Okuru Enterprises Limited

Joint application for consent

Westland District Council – Revised edition
June 2016

Proposed water export facility at Jackson Bay
Assessment of environmental effects

Okuru Enterprises Limited
P O Box 263
Westport
Buller 7866
West Coast, New Zealand

WESTLAND DISTRICT COUNCIL

THE WEST COAST REGIONAL COUNCIL

Contents

Administration - Contact details

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Okuru Enterprises Limited	
Name of persons involved and status	Directors: Ian and Helen Rasmussen Peter Roselli Anthony Black Christopher Reynolds Ian Hight
Registered office	36 Henley Street Westport
Company number	493056
Incorporation date	07 December 1990
Consents	
Council staff who have been consulted regarding this application	Rebecca Beaumont – District Planner, Westland District Council Jessica Hollis – Consultant Planner for Westland District Council Rachel Clark – Consents Officer, West Coast Regional Council
Type of consents being applied for	Coastal permit (WCRC) Water take permit (WCRC) Water discharge permit (WCRC) Land use consent (WDC)
Previous consent numbers	RC91/11 Land use permit (WDC) RC97/40 Coastal permit (WCRC) RC90/47 Water permit (WCRC) RC91/24 Discharge permit (WCRC) PAC 11-04-56 Concession (DOC)
If the application is granted, preferred term for the consents	35 years

Application details

To: Westland District Council
Private Bag 704
Hokitika 7842

From: Okuru Enterprises Ltd
P O Box 263
Buller

Okuru Enterprise Ltd (Okuru) applies for the following consents:
Okuru are resubmitting their proposal into an existing consented environment. Previous consents have been issued for this project, namely land use consent, coastal permit, water permits and an easement. Okuru are reapplying for consents for the project, applying for:

Water Permit from the West Coast Regional Council to take an average take of 300 litres per second, but up to 800 litres per second to compensate for periods of low take/low stream conditions, of water from Tuning Fork Creek via a buried pipeline to supply holding tanks /storage ponds for a proposed water export facility at Neils Beach.

Water Permit from the West Coast Regional Council to store up to 160,000m^3 of water in holding tanks /storage ponds within the proposed water export facility.

Water permit from the West Coast Regional Council to take up to 1000 litres per second of water from the water export facility holding tanks /storage ponds, via a buried pipeline, to supply ships at the monobouy facility.

Land Use Consent from Westland District Council for vegetation clearance and earthworks associated with construction and maintenance of a water export facility at Neils Beach including construction of holding tanks /storage ponds and the laying of intake and discharge pipelines. (Consent sought for pipeline covers up to the mean high water mark on Neils Beach).

Land Use Consent from Westland District Council for works within the bed of Tuning Fork Creek associated with construction and maintenance of intake structures.

Discharge Permit from West Coast Regional Council to discharge up to 800 litres per second of water from Tuning Fork Creek into holding tanks /storage ponds at the water export facility.

Discharge Permit from the West Coast Regional Council for the discharge of up to 15 litres per second of back flushing water from cleaning of the holding tanks at the water export facility into the Arawhata River and discharge of 210 litres per second of transient stormwater from the water export facility into the Arawhata River, via the same pipeline to be used for the back flushing water discharge.

Discharge Permit from the West Coast Regional Council for the discharge of stormwater containing sediment to land during construction of the water export facility.

Additional information:

These consents relate to areas at Tuning Fork Creek, Arawhata River and Neils Beach. A full description of the locations of the proposed activities, and the descriptions of the activities to which the application relates, are included in this document.

Okuru are resubmitting their proposal into an already consented environment, having held consents for this project, in this location since 1991. There are only very minor changes to the previously consented project, reflecting improvements to technology or materials. There is no change to the location or the footprint/disturbance of the previously consented proposal. The proposal has been updated to reflect changes to the district plans and the social environment since the original proposal was approved.

Okuru holds existing consents for the project, including a land use consent from Westland District Council, coastal and water take and discharge permits from the West Coast Regional Council and a concession (easement) from the Department of Conservation. More detailed information on these consents is included in this document.

Okuru have undertaken a range of consultation in relation to this project.

All Section 9 land use consents are required for an unlimited duration. The section 13 land use consents, water permits and discharge permits are required for the maximum term of 35 years.

Unless otherwise specified the default lapsing period for resource consents is 5 years. However, given the nature of the proposal and the need to maintain flexibility over construction commencement, Okuru requests that a lapsing period of 10 years apply to all resource consents. It is not envisioned that any delay in giving effect to any of the resource consents will unduly affect any party other than the applicant.

Signature: _____

Lisa Dickson on behalf of Okuru

Date: June 2016

Background

Okuru Enterprises Ltd

Okuru Enterprises Ltd (Okuru) propose to export potable water in bulk from a water export facility adjacent to Neils Beach, Haast. The current preferred (and previously consented) project option involves sourcing water from Tuning Fork Creek, immediately downstream of Mount Aspiring National Park. Water will be diverted from the creek by means of a small weir structure and a gravity fed pipeline. The pipeline will traverse some 12km west, to a set of storage tanks adjacent to Neils Beach. From the storage facility water will be pumped via a buried pipeline to vessels anchored in Jackson Bay.

As part of the project investigation, consultation and previous approvals, Okuru have commissioned a series of studies to assist in determining the potential effects of this development on the environment, including:

- Site Optimization Studies for Bulk Water Exports in the Haast Region. A R Black, August 1990
- Water Sample Analysis: Tuning Fork Creek. DSIR Chemistry Division. C J Nokes and E J Bathurst
- The Climate of Jackson Bay. NZ Meterological Service , Wellington. R McGann
- Hydrometric Monitoring as undertaken by Water Resources Survey, DSIR, Greymouth. R Dickson
- Site inspection and Report on Vegetation found in the Project Area. D Hammond
- Ecological Survey of Tuning Fork Creek, South Westland. M J Winterbourne, J S Harding and G A Knox
- The Benthic Ecology of Jackson Bay with special reference to the proposed marine pipeline for Okuru Enterprises Water Exporting Project. G A Knox
- Operation of a Mono Buoy off Jackson Bay. T Wood and J McMaster
- Jackson Bay – Wave Refraction Study. I Munro and P Young
- Okuru Enterprises Ltd proposal to extract water from Tuning Fork Creek and its likely impact on Haast Brown Kiwi. Dr John McLennan

Also relevant to the application are the following reports not commissioned by Okuru:

- Neils Beach: Archaeological Report on the Neils Beach sub-division, Jackson Bay, South Westland. M Trotter

Copies of all the above mentioned reports are included in the appendices.

Although nearly 20 years old, the original reports relating to the application are still considered to be relevant as the environmental effects remain unaltered from the time the initial applications were lodged. Cattle still graze the lower reaches of the Tuning Fork Creek catchment, the site of the export facility remains unchanged, the airstrip is still predominantly covered in exotic weed species and the population of Neils Beach remains small. Essentially the extent of human activity and natural influences in the area remains unchanged since the project was initially approved and consented. In

order to add credence to this statement, Okuru have commissioned in 2016, the following reviews to three key reports, looking at hydrometrics and vegetation:

- Tuning Fork Creek Low Flow Estimation, NIWA. J Porteous 2016
- Oukru Enterprises Water Export Project, Jacksons Bay, Westland. D Hammond 2016

Okuru are also attempting to get an update from Dr John McLennan regarding mitigation measures for Haast Brown Kiwi. Dr McLennan is not contactable until after 20 June 2016, so this information will be provided as an addendum to this document. The other reviews mentioned above are included in the appendices.

Water quality is paramount for the success of the project requiring diversion from a pristine environment. Tuning Fork Creek, which drains Haast Range and is a tributary of the Arawhata River has been identified by the applicants (by means of comprehensive water testing) as being of a very high potable quality. The first (1990) and last (2010) water analysis results have been included in the appendices to show there has been no change to the water quality over the duration of the consent period. Extensive hydrological investigations have been completed and summary reports were provided with the initial consent application. The updated NIWA report (Tuning Fork Creek Low Flow Estimation, 2016) has also been included in the appendices.

Okuru obtained all necessary approvals for the proposed water export project from the Westland District Council (WDC), West Coast Regional Council (WCRC) and the Department of Conservation (DOC) back in the early part of 1990s. However, the water and discharge permits granted by the Regional Council, and the land use consent from the WDC for construction, operation and maintenance of the water export facility, are due to expire in 2016. Okuru are seeking renewal/replacement of these consents. In addition, new consents are also being sought that are now required as a result of provisions of Regional Plans that were not in force at the time when the original applications were sought. Okuru hold all other consents that have been required for the project, namely a coastal permit from the WCRC for the pipeline and mono buoy, and a deed of easement from Department of Conservation for the construction of the pipeline over Conservation lands.

This document provides the information necessary to understand the current consents being sought, the potential environmental effects and how Okuru intend to mitigate these. The document is structured as follows:

- **Background** – this section provides an overview of the water export project.
- **Project description** – this section provides a more detailed description of the project, the land parcels affected by the project, the project approvals held to date and the new project approvals being applied for from WDC.
- **Existing environment** – this section describes the key features of the existing environment.
- **Activity effects** – this section describes the potential environmental effects of the proposed activities and sets out the mitigation measures that will be adopted.
- **Statutory considerations** – this section discusses the proposed activities in relation to the relevant planning documents, being the Westland District Plan, various Regional Plans and

RMA provisions. It also refers to matters of national importance – national standards and policy statements.

- **Consultation** – Identification of persons affected by the activity and consultation that has been completed over the course of the project.

Project description

Site location and legal descriptions

The proposed source of water is Tuning Fork Creek. This is a tributary of the Arawhata River and enters the river some 8km upstream of the mouth. The pipeline will travel from the water source, around 12 km to a storage facility at Neils Beach. From here, it will be pumped via a buried pipeline to vessels anchored in Jackson Bay. The Arawhata River flows into Jackson Bay. This bay is considered to be an ideal location for a vessel-mooring site, as Jackson Head provides shelter from the predominant weather patterns. It is considered the best location on the entire West Coast for such an activity and can handle the size of vessels necessary to export water economically.

The project covers six land parcels from the water collection point (Tuning Fork Creek weir) to the loading point (Jacksons Bay). A description of the land parcels and a brief overview of the activities to be undertaken on each land parcel is included below.

Figure 1. Map showing location of Tuning Fork Creek, Arawhata River, Neils Beach and Jackson

Water source – Tuning Fork Creek weir to the Arawhata Bridge: ***Map 1 and 2 in the appendices***

The upper reaches of Tuning Fork Creek are within the Mount Aspiring National Park. However, the proposed weir from which water collection will commence is at an elevation of 91.4m above sea

level, downstream of the National Park boundary. The weir, and the first 3km of pipeline (from the weir to the Arawhata Bridge) is located on two parcels of Conservation Land, managed by DOC, initially Pt R 1692, leading on to Res 2044 (Travelling Stock Reserve). Activities affecting these two parcels include:

- Construction of weir – Res 1692
- Construction of pipeline – Res 1692
- Construction of pipeline - Res 2044

Okuru's original application had included a boost pump to be sited on Res 2044, to assist with periodic pumping of water to assist with catch up following low flow periods. This was estimated as being required three times per year. Okuru no longer consider that the boost pump will be required, and are therefore NOT including it in this application. Activity on Res 2044 is therefore restricted to construction of the pipeline only. The pipeline will cross the Apline Fault line when travelling through Pt Res 1692. Okuru Enterprises are aware of the fault's significance. As the pipeline will only carry water we believe any environmental or property risk to be negligible. As the water being carried is for a business enterprise and is not servicing a specific community, then we do not believe there is any reason under Policy 4.14 of the Westland District Plan to not permit the activity.
Maps showing the land parcels affected by this portion of the application are included in the appendices – maps 1 (Res 1692) and 2 (Res 2044).

Crossing the Arawhata River Bridge *Map 3 in the appendices*
The pipeline will come out of the ground adjacent to the Arawhata bridge pier and rise up vertically. It will run along the side of the two bridge structures, attached by a series of brackets. Installation work will cause some disruption to traffic flow across the bridge. However, this impact will be reduced by selecting times of closure that minimise impact on local traffic patterns. Installation design will be completed in consultation with WDC Operations staff.

Arawhata River Bridge to Water Export Facility *Map 3 in the appendices*
The pipeline will be buried adjacent to or under the existing roadway for the entire route from the Arawhata Bridge to the proposed water export facility. This land is road reserve under the authority of Westland District Council. It is expected that one lane will be available for the majority of the time during the pipeline installation works.
Maps showing the bridge and road reserve location affected by this portion of the application is included in the appendices – map 3.

