman James Elder, Timothy Colin Story	Lot 1 DP 3613 and Section 1 Survey Office Plan 9465, RT SL155/79
Norman James Elder, Timothy Colin Story	Lot 2 DP 363843 and Lot 1 DP 13176 and Section 1-2 Survey Office Plan 9464 and Section 15 Block X Tuturau Survey District and Part Section 16 Block X Tuturau Survey District, RT 259751
Norman James Elder, Timothy Colin Story	Lot 1 DP 363843, RT 259750
Matariki Forests	Lot 1 DP 12509, RT 407674
Geoffrey Bruce Dodds, Kathryn Joyce Dodds	Section 61-62 Block III Wyndham Survey District, RT SL9B/866
Port Blakely Limited	Lot 2 DP 362693, RT 255758
Port Blakely Limited	Lot 4-7 DP 15305, Lot 1-4 DP 15076 and Lot 1 DP 15078, SL12B/81
Port Blakely Limited	Section 26 Block II Slopedown Survey District, 265526
The Salvation Army New Zealand Trust	Section 11, Section 16-17 and Part Section 9-10 Block II Slopedown Survey District, RT SLA4/151
The Salvation Army New Zealand Trust	Section 5 and Section 20-22 Block II Slopedown Survey District, RT SL17/134

APPENDIX FIVE: REFERENCES

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