Water export facility site *Map 4 & 5 in the appendices*
The water export facility will be sited on private, freehold land behind Neils Beach. The complex will impact on Rural Sections 2118, 526 and 290. These freehold sections are owned by Kerry Eggeling, who is a significant shareholder of Okuru Enterprises. There is also an agreement between Okuru Enterprises and Mr Eggeling for right of purchase over the affected sections. An affected party sign

has been sent to Mr Eggeling. He is currently in Canada and has indicated that he will sign this once he returns. We will forward a copy of this once it has been received.
The water export facility will consist of up to six storage tanks, water treatment facilities/pump house, workshop and office facilities. The complex will cover approximately 14 hectares to enable landscaping of the area. Vehicle access to the site (and parking) will be provided. The proposed facility is around 200m from the closest neighbour and the Neils Beach settlement.
Maps showing the freehold land parcels affected by this portion of the application are included in the appendices – maps 4 and 5.

Water export facility site to Neils Beach *Map 6 in the appendices*
The pipeline will travel from the storage facility across Lot 1 DP 3786 Blk I Arawata SD. This is a freehold section, vested in the Ngai Tahu Ancillary Claims Trust. Okuru has an existing easement in place to provide access across the land to the Neils Beach foreshore.
Maps showing the freehold land parcel affected by this portion of the application are included in the appendices – map 6. The certificate of title showing the existing easement is also included in the appendices.

Neils Beach foreshore *Map 7 in the appendices*
The pipeline will be buried through the foreshore area, namely Pt Res 1692 Block I Arawata. This is Conservation area being foreshore (formerly part of Cascade State Forest). The foreshore crossing is covered by existing consents, RC97040 for the pipeline across the foreshore (expires 2034) and RC91048 for the pipeline and buoy at seas (expires 2027).
A map showing the Conservation Area affected by this portion of the application is included in the appendices – map 7.
A summary of the six land parcels affected by the application is included in the table below:

	Site locality	Legal description	Ownership	Activity
Map 1	Tuning Fork Creek from the intake weir/collection point to Reserve 2044	Pt Res 1692 Block VI and VII Arawata SD	Department of Conservation stewardship land	Construction of the weir Pipeline (buried)
Map 2	Across Reserve 2044 to the Arawhata River bridge	Reserve 2044	Department of Conservation Travelling Stock Reserve	Pipeline (buried)
Map 3	Pipeline from Arawhata River bridge along Haast-Jackson Bay Rd to the water export facility site	Road Reserve	Westland District Council	Pipeline (attached to bridge) Pipeline (buried)
Map 4	Water export facility site	Rural Sections 2118, 526 and 290	Freehold land owned by K Eggeling	Construction of the water export facility site
Map 5	Water export facility site to Neil's Beach	Lot 1 DP 3786 Blk I Arawata SD	Ngai Tahu Ancillary Claims Trust	Pipeline (buried) – Easement held
Map 6	Neils Beach foreshore	Pt Res 1692 Block I Arawata SD	Department of Conservation conservation area being foreshore (formerly part of Cascade State Forest)	Pipeline (buried)

Project approvals

Existing approvals

Okuru Enterprise Ltd was formed in 1989 for the specific purpose of developing a facility for the export of high quality potable water in bulk. Following formation of the company, considerable work was undertaken in identifying a suitable site for such a facility. Tuning Fork Creek at Jackson Bay was selected as the ideal site for a variety of reasons including highest quality water and suitability of marine conditions for safe shipping operations. Following this site selection process and an intensive period of technical studies, various approvals were sought and obtained for the project, these are detailed in the table below:

Existing approvals held by Okuru						
Consent Number	**Consent Type**	**Issuing Authority**	**Purpose**	**Location**	**Date Issued**	**Expiry**
RC91/11	Land use	WDC	To establish, operate and maintain a bulk water export facility.	Full extent of the water export project.	5/5/1991	31/5/2016
RC97040	Coastal Permit	WCRC	To disturb and occupy the seabed - pipeline and monobouy associated with the bulk water export facility.	Neils Beach	2/2/99	1/2/2034
RC90/47	Water Permit	WCRC	To take up to 300 l/sec from Tuning Fork Creek, with a total daily take of 26,000m^3. A residual flow condition of 300 l/sec was stipulated. A subsequent variation to this water permit was granted (August 1991) to allow an increase in the maximum rate of take to 800 l/sec and an increase in the daily volume to 69,000m^3. The residual flow requirement of 300l/sec remained unchanged.	Tuning Fork Creek	31/5/1991	31/5/2016
RC91/24	Discharge Permit	WCRC	To discharge up to 1,296m^3 daily of back flushing filter water from water export facility. A subsequent variation to this discharge permit was granted (February 1992) to also enable the discharge of 210 l/sec of stormwater from the proposed export facility complex into the Arawhata River, via the same pipeline to be used for the back flushing water discharge.	Arawhata River	30/10/1991	30/10/2016
PAC 11-04-56	Concession (Deed of Easement)	DoC	To construct a weir and lay a pipeline within conservation estate.	Tuning Fork Creek and Burmeister Ecological Area	07/12/1994	19 years (from the date Okuru first enters DoC estate for the purpose of exercising the authority.

New approvals being sought from Westland District Council

The following consents are being sought from Westland District Council for the project:

Land Use Consent from Westland District Council for vegetation clearance and earthworks associated with construction and maintenance of a water export facility at Neils Beach including construction of holding tanks /storage ponds and the laying of intake and discharge pipelines. (Consent sought for pipeline covers up to the mean high water mark on Neils Beach).

Land Use Consent from Westland District Council for works within the bed of Tuning Fork Creek associated with construction and maintenance of intake structures.

Okuru plan to source sands and gravel from the Arawhata River, for which a gravel take consent will be required and applied for at a future date.

Existing environment

Water values

Tuning Fork Creek hydrology

Tuning Fork Creek is a tributary of the Arawhata River into which it flows about 30km south of Haast. Its origins are two tarns - Lake Greaney (surface area of approximately 15 hectares) and Minim Mere (surface area of approximately 4 hectares). These lakes are located on the western slopes of the Haast Range at an altitude of approximately 1070m.

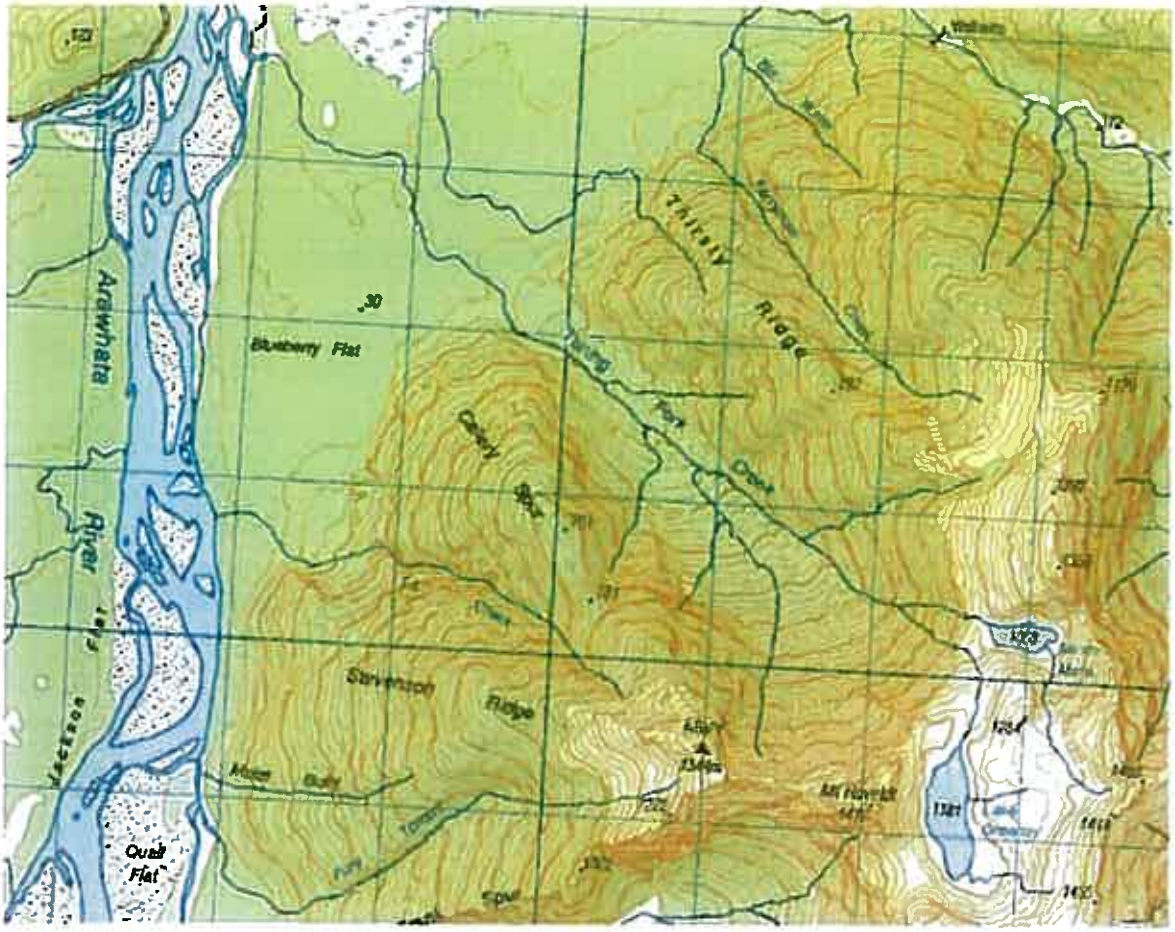


Figure 2. Map showing Lake Greaney, Minim Mere, Tuning Fork Creek and the Arawhata River

Upper creek reaches above the 60m contour are steep. Rapids and shallow turbulent water dominate. Below the 60m contour the slope of the creek is gentle with sedate water flows with some loss of volume apparent, this is expected to be due to subsurface flow through the loose gravel and sands.

Basement lithology is garnet oligoclase schist. This is a quartzo-feldspathic rock type that at ambient surface conditions will not decay to liberate metals and salts deleterious to high water quality. The

applicant's research has identified this rock type to be inexorably related to high water quality. Glaciation in the upper creek reaches has removed most of the soil, with bare rock and scree common. Mid-creek reaches are well vegetated and stable and it has been observed that even in intense rainfall creek levels run clear. Lower reaches of the catchment feature grassy flats and bank erosion with consequent water quality degradation. Cattle commonly graze in the lower creek area affecting water quality, however, cattle do not access the higher creek reaches.

The water intake structure at 91.4m above mean sea level is the lowest possible location that Okuru can use. This is a trade-off between Okuru's desire for head and water quality (both obviously improving with increased altitude) and the necessity of avoiding the Mt Aspiring National Park. At this intake point there is a catchment area of 8.1km^2 available to provide water and residual flow. Below the intake but above the 60m contour, a further 2.3km^2 of catchment is available to supplement residual flows past the intake and maintain downstream ecosystem values.

At the time of preparation of the previous AEE, the then Department of Scientific and Industrial Research (DSIR) had a flow gauge located in the headwater of Tuning Fork Creek, with the proposed water intake pipe above this monitoring gauge. Immediately below this gage two un-named tributaries entered Tuning Fork Creek. The DSIR report is attached to this application.

Okuru Enterprises have commissioned NIWA to do an updated low flow estimation report for Tuning Fork Creek (dated February 2016). The purpose of this report was for data analysis specifically to be used for water extraction consent purposes. The report found that any long term trends on the consent was minimal, with the 7-day MALF estimate for Tuning Fork Creek stable at 0.36 m3/s ± 25%. The 2016 report is included in the appendices.

Water right conditions were granted on the basis of the aquatic reports. Okuru Enterprise have "first application priority" for water take in the area. There are currently no other consented takes. Any new/future application received from another operator would be assessed at that point, and any potential new operator would have to first prove that the new take was not adversely affecting the environment and aquatic ecosystems over and above the existing Okuru take (regardless of whether it has been implemented or not), and would also not adversely impact on the existing authority take.

Tuning Fork Creek aquatic ecology

A report prepared by Knox, Winterbourne and Harding (1991), commissioned by Okuru, describes the ecology of Tuning Fork Creek and the impact of the proposed water abstraction. This report was prepared to support the original water right application and is attached as an appendix. The report identified a number of key points:

- Tuning Fork Creek has a very similar biology to many other streams in South Westland
- There appear to be no rare species present in the stream
- The stream has large natural fluctuations in flow rate, and the communities living in the stream have adjusted to this phenomenon
- It is considered that water abstraction will have negligible impact on instream biology provided a specified residual flow is maintained

The report covers results of a quantitative survey of benthic invertebrate fauna undertaken at two sites on Tuning Fork Creek on 17 March 1991. Two biological sampling sites were established, one in the vicinity of the DSIR flow gauge (upper site) and the other about 2km downstream (lower site). The upper site at 230m a.s.l. was within podocarp forest with fuchsia common along the stream banks. The creek bed morphology consisted of a series of alternating pools, cascades and riffles, with large boulders and cobbles forming the predominant substrata. Algae and bryophytes were found to be present on stones in the water. At the lower site (about 17m a.s.l.) stream gradients was substantially gentler and the riparian vegetation consisted of a mixture of podocarp forest and roughly grazed pasture. The stream at this sampling point had a meandering course and large pools alternating with short rapids. The bed substratum consisted mainly of cobbles and pebbles and some gravel beds were present with algae covering most of the submerged bed materials.

Twenty seven taxa of invertebrate fauna were identified, 19 at the upper site and 17 at the lower site. The dominant animal at both sites was the mayfly (*Deleatidium*). All other species occurred in low numbers at the upper site but at the lower site beetle larvae (*Elmidae*) and a stonefly, (*Zelandoperla decorate*) were also found.

All species found have been recorded from other West Coast streams and rivers, with 20 of the 27 taxa having being recorded in a survey by Graesser (1988) of the lower reaches of 23 streams and rivers between Franz Josef and Haast. None of the species found in Tuning Fork Creek were considered to be rare. Comparisons were also made between numbers of taxa and faunal densities in pools and riffles at each site. Overall the results indicated that more taxa and individuals occurred in shallow water.

The report concluded that Tuning Fork Creek is similar in many ways to other South Westland streams including moderately low density of fauna and the low biomass of algae and plant debris on the streambed. All are characteristic features of nutrient-poor streams in high rainfall regions where discharge fluctuates frequently and often substantially. The denser fauna at the lower sampling site reflects its gentler gradient, smaller average substrate particle size and more open nature, factors that were also considered to be responsible for the greater biomass of algae on stones.

Flora and fauna

Terrestrial flora and fauna

The terrestrial flora and fauna environment was discussed in the original application, and effects were addressed in the land use consent issued by the Westland District Council. However, in the interests of providing a complete description of the existing environment a brief discussion is also provided in this report. This discussion is based on a report provided by Don Hammond that supported the initial consent applications (and was re-verified by Mr Hammond in March 2016), included in the appendices.

Tuning Fork Creek Catchment

The Hammond report identified six merging or distinct vegetation associations being:

- Grassland river flats

- Heavily modified kamahi fuschia
- Modified beech podocarp
- Podocarp beech hard wood
- Beech kamahi
- Seral hardwood

The lower reaches of Tuning Fork Creek catchment comprise grassland riverflats with these flats kept in grass by continued grazing by cattle and deer. As the terrain starts to rise from the almost flat lower reaches, the number of canopy hardwood other than beech increases with rata and kamahi present. Foraging forays by cattle are much reduced thus leaving the understory significantly more intact. A gradual merging of the previously described podocarp-beech-hardwood association to beech-kamahi occurs in the cooler parts of the Tuning Creek catchment. Scattered through the previous association are a number of areas of seral hardwood.

The Hammond report describes the various associations found in the Tuning Fork Creek area to be representative of the broad range of vegetation types found in this area. There has been, and continues to be, modification due to the presence of animals, in particular cattle and deer. In addition, the lower reaches are periodically flooded with considerable silt deposition further restricting the regeneration of a number of species.

Water export facility site

The Hammond report also describes the proposed water export site, which is to be located on the south side of the road to Jacksons Bay. The report states this area consists of a gently rising outwash fan with a northerly aspect. Soils appear to be derived from stream outflows being mainly sorted gravels and silt. The present forest vegetation is dominated by kamahi with occasional emergent podocarps. This forest types is described as being transitional, changing from cleared grassland towards a podocarp hardwood mixture. The report states the area appears to have been cleared by early settlers for agriculture and has subsequently been abandoned.

Neils Beach foreshore environment

The Hammond report describes the fore dune as being unconsolidated windblown sand colonised by maram grass and pingao grass to the top of the dune. Plants are spread along the foredune but do not generally form a dense sward. Behind the foredune is a tangle of interlaced association of approximately 1 to 1.5m height. This association consists predominantly of blackberry, bracken and clematis with a variety of other exotic species including bidibidi, yorkshire fog, dandelion, maku lotus, ring fern, lupin, prickly shield fern, fuschia, Himalayan honeysuckle, five finer, coprossma, gorse and occasional exotic grasses.

Beyond the fore dune area is a track to the airstrip. This area is covered in exotic grasses and buttercup, with occasional gorse, bracken and blackberry maintained by cattle grazing and human activity. Wet soils restrict growth of most species. The species present, other than pingao, are predominately exotic and are aggressive colonisers. It is anticipated that these species will rapidly recolonise the site upon completion of construction work.

Terrestrial fauna

The Hammond report referred to a previous study undertaken by O'Donnell and Dilks (1986) which included the Tuning Fork Creek and surrounding area as part of a survey conducted in the Burmeister region. A total of 27 bird species were recorded in forest in this region including eight introduced species. Low numbers of Brown Kiwi also appeared to be present in the area (additional coastal, wetland and open country birds were also reported but these are not relevant to the forested environment of Tuning Fork Creek which is affected by the project).

Neils Beach stability

Neils Beach is located south of the Arawhata River and forms part of Jackson Bay. It is sheltered from the south and south west but exposed to the north and north west. Geologically the beach is stable and gently prograding seaward. It has been defined as a mature, low energy beach. Well sorted and rounded fine quartzo-felspathic sand with minor rounded schist pebbles form this gentle gradient beach. These features typify a low energy environment. Storm evens can cause localised, transient changes with localised sand removed. Sand is then replaced during gentle summer conditions. These changes occur on all beaches to some extent. Aerial photos from 1951 show little change to the beach. Back beach low amplitude sand dunes of less than 4 metres height appear to be building. These dunes terminate 80 to 90 metres inland from mean high tide.

One hundred metres west of the pipeline crossing is the small settlement of Neils Beach. Houses are built on low dunes in the back dune area. In living memory no resident can recall significant changes to the beach profile or erosion. Thick vegetation cover is present on all but the front fore dune. Most vegetation consists of exotic species notably bracken, blackberry and gorse.

Haast Kiwi

Haast kiwi are known to inhabit the area around the Tuning Fork Creek catchment. Okuru commissioned a report from Dr John McLennan in 1992, to assess the potential impact of the pipeline on kiwi in the area, and to proffer mitigation measures to protect this important species. A copy of this report is included in the appendices. I have also attached a copy of the follow up letter dated July 1993. In his report, Dr McLennan is quite clear that it is essential that no birds are harmed or unduly disturbed while the pipeline is installed. He notes that this goal is achievable, provided appropriate precautions are taken. The two key threats identified are:

- Some birds could be crushed by construction machinery or by the felling of trees
- Birds could suffer a greater risk of predation if the access track were permanent and became a "highway" for dogs, stoats and cats

To mitigate these concerns, Okuru enterprises are suggesting a range of proposed consent conditions (proposed consent condition 1.3, 1.4, 2.1, 2.8, 3.3 and 3.4). A kiwi management plan, approved by the Department of Conservation would be required prior to any works commencing.

Dr McLennan is assured that the pieline could be built at no risk to kiwi, and that any short term effects would be more than offset by Okuru Enterprises plans to control introduced mammals in the catchment area. We are in the process of requesting an updated report from Dr McLennan for consideration.

Activity effects

The potential effects of the proposed activity, and the mitigation measures that will be adopted are discussed here. Affects and mitigation have been divided into the six land parcel locations mentioned earlier in the application.

Tuning Fork Creek from the intake weir/collection point to Reserve 2044

Land parcels affected: *Pt Res 1692 Block VI and VII Arawata SD*

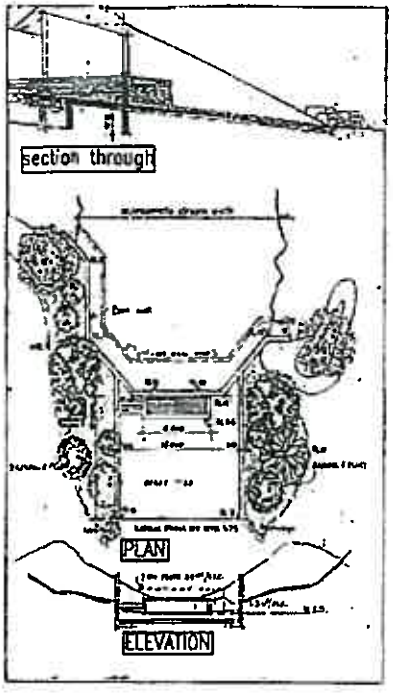
Area: 9,097ha

Activity: Temporary diversion of the Creek, construction of the weir and burial of the pipeline

Temporary stream diversion and weir construction

The proposed water intake on Tuning Fork Creek is at an elevation of 91.4m a.s.l, outside and below the Mount Aspiring National Park boundary (NZMG 2170000E 5673600N). Water collection will be by means of a small weir that precedes an intake structure. In order to ensure continuous residual flows the intake structure has a gate valve, at a low level, which will remain open. Under extreme low flow conditions, all creek flows will exit through this gate valve. This will deny uptake of water for the facility when flows at this location drop below the required residual flow rate. This is presently set at 300 litres per second as a condition of the Water Permit (RC90/47), with Okuru proposing continuation of this residual flow under the renewed water permits.

The weir structure is a reinforced concrete construction. The top is shaped to provide a central focus for the flow. Walls rise up from the central level towards the sides in order to keep high flows away from the steam banks. Walls are anchored into the existing base by way of two keyed-in concrete footings that will run across the creek. These are also required to limit flow under the weir. Similarly the weir structure will be built into the stream banks in order to prevent flow around the edges. Water retained by the weir structure will be limited to a depth of 1.2m. This will limit water pressures and ensure they are manageable.



A concrete slab will be located on the downstream side of the weir to absorb impact of water flowing over the weir. Hardwearing local rocks will be set into the concrete to provide a natural appearance. The intake structure will be positioned adjacent to the weir, comprising intake pipes fitted with fine wedge wire screen material, which will prevent anything larger than 1.5mm passing into the intake. Wedge wire screens of this type exhibit very low entry velocities which greatly reduce the chances of living organisms and small particles being sucked through.

All aspects of the intake work by gravity alone so that no electrical or diesel powered equipment is required. Some monitoring instrumentation will be needed and will be solar powered. This will be mounted in a secure, watertight compartment on the side of the weir structure above flood level. The immediate intake site will only be fenced if a security problem arises (i.e. people tampering with the monitoring equipment).

Construction works will involve the temporary diversion of Tuning Fork Creek around the proposed weir site. This will be undertaken by sand bagging supported by material excavated from the streambed for the structure. Water will be piped past the intake structure site and discharged immediately downstream of the site to avoid silting of the creek during the construction phase. The construction zone will be kept to minimum, with the area of disturbance marked out in conjunction with the Department of Conservation prior to works commencing (proposed consent condition 4.1)

An excavator will be used to in order to carry out excavations required for the weir foundations and structure. The foundations must be of sufficient depth and size to give the weir a stable footing. In addition, the excavator will be used to replace local rock riprap in the post construction rehabilitation phase. A construction rehabilitation plan will have been prepared and approved by the Department of Conservation prior to any works commencing (proposed consent condition 1.1). This rock will provide protection to the creek banks and assist with obscuring the concrete weir structure. Throughout the construction of the weir, the Department of Conservation will be able to have a representative on site for fifty percent of the time (funded by Okuru Enterprises) to observe works (proposed consent condition 2.1)

Once the weir is constructed, the area between the sidewalls and stream banks will be backfilled. This will improve stability of the natural banks and reduce the visual impact of the structure. The backfilled area will be planted with locally sourced seedlings to ensure re-vegetation of disturbed areas is achieved within a relatively short timeframe. Upon completion of the construction of the weir, the area of disturbance will be returned to natural contours and revegetated to the approved rehabilitation plan, and to the satisfaction of the Department of Conservation (proposed consent condition 4.4). Construction of the weir is expected to take approximately 40 working days.

All the components including timber for boxing, steel reinforcing, fittings etc will be brought to the site by helicopter (utilizing existing helipads) to minimise disturbance wherever possible (proposed consent condition 4.2 and 4.2). Where a helicopter is not possible, the access way required for the pipeline will be used. The concrete required for the weir structure is expected to be mixed on-site at the Arawhata Bridge and flown in by helicopter. The weir structure may comprise some precast elements in order to minimise construction time, however, they will also be brought in via helicopter where practicable.

Temporary activities
A portable generator and a small compressor will be required to be on site for construction purposes, along with several sheds for storage of equipment and a workers smoko room. All on-site buildings will be removed following completion of construction work. Support buildings will be required only during construction (approx. 40 working days), so this is deemed to be a 'temporary activity' under the WDC Plan. Under section 6.2(a) temporary activities are permitted and are not subject to any performance standards or conditions.

Tuning Fork creek flow rates vary over a wide range. Stability of the structure and scouring forces induced during high flows will need to be compensated for. Movement of boulders, smaller stones, sand and silt across and through the intake structure during normal operation is inevitable and the weir structure will be designed and constructed accordingly.

Maintenance work at the intake will include cleaning or replacing screens and removal of any build-up of material, especially organic material that may be retained behind the weir. Other requirements will be the servicing of data recording equipment and management of rehabilitated areas to ensure plant survival and healthy establishment.

The construction site will be fully rehabilitated, including returning natural contours and replanting, to the previously approved rehabilitation plan, and to the satisfaction of the Department of Conservation.

Burial of the pipeline

During the previous consenting process a number of viable pipeline routes were proposed as possible options. These options are listed below:

a) To run the pipeline above ground through the bush on a series of concrete plinths (concrete up stands)
b) To bury the pipeline within the streambed thereby leaving vegetation intact
c) To bury the pipeline along a selected route through the bush

After a lengthy consenting process with considerable input from a significant number of affected and interested parties, option "c" was considered to have the least environmental effects and was the activity consented by the WDC.

The preferred route is one that will direct the pipeline away from the stream and run down the slope within an easement some 50 to 150m distant from Tuning Fork Creek. Essential elements are as follows:

- The excavated trench is 1.2m wide (at maximum).
- To one side approximately 1.3m of space is required to place excavated material, if possible, this material will be stockpiled so that it can be re-spread to assist with rehabilitation.
- On the other side a 1.5m space (at maximum) will be periodically required to set up the pipes to weld and test prior to installation.
- A bulldozer fitted with a side boom needs to run alongside this prepared pipe and will occasionally require approximately 4m wide turning area. This need not be continuous and therefore large trees or specific areas can be worked around.

For the majority of the pipeline through this area, a corridor of **maximum** 2.5m (trench of 1.2 and 1.3m for excavated material). Additional space (up to 4m) will be required periodically. When a turning area is required, up to 8m will be required, but can be worked around any environmental constraints or sensitivities. The current consent conditions allows for a 25m corridor, with the track as narrow as possible, preferably no more than 3 meters wide. The above methodology will meet these requirements, and Okuru are suggesting that these conditions remain (proposed consent conditions 2.4 and 2.5).

The pipeline is low pressure, and will be approximately 3km of 410mm HDPE pipe. Burial processes will ensure integrity of the pipeline and therefore avoid (or at least limit), need for machinery to revisit the pipeline and cause further disruption to vegetation. Depth of burial will vary to compensate for changes in slope, topography, streams and root zone depth of tall trees. Specified cover required for this pipeline is 600mm. Significant trees identified in the construction zone will be tagged prior to construction commencing (in conjunction with the Department of Conservation) and

will be retained (proposed consent condition 1.2). The pipeline route will also be subject to a kiwi management plan being developed by Okuru Enterprises, in conjunction with, and approved by, the Department of Conservation. This plan will document procedures to be followed to mitigate any threat to Haast Brown Kiwi population by the pipeline construction. This is likely to include a survey of the proposed pipeline, radio tagging and monitoring of any birds whose territories include part of the route, and other mitigation measures identified (proposed consent condition 1.4).

Trenching will be undertaken by means of an excavator not bulldozer, eliminating side casting and providing earthmoving precision to minimize impact. This is due in part to the need for space for both the trench and somewhere to put the excavated material. More significantly it also allows space for a bulldozer fitted with a boom to transfer the pipeline after welding inspection and wrapping in a continuous manner into the trench. The 8m access way can have sections of significant interruption - large trees can be accommodated within the 8 m access way. Topsoil and forest duff will be scraped off, stored and replaced where possible. Trenches will be backfilled and compacted as soon as practicable. Any remaining gravel that may have been used to enable temporary access will be removed and any areas of compaction loosened to speed regeneration. The pipeline route will be rehabilitated to the previously approved rehabilitation plan, and to the satisfaction of the Department of Conservation (proposed consent condition1.1).

Reserve 2044

Land parcels affected: *Res 2044 Travelling Stock Reserve*
Area: 8.892ha
Activity: Burial of the pipeline – works covered by existing DOC Deed of Easement

The pipeline will be buried through this zone using the same 2.5 - 8m maximum construction width. Burial depth will be increased to 1m in order to cope with the potential for machinery movements and to provide additional cover against flooding. Flooding has not caused scouring in the past but extra burial depth will reduce this potential low probability risk. Rehabilitation will be completed to the approved rehabilitation plan.

Crossing the Arawhata River Bridge

Land parcels affected: *Pt Res 1692 Block VI and VII Arawata SD*
Activity: Attachment of the pipeline

The pipeline will come out of the ground adjacent to the Arawhata bridge pier and rise up vertically. The pipeline will be protected from damage by a larger section of pipe acting as a sleeve. It will travel through a large diameter 90-degree bend and run along the side of the two bridge structures, attached by a series of brackets. Installation work will cause some disruption to traffic flow across the bridge. However, this impact will be reduced by selecting times of closure that minimise impact on local traffic patterns. Detailed design and method of fixing the pipeline to the Arawahata River bridge will be submitted to the Westland District Council for approval prior to works commencing. These design plans will be completed by an appropriately qualified person, holding appropriate

qualifications and experience (proposed consent conditions 7.1 – 7.5). Once approved, and prior to work commencing, approved traffic management plans will also be provided to the Westland District Council, covering the period of installation. The design engineer and Okuru Enterprises will carry full professional and public liability insurance (proposed consent conditions 7.5 and 7.6).

Arawhata River Bridge to Water Export Facility

Land parcels affected: *Haast-Jackson Bay Road*
Area: 27.013ha
Activity: Burial of the pipeline

The WDC has previously given approval for the pipeline to be buried under the existing roadway for the entire route to the proposed water export facility, subject to satisfactory reinstatement. In this new application, we also intend that this approval will be subject to full, detailed design plans and specifications having been approved by the WDC Group Manager – District Assets. These plans would be completed by a suitable professional, and would show the actual location of the pipeline, the depth, method of laying, compaction, methods of crossing rivers and timing of works (proposed consent condition 8.1). The plans would demonstrate how we plan to comply with NZS 4404:2010. Road closures would be avoided where ever possible, it is expected that one lane will be available for the majority of time during these works. Once again, work planning will take into account impacts on traffic, and construction methodology will be developed to minimise impact on local traffic. Pipe installation is expected to be at a rate of approximately 300m per day, on this basis roading interruption should not exceed 50 days. Okuru Enterprises are aware of the importance of the road to users, and the road would not be closed overnight. At any times when the road was closed, machinery would be on hand to effect immediate road reopening for emergency services. All works would be subject to approved traffic management plans, copies of which would be lodged with WDC.

The road would be reinstated to at least its present subgrade condition and sealed from the Arawhata River bridge to Neils Beach. Okuru Enterprises would offer a bond to the full sum of the estimated cost of sealing to ensure performance and would commit to the upkeep of the road for 12 months after pipelaying is completed. They would also indemnify the Council and other asset providers (phone/power) against all costs and damage to the roads or services resulting from pipeline failure or blowout over the full lifetime of the project (proposed consent conditions 8.3 and 8.4).

Water Export Facility site

Land parcels affected: *Rural Sections 2118, 526 and 290*
Area: 35.6353ha
Activity: Vegetation clearance and construction of the water export facility

The water export facility will be constructed on private land (owned by Mr Kerry Eggling) behind Neils Beach. The complex will comprise of four concrete storage reservoirs each of 30,000m^3 capacity. In addition to these tanks, two plastic lined open storage ponds of one hectare each will be

constructed. A water depth of 4m will enable storage of 80,000m^3 of water, as an additional buffer in times of low creek flow and consequent reduced water take.

The water export facility will also house water treatment facilities (filter room, pump house, control room/workshop and small office facilities. The complex will cover approximately 14 hectares to enable landscaping of the area.

The first stage of construction will require recontouring of the existing ground. All silty and organic matter will be stripped from the proposed storage tank positions. This material will be used to landscape the complex. Earthworks will entail approximately 35,000m^3 of topsoil material to be excavated, landscaped and reshaped, and a total of 70,000 for topsoil and foundation preparations. Tank floors will be of reinforced concrete construction with the floor slab poured in sections and each joined to the adjacent with a waterbar type strip to prevent leakage. As the floor slab is progressively laid, precast wall units will be placed and joined together. Inside columns will be progressively propped into position, followed by precast roof beams. Infill slabs will in turn be placed on these beams and an insitu (wet concrete) slab will complete the roof. A small structure similar to a small garage will be necessary atop each tank to cover a large access way into each tank. This will provide access for sampling and quality checks. Pipework associated with each tank will include:

- An inlet under gravity from the source
- An outlet to the pump station
- Inter-tank connection to allow adjustment to the contents
- A drainage line to allow tank drainage to the river

Concrete required for this project, is expected to be made in an on-site batching plant. Bulk cement will be brought to the site either by road tanker or barge/specialised cement carrier. Sands and gravel are proposed to be sourced from the Arawhata River, for which a gravel take consent will be required and applied for. Gravel extraction requirement is estimated at 10,000 cubic meters in a 12-month period during the construction phase. The proposed gravel take area would be in an active riverbed. Okuru would re-contour, and along with natural river movements, this would mitigate any visual effects of the extraction works.

The proposed water export facility will initially comprise of 4 (with a maximum of 6) storage tanks and two ponds to provide a buffer between low inflow rates from the creek source and the high pumping rate required to fill vessels. Tanks will normally be filled at the rate of 1000m^3 per hour. Vessels are loaded at 3000m^3 per hour. When the boost pumps are working the tank fill rate will increase to some 2500m^3 per hour. Expected frequency of vessels is one per week. This therefore requires storage facilities to hold at least 120,000m^3. This could increase to some 180,000m^3 if vessel numbers increase.

It is necessary to have a set of smaller tanks rather than one large one. Water must be batched (to provide quality control assurances) and stored. By using four storage tanks, once the first tank is emptied the facility can continue to collect water while vessels loading occurs.

Water will be collected continuously by the intake structure and fed by gravity to the storage facility. There will be periods during which no water collection will be undertaken. There are two circumstances for this – when reservoirs are full and no discharge from them is being carried out or when stream flows drop below the minimum specified 300 l/sec. The volume normally required for each vessel is expected to take 100 hours to collect. For contract purposes, after an individual tank is full, it is anticipated that the water collected will be independently quality tested. By passing contract criteria, the particular batch of water will then be cleared for loading.

All access roads, vehicle maneuvering areas and car parking areas shall be sealed or otherwise hard surfaces, and stormwater originating from the site will be disposed of to the satisfaction of Westland District Council. These detailed plans will indicate compliance with Parts 8.9 and 8.10 of the Westland District Plan, and would form part of the building consent process (see proposed consent condition 14.2). Any security lighting or night lighting shall be positioned and shielded to avoid glare when viewed from Jackson Bay Road or any residential property (proposed consent condition 14.3).

Assessment of visual effects

The proposed design and siting of the facility has been specifically chosen to ensure the facility will be obscured from public view by the existing vegetation. Roadside/buffer vegetation consists of mature, regenerating forest, including near mature Rimu trees which will remain. Extensive landscaping to assist with mitigation of visual effects is planned – fourteen hectares has been proposed for disturbance in this area to enable full design and construction in sympathy with the site. Without consideration for landscaping and the visual environmental, this figure would be reduced to only seven hectares required for actual facility construction. The facility will have no signage and no requirement to advertise its presence or location. The buildings are low profile structures with a small footprint. All structures on the site will be well below 25m in height. Reservoir and building structure heights are estimated at around 12m. The water export facility site location plan included in the appendices shows an aerial view of the facility superimposed onto google earth map, with blow out photos of the view of the car park entrance from Jacksons Bay Road and a view of Jacksons Bay (facing West-NorthWest). These photos give an indication of the vegetation that would remain to buffer the facility from view. Also included is a small elevated view from the north of the complex.

We are aware that the plans and elevations of the facility remain at concept stage, but believe that the concepts will assist in assessing the visual impacts of the proposal and the effects on the character and amenity of the area. We are comfortable that the existing vegetation and proposed planting will adequately screen the facility to ensure that it is not visible from any point on Jacksons Bay Road. The final design will be subject to the building consent process, which will also provide opportunity for the detailed design and full concept drawings to be assessed for compliance.

Assessment of noise effects

Construction noise emanating from the site will meet NZS:8802:1999 (see proposed consent condition 9.1). The only noise generating activity of concern at the facility is the diesel powered pumps that will assist with pumping operations. The storage facility pumphouse will contain 5 diesel powered pump sets of 500kw. These diesel powered pumps re the same type as used in built up areas, and will be used to move the water to the offshore monobouy (expected frequency of vessels

is once a week, so pumps will be non-operational for the majority of time). During pumping, four sets would be on line, with one on stand-by. Pumping (including line flushing) will be concluded in 28 hours per loading. We expect background sound levels to be 50db. Sound levels adjacent (one meter) to the generators will be approximately 65db. The generators are sited well within the boundary, away from residential properties. Sound intensity decreases in proportion to the square distance from the source point. The effect of this separation from the boundary will mean the level at the boundary will be below 45db as the distance exceeds 10 meters. This will make the sound (when the pumps are operational) virtually undetectable from the road adjacent housing. The closest neighbor to the facility is Sec 1 SO 11781 Blk 1 (shed for boat storage with living accommodation) which is 200m from the proposed pump station (note that the consent for this structure was issued well after Okuru had already been given approval for the export facility to be constructed). The distance from the pump house to the closest neighbor at the Neils Beach settlement is 330m.

Noise impacts from the pumping operation will be further mitigated by the solid structure/noise attenuating nature of the pumphouse building, which will include design features to control noise transmission such as double swung doors, mufflers and barriers, as well as careful planning, such as directing exhaust towards non-populated areas (Okuru Enterprises have secured land for this purpose). Both the building and plant will be designed and laid out to ensure that NZS 6802:2008 is met (proposed consent condition 9.2).

Prior to the construction of the export facility, and as part of the detailed design and building consent process, Okuru Enterprises will submit to Westland District Council a report prepared by a qualified and experienced acoustic engineer. The report will address in detail all potential noise sources and indicate the means by which the performance standards specified will be complied with (proposed consent condition 9.4).

Water Export Facility site to Neils Beach

Land parcels affected: *Lot 1 DP 3786 Blk I Arawata SD*
Area: 12ha
Activity: Burial of the pipeline

The pipeline from the water export facility site to Neils Beach runs through an existing easement on Lot 1 DP 3786 Blk I Arawata SD. A copy of the Certificate of Title, showing the easement is included in the appendices. The pipeline will be buried through this easement. The Neils beach subdivision area is heavily modified, having been exposed to bulldozed roadways and cutting and other forms of surface clearance throughout the subdivision.

One archaeological survey and accompanying report is recorded by Heritage New Zealand. We have requested all information that they hold regarding Neils Beach, and they have advised that this is the sum of their holdings in relation to the area. The report was completed in August 1976, by Michael Trotter (reference Trotter20). A copy of the report is included in the appendices. During this survey, thirty-three small test excavations were made in and around the subdivision area. Examination was also made of soil exposed by the subdivision works. Remains of pre-historic middens were found in four locations. In only one of these was material sufficiently extensive and undisturbed to warrant investigation. This area had already been acquired and built on. The other three locations were

deemed to be "largely disturbed". At the time, it was considered that there was no need to place restrictions nor to advise owners of sections of the requirements of the Historic Place Act.

The survey also examined areas to the east of the sub-division (covering the area where the easement is lodged, the airstrip, and areas adjacent to the river). There were no signs of occupational material found. One site of some importance was noted (page 2 of the report, identified as S97/1). S97/1 is an older imperial archaeological reference number which has since been revised to metric, so this site is now known as E37/1. The map below shows the location of area E37/1, which is some considerable distance from the easement location.

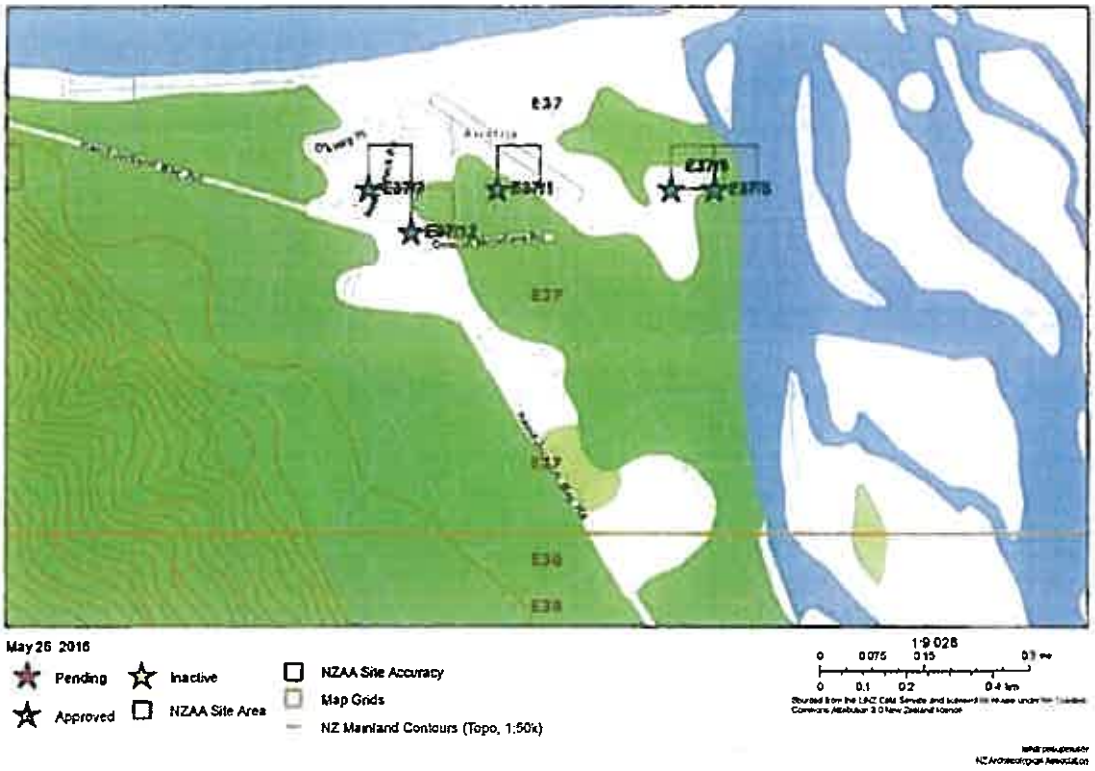


Figure 3. ArchSite report showing recorded sites at Neils Beach

The only known site that impacts on the easement area is site E37/12 identified on the map above. We requested information on this site from ArchSite (see Archsite record included in the appendices). The site was recorded in 1985, but the site has not been visited since it was recorded, and no additional information is held. The site is classed as Historic – Domestic. It is a site of an old house, with surface material including ceramics, glass, bricks and a shovel head. There is no potential that the pipeline/easement will impact on the other recorded sites mentioned on the ArchSite map above.

There is of course, the risk of accidental discovery during the laying of the pipeline, and to mitigate this risk, Okuru Enterprises plant to conduct a surface check and utilize test holes along the proposed pipeline prior to commencing trenching. We are also suggesting having a cultural monitor on site during earthworks (refer to section on *mana whenua* for further information on cultural

mitigation measures). An accidental discovery protocol has also been supplied to us from iwi, which would be followed in the event of any undiscovered sites (see appendices).

Neils Beach foreshore
Land parcels affected: *Pt Res 1692 Blk I Arawata SD*
Area: 102,1000ha
Activity: Burial of the pipeline

The pipeline will be buried through the foreshore area. This is Conservation area being foreshore (formerly part of Cascade State Forest). The foreshore crossing is covered by existing consents, RC97040 for the pipeline across the foreshore (expires 2034) and RC91048 for the pipeline and buoy at seas (expires 2027).

The pipeline to the mono bouy is 1 meter diameter nominal bore 925mm HDPE. The pipeline will be fusion welded and stored along the side of Jackson Bay Road/Neils Beach airstrip prior to installation. Conventional burial will be utilized from the back dune at Neils Beach and from the dune out through the wave zone. This process will require an open trench developed with steel sheet piles. During this construction phase, heavy machinery (20 – 30 tonne excavators) will be employed, and a vibro-hammer will place and retrieve the sheet piles. The construction period at Neils Beach is estimated at 6 weeks, but the actual period the trench would be open could be longer, as good marine conditions are required to pull the pipe string out to the mono bouy location. Under the current health and safety requirements, the public would be excluded from the active worksite while the pipeline is being buried. Due to the proximity of domestic dwellings, we anticipate that industry standard work restrictions would be required and employed. Pipeline burial will be at 1 meter or better, at this burial depth there will be no need for any public access restrictions once burial is completed.

The off-shore pipeline and single point mooring buoy and anchors are as per the original consented project, except we propose changing the material from steel to HDPE.

As the foreshore crossing site is already considerably modified and largely colonised by aggressive exotic weeks, any impact from burying the offshore pipeline will be temporary. Pingao grass will be salvaged along the pipeline route for transplanting. The backdune is presently heavily modified and supports vigorous exotic plant growth. Monitoring will occur to ensure sand blow out does not occur before complete vegetation recovery.

On fore dune areas, the native sedge pingao (*Desmoschoenum spiralis*) exists naturally. Following pipeline construction, disturbed fore dune areas will be replanted in pingao. Seeds will be collected from local pingao plants and nursery raised for replanting upon completion of pipeline burial. The benefits of planting pingao include dune stablisation and additional establishment of a plant considered to have high cultural value.

Statutory considerations

Assessment against the Westland District Council Plan

For the purposes of this analysis against the Westland District Council Plan, we have identified the proposed activity as *Industrial* in the *rural zone*, under the District Plan definitions;

"*Industrial Activity* means any activity involving the production, processing, assembly, servicing, testing, repair and/or storage and warehousing of any materials, goods, products or vehicles and includes transportation facilities and freight depots but does not include odorous activities specified in Appendix G."

"The *Rural Policy Unit* covers all non-urban land within Westland District. Rural-residential areas will be included in the Rural zone."

Part 5.6 of the WDC Plan relates to compliance within the Rural Zone. Table 5.7 provides the standards for permitted, controlled and discretionary activities in the rural zone. The relevant tables relating to buildings, noise, structure/heights, and modification to ripariam set backs have been reproduced below:

		Rural Zone		
		Permitted Activities	**Controlled Activities**	**Discretionary Activities**
(a	**Buildings**			
	• maximum gross ground floor area of non-farming building		300 m²	800 m²
	• maximum gross ground floor area of farm buildings	no limit	no limit	no limit
	• maximum incremental addition to a building		100 m²	150 m²

		Rural Zone	
		Permitted and Controlled Activities	**Discretionary Activities**
(d)	**Noise** (all activities except forestry, and agricultural activities)		
	• 0700 - 2100 hrs Mon - Fri • 0700 - 1800 hrs Saturday	55dBA L_{10} at any point within the notional boundary of a residential activity	55dBA L_{10} at any point within the notional boundary of a residential activity
	• all other times including public holidays	45dBA L_{10} at any point within the notional boundary of a residential activity	45dBA L_{10} at any point within the notional boundary of a residential activity

(h)	**Height** • maximum	10 m (residential buildings)	12 m (residential buildings)
		8 m (all other buildings)	25 m (all other buildings)
(i)	**Riparian setbacks** (no modification)		
	• Natural wetlands (greater than 2ha)	25 m	
	• lakes	20 m	
	• rivers and streams (of more than 3 m in width)	10 m	

Part 5.6.2.2 of the WDC Plan relates to compliance within the Rural Zone in relation to vegeation clearance. Section C relating to definitions of discretionary activities in relation to clearance has been reproduced below:

5.6.2.2 Rural Zone

C. Discretionary Activities

- Forestry above an altitude of 1000 m.
- Any other activity which complies with the standards for discretionary activities (see Table 5.7), except mining.
- The clearance of more than 2000 m2 of indigenous vegetation per 5 years per site:

  (a) Where the contiguous land is managed for conservation purposes, or;
  (b) From an area of indigenous vegetation in excess of 5 hectares.
  (c) From a natural wetland.

This rule does not include:

(a) Exotic plantation forest area.
(b) The clearance of regrowth vegetation to maintain existing tracks and stock crossings.
(c) The incidental clearance of indigenous vegetation to control gorse, broom or other exotic plant pests.

We have assessed the proposed activity on each land parcel (above Mean High Water Springs) against the relative activity compliance in the WDC Plan. A summary of this is included below:

Tuning Fork Creek from the intake weir/collection point to Reserve 2044

Pt Res 1692 Block VI and VII Arawata SD

Area: 9,097ha

Activity: Construction of the weir and burial of the pipeline

The activity on this site has been assessed against 5.7(i) Riparian setbacks, 6.6.2.2(c) Vegetation clearance and 6.2(a) temporary activities.

Riparian setbacks

The Westland District Plan allows for no riparian setback modification. Under the plan, riparian setbacks recognise the sensitivity of waterbody margins. Water quality, natural character and significant vegetation and ecosystems can be protected by the setting back of activities such as vegetation clearance from the margins of water bodies. Okuru are not proposing any vegetation clearance in the riparian margin, but recognise there may be minor disturbance from the construction of footings for the weir and intake structure.

Under the Westland District Plan, permitted activities within riparian setbacks include fencing, the activities of free range stock, pest and weed control, the retrieval of unavoidable logging and the removal of other logging debris, cable suspension logging, and access points to water on the basis of either one per site or one every 400m of linear measurement for stock, vehicles and structures such as whitebait stands. We do not believe the works planned will have negative impacts on the riparian margin in excess of those caused by permitted logging retrieval activities.

The proposed small weir and intake structure will be constructed within Tuning Fork Creek, with the sides keeping high flows away from the stream banks and riparian setback. These walls will not impact on the riparian margin, but will be anchored by the keyed concrete footings. Once constructed, the area between the sidewalls and stream banks will be backfilled to improve the stability of the natural banks. The backfilled area will be planted using locally sourced seedlings to ensure re-vegetation is achieved within a relatively short timeframe. Throughout the construction works, the Department of Conservation will be able to have a representative on site for fifty percent of the time (funded by Okuru Enterprises) to observe works (proposed consent condition 2.1), and all rehabilitation works will be as per the approved construction rehabilitation plan (proposed consent condition 1.1).

Because construction works will have a minor impact on the riparian margin, Okuru Enterprises are seeking consent for this work.

Vegetation clearance

The total area of this parcel of land is 9,097ha, the majority of which is covered in vegetation. The length of the pipeline over this land parcel is around 2700m. For the majority of this length the construction corridor will be 2.5m wide, with a maximum of 8m wide. We have estimated the total area of vegetation disturbance as 1.6ha, which is over the 2000m2 specified under 6.6.2.2(c) Vegetation clearance, and therefore is an activity requiring consent.

Don Hammond has inspected and reported on the Tuning Fork Creek vegetation and deemed it to be "representative of the broad range of vegetation types found in this area". He has assessed the pipeline impact (allowing for mitigation measures identified below) as "negligible and short lived". The vegetation is natural, but 'intactness' over the area has been impacted by animals (cattle/pest species such as deer), and land clearing/wind damage. The area does not meet that criteria for 'Distinctiveness or Representativeness' with some areas of the catchment heavily modified. The mitigation measures outlined below would ensure that the visual coherence of the site would be retained, with construction impacts short lived.

The small area of disturbance created by construction of the intake weir will be contoured and replanted in species present in the locality. Seedlings will be removed from the weir site prior to work commencing and transplanted on completion of construction activity. If necessary these plantings will be supplemented by additional plants sourced from the general locality.

The pipeline will be buried from Tuning Fork Creek down to the Jackson Bay Road. The pipeline will require a track of width varying up to 8m. This will be aligned to minimise disturbance to the forest, avoiding large canopy trees wherever possible and avoiding creating canopy gaps by removal of trees. The route for the pipeline will be pre-marked in consultation with Department of Conservation personnel. Techniques to reduce the visual and ecological impact will include:

a) Directional felling along the route alignment of any trees which must be removed
b) Avoidance of large canopy trees wherever possible
c) Cutting up of any vegetation to pack it close to the ground to facilitate rapid decay
d) Restriction of equipment to the specified route
e) Prevention of damage to residual trees, including bark and root damage
f) Cleaning of machines, equipment and any materials bought into the site to reduce the potential for wood invasion

Small plants, ferns and leaf litter, which will be destroyed or damaged by construction activities, will be salvaged for use in rehabilitation of disturbed areas. Any compacted areas will be ripped and a seedbed of litter and humus material will be spread to promote natural regeneration. Salvaged plants will be progressively transplanted as burial of the pipeline occurs. Natural regeneration of disturbed sites in this area is usually rapid and prolific, however, additional planting will be undertaken should regeneration be slower than expected.

It is expected that by following these procedures, the impact on the forest will be temporary and will have no long term effects.

Temporary activities

A portable generator and a small compressor will be required to be on this site for construction purposes, along with several sheds for storage of equipment and a workers smoko room. All on-site buildings will be removed following completion of construction work. Support buildings will be required only during construction (approx. 40 working days), so this is deemed to be a 'temporary activity' under the WDC Plan:

> *Temporary activity means any land use or structure of a short-term duration of up to 12 months and buildings and scaffolding incidental to a construction project provided that they are dismantled within 5 days of the project's completion or 12 months, whichever is the lesser; sporting events, galas and uses of a similar character provided that they do not occur more than 5 days per year; hawkers carts and mobile shops which are licensed by the Council; and temporary buildings provided that they are moved off the site within 5 days.*

Under section 6.2(a) temporary activities are permitted and are not subject to any performance standards or conditions.

Reserve 2044

Res 2044 Travelling Stock Reserve

Area: 8.892ha

Activity: Burial of the pipeline – works covered by existing DOC Deed of Easement

The activity on this site has been assessed against 6.6.2.2(c) Vegetation clearance. The total area of this parcel of land is 8.892ha, the majority of which is covered in vegetation. The length of the pipeline over this land parcel is around 490m. For the majority of this length the construction corridor will be 2.5m wide, with a maximum of 8m wide. We have estimated the total area of vegetation disturbance as .3ha (2,940m^2), which is slightly over the 2000m^2 specified under 6.6.2.2(c) Vegetation clearance, and therefore is an activity requiring consent.

The vegetation in this area is more heavily modified with grassland riverflats that have been grazed by cattle and deer. Vegetation includes areas of predominantly exotic grasses, as well as some indigenous hardwoods. The area is not intact or distinctive. Okuru will still employ mitigation measures, including avoiding the indigenous vegetated areas in favour of the heavily modified areas where ever possible.

Crossing the Arawhata River Bridge
Pt Res 1692 Block VI and VII Arawata SD
Activity: Attachment of the pipeline

Okuru wish to fix the pipeline to the Arawhata River bridge, and are seeking permission form Westland District Council for these works. Detailed design and method of fixing the pipeline to the Arawahata River bridge will be submitted to the Westland District Council for approval prior to works commencing.

Arawhata River Bridge to Water Export Facility
Haast-Jackson Bay Road
Area: 27.013ha
Activity: Burial of the pipeline

The WDC has previously given approval for the pipeline to be buried under or adjacent to the existing roadway for the entire route to the proposed water export facility, subject to satisfactory reinstatement. Okuru are seeking permission from Westland District Council for these works.

Water Export Facility site
Rural Sections 2118, 526 and 290
Area: 35.6353ha
Activity: Vegetation clearance and construction of the water export facility

The activity on this site has been assessed against 6.6.2.2(c) Vegetation clearance, table 5.7 compliance for buildings, noise and height, and Part 8, specifically section 8.2 Signs, 8.6 Hazardous substances, 8.9 Access and 8.10 parking.

Vegetation clearance

The total area of these parcels of land is 35.6353ha, the majority of which is covered in vegetation. The export facility site will require clearance of 105,000m^3 of earthworks disturbance/vegetation removal. Of this, 35,000m^3 will be reshaped and landscaped. We have estimated the total area of vegetation disturbance as 14ha, which is over the 2000m2 specified under 6.6.2.2(c) Vegetation clearance, and therefore is an activity requiring consent. The majority of the site is covered with regenerating forest vegetation, having likely been cleared by settlers and subsequently abandoned. The site does not meet the definitions for intactness or distinctiveness. Mitigation measures for this site include retaining as much vegetation as possible, including a minimum width that will reduce visual impact from the road.

A large area of land is required for the construction of reservoirs and associated buildings. It will be necessary to completely clear the building site and excavate the actual tank and pond areas. This will involve considerable earthworks. The impact of this development will remove all vegetation over an area of 14 hectares, some of which will be re-landscaped. Access from Jacksons Bay road will be required for both incoming and outgoing pipelines and for construction and operational traffic. However, the intention is to keep this to a minimum width to reduce the visual impact from the road. In addition, apart from the access way, all roadside vegetation will be maintained for a distance of approximately 100m back from the road in an unmodified state which will ensure the site is not visible from the road.

Care will be taken to ensure construction does not damage surrounding vegetation. Additionally machinery will be cleaned – especially tracks of earth moving machines before commencing work to reduce the ability of undesirable weeds invading the area.

Compliance for buildings, noise and height

Part 5.6 of the Westland District Plan relates to compliance in the rural zone. Table 5.7 provides the standards for permitted controlled and discretionary activities in the rural zone. The maximum gross ground area of a non-farming building is discretionary between 300m^2 and 800m^2. The floor area of the filter room is 120m^2 and the pump station/control room is 240m^2 which makes both buildings compliant under the plan.

The floor area of the water reservoirs is 1600m^2 (for each reservoir). This is over the 800m^2 specified in the plan, making it an activity requiring consent.

For non-residential buildings, permitted height is 8m and discretionary activity height is 25m. Okuru buildings will be around 10m in height, with the reservoirs around 18m high (although some of this height may be sunk into the ground to reduce visual impacts), so this activity will require consent.

Permitted activities in the rural zone in relation to noise is 55 dBA L^{10} at the boundary of a residential activity with a limit of 45dBAL^{10} outside the specified hours. Okuru Enterprises will be able to meet the specified noise limited for permitted and controlled activities.

Signs, access and parking

There will be no signage on the Neils Beach water export facility. Vehicle access to the site will be by way of a designed and constructed access way from the Haast Jackson Bay Road. All access roads, vehicle maneuvering areas and car parking areas shall be sealed or otherwise hard surfaces, and

stormwater originating from the site will be disposed of to the satisfaction of Westland District Council. These detailed plans will form part of the building consent process (see proposed consent condition 14.2). Any security lighting or night lighting shall be positioned and shielded to avoid glare when viewed from Jackson Bay Road or any residential property (proposed consent condition 14.3). This would make the project compliant under section 8.9.1.
The project will involve a new property access to a State Highway. Traffic generated will be in single figures per day, well below the 100 movements per day allowed under the plan. The project will comply with the performance criteria in table 8.9.1
The project plan provides ample areas for parking and loading/unloading, with a circular sealed access route enabling good movement around the facility, set well back from the road and shielded from view.

Hazardous substances
Water treatment will employ filtration and ultraviolet radiation. No chemicals will be used. Bulk chemical or pest control storage is not occurring on the site. Diesel will be stored on site in a 10,000 litre double bunded, compliant tank. Some small amounts of oils/hydraulic fluids may be stored on site for maintenance, and will be housed/stored appropriately. Section 8.6 will be complied with.

Water Export Facility site to Neils Beach
Lot 1 DP 3786 Blk I Arawata SD
Area: 12ha
Activity: Burial of the pipeline

The activity on this site has been assessed against 6.6.2.2(c) Vegetation clearance. The total area of this parcel of land is 12ha, of which about half is covered in vegetation. The length of the pipeline over this land parcel is around 420m, of which around 180m has no vegetation cover. For the majority of this length the construction corridor will be 2.5m wide. We have estimated the total area of vegetation disturbance as 600m^2, which is permitted under 6.6.2.2(c) Vegetation clearance.

The vegetation in this area has been assessed as "neither rare nor unique" by Don Hammond, consisting heavily of exotic grasses and weed species. It is anticipated that within a short space of time there would be few visual signs of disturbance in this areas. D Hammond has suggested that the impact of construction on the Neils Beach environment would be very limited in extend and short lived visually.

Other relevant planning documents

In addition to the assessment against the Westland District Plan already discussed, various regional planning documents are in force that did not exist at the time the previous applications by Okuru were lodged. As a consequence, some aspects of the proposal now require consent along with consideration of the planning provisions for the new applications being sought.

Other than the Westland District Plan discussed above, the relevant planning documents are as follows:

- The West Coast Regional Policy Statement (RPS)
- The Regional Land and Water Plan
- The Regional Coastal Plan (RCP)
- The Regional Air Plan
- New Zealand Coastal Policy Statement 2010

West Coast Regional Policy Statement (RPS)

The RPS provides an overview of the resource management issues of the West Coast region and includes policies and methods for achieving the integrated management of natural and physical resources.

Of particular consideration for the current application is Chapter 7 (Soils and River), Chapter 8 (Water), Chapter 9 (Habitats and Landscapes) and Chapter 10 (The Coastal Environment). With the exception of the reasonably significant earthworks proposed for construction of the water export facility, the scale of disturbance is considered to be minor and compatible with the provisions of the RPS. With respect to the proposed water export facility earthworks aspect, this site is within an area substantially modified by previous human activity and concealed from public viewing points (i.e. Jacksons Bay Road and Neils Beach). In addition, adequate stormwater controls measures will be installed to ensure run-off does not adversely affect the surrounding environment, therefore is also considered to be consistent with the provisions of the RPS.

Regional Land and Water Plan

Vegetation clearance

For the purpose of assessing compliance with the rules of the Land and Water plan it anticipated that the average dominant slope across the area is less than 12 degrees (slope of pipeline and export facility sites), and works will not take place in riparian margins. The site therefore falls under Non Erosion Prone Area, outside of riparian margins.

Under Rule 3, earthworks are a permitted activity provided it is undertaken in accordance with a number of criteria. Volumes of earthworks for the project is well over the permitted 5000m^3, therefore Rule 16 applies, making this a discretionary activity. Earthworks involves removal of topsoil (around 250mm), which will be stockpiled and used for subsequent landscaping and planting. A further 250mmm will be excavated to prepare foundations for the tanks, which would be backfilled and compacted. Sediment controls would be constructed to ensure that requirements relating to sediment management are met and that land stability is maintained.

Earthworks

The activity fails to meet the permitted criteria for earthworks in the Non Erosion Prone Area as the total volumes of excavations for both the pipeline and water export facility will exceed 5000m^3. Therefore the proposed earthworks becomes a controlled activity pursuant to Rule 16.

Tuning Fork Creek weir structure

Rule 50 provides for the erection of a structure for the damming of water as a permitted activity provided a number of criteria area meet including the following:

- The depth of water at the dam face does not exceed 3 m and the total volume of water stored by the dam does not exceed 20,000m^3 – the current proposal complies as the weir will create a water depth of 1.2m
- The dam allows residual flow of 75% or the instantaneous flow whichever is the lesser
- A spillway is constructed – the current proposal complies as weir incorporates a spillway

Among the issues that the Land and Water Plan seeks to address is the effects of land disturbance on soil conservation, land stability, water quality and in stream values. The small-scale nature of the disturbance within Tuning Fork Creek and the pipeline required to convey the water is considered to be consistent with the objectives and policies of this plan. Earthworks at the proposed water export facility is on flat land essentially devoid of native vegetation therefore land stability and loss of significant habitat is not an issue. Earthworks will be undertaken with appropriate sediment controls, which is again consistent with the planning provisions.

Tuning Creek water take

The Land and Water Plan outlines various scenarios in which water takes are a permitted activity. Given Okuru's intention to abstract water for a commercial enterprise this exceeds the permitted activity rules and falls as a Restricted Discretionary Activity pursuant to Rule 55, whereby Okuru accepts a minimum flow within Tuning Fork Creek of 75% of the mean annual low flow.

Relevant provisions of the Land and Water Plan include water objective 7.2.1 which seeks "to retain flows and water levels in water bodies sufficient to maintain their in stream values, natural character and life supporting capacity". Also relevant is Policies 7.3.1 to 6.4.3 set out below:

Policy 7.3.1 *"Takes from rivers where the total volume of water allocated is less than 20% of the river's mean annual low flow will require no minimum flow".*

Policy 7.3.2: *"Where Policy 7.3.1 does not apply, a minimum flow based on 75% of the mean annual low flow will be applied as a consent condition".*

Policy 7.3.3: *"To consider granting an application for a resource consent to take water from a river, subject to a minimum flow lower than that specified in Policy 7.3.2, on a case-by-case basis, provided:*

a) Any adverse effects on in stream values or natural character of the source water body.....

Among the issues the Land and Water Plan seeks to address is the taking and use of water in such a way that in stream values and natural character are not adversely affected. Of particular relevance for the current proposal is objective 7.2.1 which seeks "To retain flows and water levels in waterbodies sufficient to maintain their in stream values, natural character and life supporting capacity". The current proposal is consistent with this objective as the applicant has proposed a minimum flow regime to ensure that the in stream values of Tuning Fork Creek are not adversely

affected. This minimum flow was incorporated on the recommendation of the authors of the ecological survey report to ensure adequate protection to the aquatic values of the creek.

Discharge of water and stormwater/Back flushing water
Rule 65 provides for discharges of water (from a supply pipeline or reservoir) into water as a permitted activity provided, among other criteria, that the discharge contains no contaminants beyond trace concentrations or hazardous substances. The discharge of water from the export facility back to the river is therefore a permitted activity.
There is potential for the proposed discharge of stormwater (back flushing water associated with the cleaning of the tanks and transient stormwater) to contain residual traces of oil or fuel that may have leaked onto the parking area within the water export facility, therefore a cautious approach has been applied and the discharge of stormwater is being treated pursuant to rule 81.

It is noted that the only hazardous substances stored and used on-site will be oil and diesel required to run the diesel pumps. All pumps will be housed in a contained area which will be bunded to contain any accidental spills. Likewise, any machinery repairs will be undertaken within a workshop whereby any accidental spills can be contained and cleaned up with appropriate spill equipment.

Regional Coastal Plan (RCP)
The existing Coastal Permit (97/40) addresses aspects of the project below the mean high water spring mark (i.e. within the coastal marine area - CMA). However, the offshore pipeline will traverse the foredune and CMA without any differentiation to the CMA boundary, hence in the interests of an integrated approach some comment on the proposal in relation to the provisions of the RCP are discussed.

Also of consideration is the identified coastal management areas within the RCP, these are areas of the CMA where site specific values have been recognised. Of significance for this application is that Neils Beach is recognised as a Culturally Significant Area pursuant to rule 5.4.1.3 (CSA 20), due to the values of Tauranga waka associated with the area. The wider Jackson Bay area is recognised as a Coastal Recreation Area pursuant to rule 5.4.1.7 (CRA 18), with the main recreational uses listed as walking, swimming, fishing, diving and boating. Such recreational and cultural considerations were directly relevant to the WDC Land Use Consent and the Coastal Permit consenting process and conditions of both these consents address such matters.

Noteworthy, is that the WDC conditions require an archaeological survey of the pipeline routes and construction zones prior to any earthworks commencing with test pitting and trenching to be undertaken along Neils Beach and monitored for archaeological artefacts. Consultation has also occurred with local iwi, to discuss cultural values and the mitigation, avoidance and remedy methods which are discussed further in this report.

With respect to public access along Neils Beach the following objective is contained within the RCP:

Objective 7.3.1 seeks to "maintain and as far as practical enhance public access to and along the coastal marine area".

Public access impacts during burial of the pipeline will be temporary. The public will be excluded from small sections of the foreshore as burial of the pipeline progresses down to the water line. Once the pipeline is buried (expected to be completed within 40 working days) there will be no impact on public access along the foreshore. All disturbed foredune areas will be replanted in the native sedge pingao which will ensure dune stablisation and is considered to be of high cultural value.

Discharges to Land

The Land and Water Plan now controls, among other things, the discharge of solid and liquid contaminants into or onto land. During construction of the water export facility there will be a number of materials stockpiled onsite, including sand, gravel and soil. However, runoff from stockpiles will be controlled to ensure compliance with permitted activity Rule 83 of the plan.

In addition, construction activities will also involve the discharge of stormwater during earthworks activities. Appropriate sediment control measures will be implemented to ensure run-off does not contaminate any waterbody or cause erosion or instability.

Chapter 5 of the Plan contains the relevant objectives and policies that relate to the discharge of solid and liquid contaminants to land. It contains an objective to ensure that the adverse effects of discharge contaminants on water, soil quality, social, cultural and amenity values and human health are avoided, remedied or mitigated (14.2.1). As mentioned above, during construction of the facility appropriate measures for controlling run-off, such as settling ponds and silt traps, will be installed prior to any substantial earthworks being undertaken on-site.

Regional Air Plan

The Regional Air Plan contains objectives, policies and rules to manage air quality for the West Coast region. The discharge of dust to air associated with earthworks and operation of the concrete batching plant required to construct the water export facility will meet the conditions of permitted activity Rules 3 and 5.

Chapter 7 of the Regional Air Plan relates to dust management and contains one objective and four policies. The objective and supporting policies seek to protect human health, property, structures and ecosystems form the adverse effects of discharges of dust to air. The discharge of dust during construction of the water export facility will be controlled using proven methods to ensure dust effects do not go beyond the property boundary.

Regional Coastal Plan (RCP)

The RCP has been written to be consistent with the Regional Policy Statement. The Plan is intended to sustainably manage activities in the coastal marine area of the region - to enable low impact activities to be carried out, as well as to manage other uses with greater impacts.

The area of the application which triggers an assessment under the RCP is the proposed water export facility and the proposed offshore pipeline from the facility down to the coastal marine area (with the offshore aspect covered by the Coastal Permit). The proposed water export facility is already a modified environment with no outstanding area of landscape or habitat. The main facility is located well above Neils Beach. The only works proposed along the foreshore is burial of the offshore pipeline resulting in no loss of visual amenity. On this basis it is considered that in the long term there will be little visual change to the coastal environment.

The proposed offshore pipeline down the coastal marine area involves an already modified area. The backdune is presently heavily modified. The foredune areas that are affected by the project will be replanted in native sedge pingao (*Desmoschoenus spiralis*) which will provide benefits including dune stabilisation.

Chapter 7 of the Plan relates to the importance of providing public access. As mentioned previously, public access restriction will be limited to the period of time required to bury the pipeline, and the reasons for the restricted access will relate solely to health and safety. The public will be excluded from small sections of the foreshore as burial of the pipeline progresses down to the water line. Once the pipeline is buried there will be no impact on public access along the foreshore.

New Zealand Coastal Policy Statement 2010 (NZCPS)

The New Zealand Coastal Policy Statement was approved in 2010. It is a national policy statement under the Resource Management Act 1991. The West Coast Regional Coastal Plan is consistent with the national policy statement.

As well as objectives aimed at safe guarding the integrity, character and resilience of the coastal environment, the NZCPS also aims to ensure that communities can provide for their social, economic, cultural wellbeing though use and development, in appropriate places and forms, and within appropriate limits. The relevant parts of the NZPCS include Policy 6 (Activities in the coastal environment), Policy 13 (Preservation of natural character) and Policy 18 (Public open space).

The provisions for management of the coastal environment established by the NZCPS, are reflected in the West Coast Regional Coastal Plan.

RMA Provisions

Part 2 Considerations

Part 2 of the RMA is concerned that the use, development and protection of natural and physical resources is managed in a way or at a rate, which enables people and communities to provide for their social, economic and cultural wellbeing. Also paramount is the need to safeguard the life-supporting capacity of air, water, soil and ecosystems along with ensuring that adverse effects of activities on the environment are avoided, remedied or mitigated.

The Okuru proposal does not appear to trigger any considerations which must be recognised as a matter of national importance in terms of S6 of the RMA. With respect to S6(a) and the preservation

of the natural character of the coastal environment, the water export facility although in close proximity to Neils beach will not be readily visible from public access points due to the native vegetation screening the site. Similarly, burial of the offshore pipeline will ensure the natural character of the foreshore is preserved. In relation to S6(b) and the protection of outstanding natural features and landscapes, the site is not recognised as such within the RCP or any other planning document. With respect to Section 6(c) the terrestrial ecological report did not consider the application site to contain significant indigenous vegetation or significant habitats of indigenous fauna and such matters were addressed in the WDC land use consent process. Section 6(d) requires the maintenance and enhancement of public access to and along the coastal marine area. Burial of the pipeline will ensure public access remains unaffected, with only partial areas restricted temporarily during the limited period of construction. The relationship of Maori and their culture and traditions (S6(e) has been considered and is formally promulgated in the *mana whenua* section of this report.

Other relevant considerations include some S7 matters being:

(b) The efficient use and development of natural and physical resources
(c) The maintenance and enhancement of amenity values
(d) Intrinsic values of ecosystems
(f) Maintenance and enhancement of the quality of the environment

Taking a holistic view, the proposal provides an economic activity that will assist the small rural community of Jacksons Bay to provide for its economic wellbeing, while sustaining the ecosystems that will be affected by the project. The relatively small-scale nature of disturbance required to construct the weir and to lay the pipeline, is such that ecosystems functioning will not be adversely affected. Similarly, although the earthworks associated with the water export facility are substantial, this activity is located on land significantly modified by previous human activity. Further, the proposed mitigation measures of undertaking rehabilitation of all disturbed sites and maintaining residual flows within Tuning Fork Creek ensures adverse effects of the project are mitigated. The application is also be made into a previously assessed and consented environment.

Section 104

When considering resource consent applications a consent authority must, subject to part 2 of the RMA, have regard to the following:

- Any actual and potential effects on the environment,
- New Zealand Coastal Policy Statement,
- Relevant provisions of a Regional Policy Statement and other relevant plans or proposed plans, and
- Any other matter the consent authority considers relevant and reasonably necessary to determine the application.

This report has dealt with the first three aspects within this report. With respect to the last matter, there are no other matters that have been identified as being relevant to this resource management assessment.

Social and community impacts and benefits

Community effects

Okuru are submitting this proposal into an environment where consents have already been granted, but we acknowledge that both the legislative and policy/planning framework has evolved since that time.

The social environment has changed very little since the original proposal was approved. Neils Beach remains a small settlement, with no major development or changes in population since consent was initially granted. The Census meshblock containing Neils Beach (this mesh block is quite large and takes in other small settlements around the Neils Beach area) shows a decline in usual permanent residents over the years since consent was granted.

Census data for Neils Beach mesh block	
Year	Population
1996	48
2001	33
2013	21

The area is also used for holiday homes/part-time residence, so statistics relating to building consents issued for Neils Beach have also been obtained. These show low numbers of consents to build issued since the original consent was granted (average of 2.6 per annum). These consents also cover extensions/modifications to existing buildings within the community and unimplemented building consents.

We have identified the key social/community impacts as being visual and noise related, and believe we have mitigated these sufficiently that the project will have no negative impacts on residents.

The project also offers some positive social and economic benefits. The positive flow-on effects from export earnings for a project this scale on the domestic market are clear. At a local level, the creation of new jobs benefits individuals (given such a small population, the creation of multiple jobs is significant), increases the money circulating in the Haast community, and provides the stimulus for spin-off services and jobs through increased spending and productivity levels. At a national level, both Okuru Enterprises and its employees would contribute to the tax pool, which in turn provides for infrastructure, services and welfare. The small, locally derived work force would cause no local disruption.

The project has been designed to be run by locally available people. Present calculations are that 7-10 directly employed people will be required for the project. These are likely to include:

- Operations/Facility Manager
- Administration officer
- Marine operations (3)
- Plant operators/Maintenance (2-3)

- Project liaison officer (proposed consent condition 11 – this person may have a secondary role within the facility)

Neils Beach is a very small area, and employment opportunities are extremely limited and many are seasonal. Two meetings held in Haast prior to the proposals original approval was well attended, with strong support for the project and its potential benefits.

There have been no significant changes to the environment or the proposal that would pose additional effects (aesthetics, recreational, scientific, historical, spiritual or cultural) since the water scheme was originally consented.

Mana whenua and consultation

Manu whenua

The hapu who holds mana whenua for the area subject to these applications is Kati Mahaki, represented by Te Rūnanga o Makaawhio. Their exclusive area of tribal authority extends from the north at the Pouerua River, inland to the man divide and south to Awarua point. Te Rūnanga o Makaawhio shared areas of interest at either end of their exclusive boundaries extending their area of influence from Hokitika in the north to Piopiotahi/Milford Sound in the south.

Cultural Heritage

The current settlement known as Neil's Beach subdivision is known to the mana whenua as 'Okahu' pa. This is a significant place for Kati Mahaki and Ngai Tahu. The pa was also kainga to upwards of 300 people at its peak who were engaged in the manufacturing of pounamu from the southern pounamu fields.

While much of the area has been modified, the cultural value of this wahi taonga for both Kati Mahaki and Ngai Tahu has not diminished.

Archaeological assessment (Allingham report) on the site has been done in recent years in response to unauthorised earthworks undertaken as part of the newer subdivision development on either side of the airstrip. A copy of this report has been obtained from Te Rūnanga o Makaawhio and is included in the appendices (Preliminary Report on Excavations at the Arawhata River Mouth, Site E37/1, South Westland). While this report states it was written for the Historic Places Trust, Historic Places Trust advised us that the only report they had on file for the site was the Trotter report of 1976. The report provides additional information on site E37/1 discussed earlier, which is outside the area covered by Okuru's easement.
This archaeological work undertaken in conjunction with members of Te Rūnanga o Makaawhio unearthed a cache of taonga/archaeological artefacts and has legitimised the long held mana whenua knowledge of the site and its importance.

There remains the possibility that cultural material could be uncovered as a result of earth works and it is the role of Kati Mahaki as represented by Te Rūnanga o Makaawhio to ensure the protection of their cultural values, rights and responsibilities within their area of tribal authority.

Mitigation measures:

1. Okuru Enterprises is committed to following the terms of an accidental discovery protocol relating to both archaeological material and pounamu;
2. Okuru Enterprises is committed to providing resources to enable for a cultural monitor to be present during earthworks within the cultural zone for the Neil's Beach sub-division

There are no other known wahi taonga sites deemed to be affected by the renewal of these resource consent applications.

Wai Maori – Water

For Kati Mahaki the primary principal associated with water is the maintenance and enhancement of the Mauri or life-giving essence of the resource. Protection of the overall Mauri of the waterway will be ensured by;

- Ensuring that there is enough water to sustain the natural environment
- Ensuring that any discharges do not have a negative impact on the receiving environment

Mitigation measures:

1. The water take is deemed to be a minor water take that is considered and has been approved previously on the basis that there are no adverse impacts on the natural environment
2. Water discharge will meet required conditions to ensure that any discharge has no adverse effects in relation to contaminants, social, cu;tuiral and amenity values and human or environmental health

Whenua – Land

Indigenous flora and fauna have sustained tangata whenua, providing food, fibre, building materials, fuel, medicine and other resources. Te Rūnanga o Makaawhio has a duty to ensure that any impacts on these values are minimised to levels that will have no lasting or negative impacts.

Mitigation measures:

1. Directional felling along the route alignment of any trees which must be removed
2. Avoidance of large canopy trees wherever possible
3. Cutting up of any vegetation to pack it close to the ground to facilitate rapid decay
4. Restriction of equipment to the specified route
5. Prevention of damage to residual trees, including bark and root damage
6. Cleaning of machines, equipment and any materials bought into the site to reduce the potential for wood invasion

Mahinga Kai

The primary mahinga kai cultural value associated with this area are the mussel beds which are approximately 2kms South of the Neil's Beach settlement. These mussel beds are extremely important due to not their ability to sustain people physically, but also because mahinga kai practises provide the conduit for connection to the natural environment and the contribution these activities make to the retention of cultural knowledge, heritage and identity. The applicant considers that there will be no impact on these values.

Consultation

Okuru Enterprises have previously identified and consulted with affected parties to the proposal. During the course of the project, Okuru have consulted with the following:

- Department of Conservation
- Te Rūnanga o Makaawhio
- Private land owners affected by the proposal
- West Coast Regional Council
- Westland District Council
- Residents of Neils Beach/Jackson Bay

The original consent application and subsequent applications for change to consent conditions have been publicly notified and heard. The number and range of submissions are a matter of record.

In addition, Okuru Enterprises have re-consulted with the Department of Conservation, Te Rūnanga o Makaawhio, West Coast Regional Council, Westland District Council and West Coast Fish and Game during 2015/2016. A summary of the key consultations is included below:

West Coast Fish and Game
Identified as an affected party for the processing of WCRC water permits. Affected party sign off was received from them in March 2016.

Department of Conservation
Initially contacted in December 2015 when we were advised that our DOC concession for the project was still valid. Ongoing consultation since that time. We have supplied them with a full copy of our application and requested WCRC affected party sign off for water consents 4th March 2016. We have had ongoing discussion with them, to date we have not received affected party sign off, they have advised:
"....There is an easement in place for the installation of the pipeline and intake across the conservation area. DOC will consider effects on its interests when further information is supplied and the [WDC] application is deemed complete".
I have advised that we will supply them with a copy of this application (once WDC deem it complete) and any copies of correspondence with Dr John McLennan, to assist in their considerations.

Te Rūnanga o Makaawhio
Initially contacted in January 2016 when we supplied them with a full copy of our application, offered a meeting and requested their views on both the proposal and our proposed mitigation measures to protect cultural values. We have also requested WCRC affected party sign off for the water consents since that time. We have had ongoing discussions with them, along with several more offers made of meetings. The last update I have received is that the Executive met the weekend of 11/12th June, and that they would discuss the proposal at that meeting. We have not been provided any feedback as yet on those discussions. They have not requested any additional

information to date, but we will again share any additional reports we may obtain regarding kiwi management and mitigation.

Appendices

- Cadastral map – Project overview
- Cadastral map – Tuning Fork Creek
- Cadastral map – Neils Beach
- Cadastral map – Storage facility
- Land parcel maps 1-7
- Certificate of Title showing existing easement
- Proposed consent conditions
- Copy of Okuru Enterprises Taonga, Kōiwi Tangata and Pounamu Accidental Discovery Protocol
- ArchSite record for site E37/2 Neils Beach

Reports commissioned

- Site Optimization Studies for Bulk Water Exports in the Haast Region. A R Black, August 1990
- Water Sample Analysis: Tuning Fork Creek. DSIR Chemistry Division. C J Nokes and E J Bathurst
- The Climate of Jackson Bay. NZ Meterological Service , Wellington. R McGann
- Hydrometric Monitoring as undertaken by Water Resources Survey, DSIR, Greymouth. R Dickson
- Site inspection and Report on Vegetation found in the Project Area. D Hammond
- Ecological Survey of Tuning Fork Creek, South Westland. M J Winterbourne, J S Harding and G A Knox
- The Benthic Ecology of Jackson Bay with special reference to the proposed marine pipeline for Okuru Enterprises Water Exporting Project. G A Knox
- Okuru Enterprises Ltd proposal to extract water from Tuning Fork Creek and its likely impact on Haast Brown Kiwi. Dr John McLennan (and follow up letter dated July 1993)
- Neils Beach: Archaeological Report on the Neils Beach sub-division, Jackson Bay, South Westland. M Trotter
- First and last water analysis results

2016 Reviews

- Tuning Fork Creek Low Flow Estimation, NIWA. J Porteous 2016
- Oukru Enterprises Water Export Project, Jacksons Bay, Westland. D Hammond 2016

Other reports

- Preliminary Report on Excavations at the Arawhata River Mouth (Site E37/1) South Westland

LEGEND

Pipeline

Cadastral

Property Titles

DOC Public Conservation Area

Road Parcels

Hydro Parcels

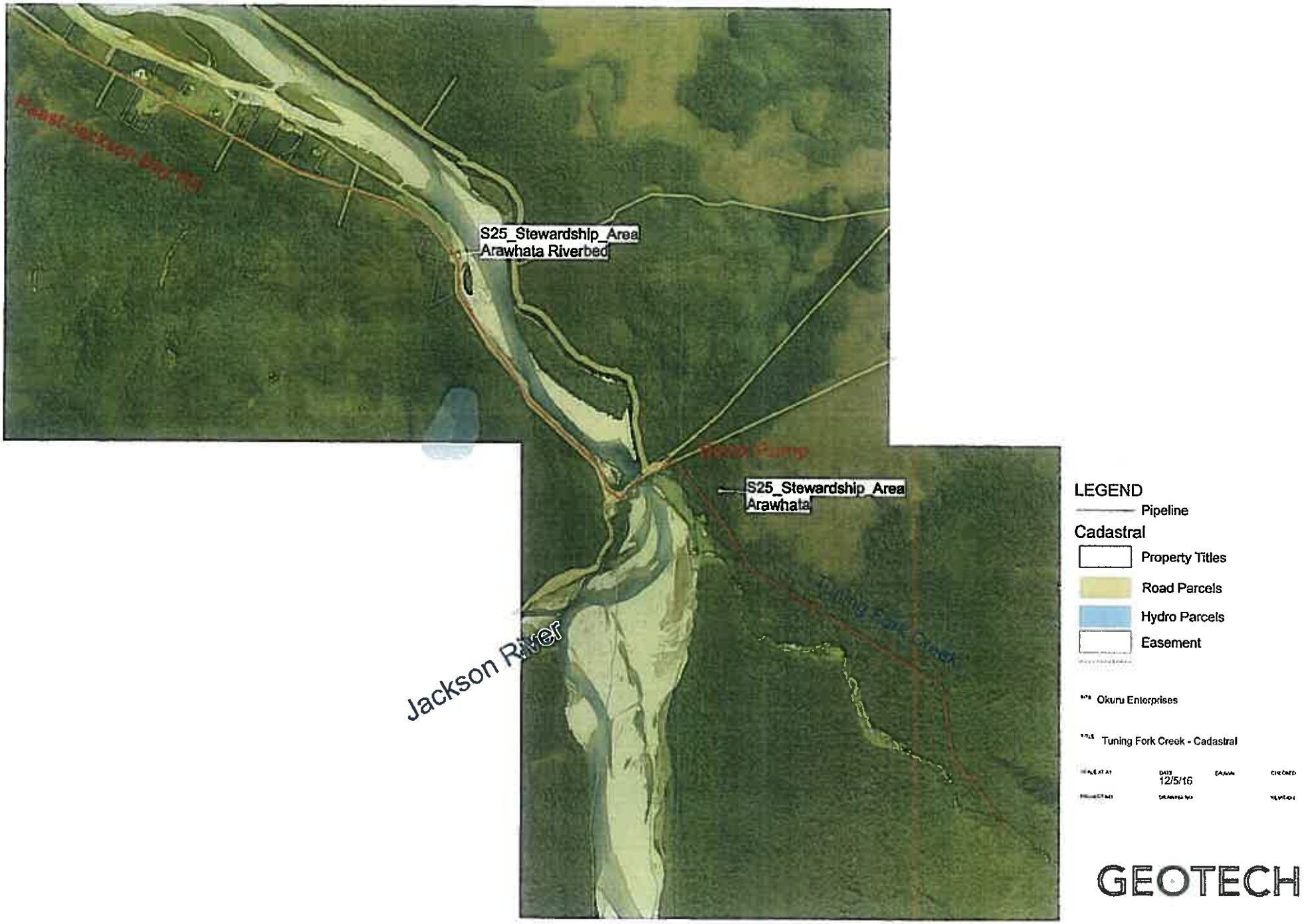
Easement

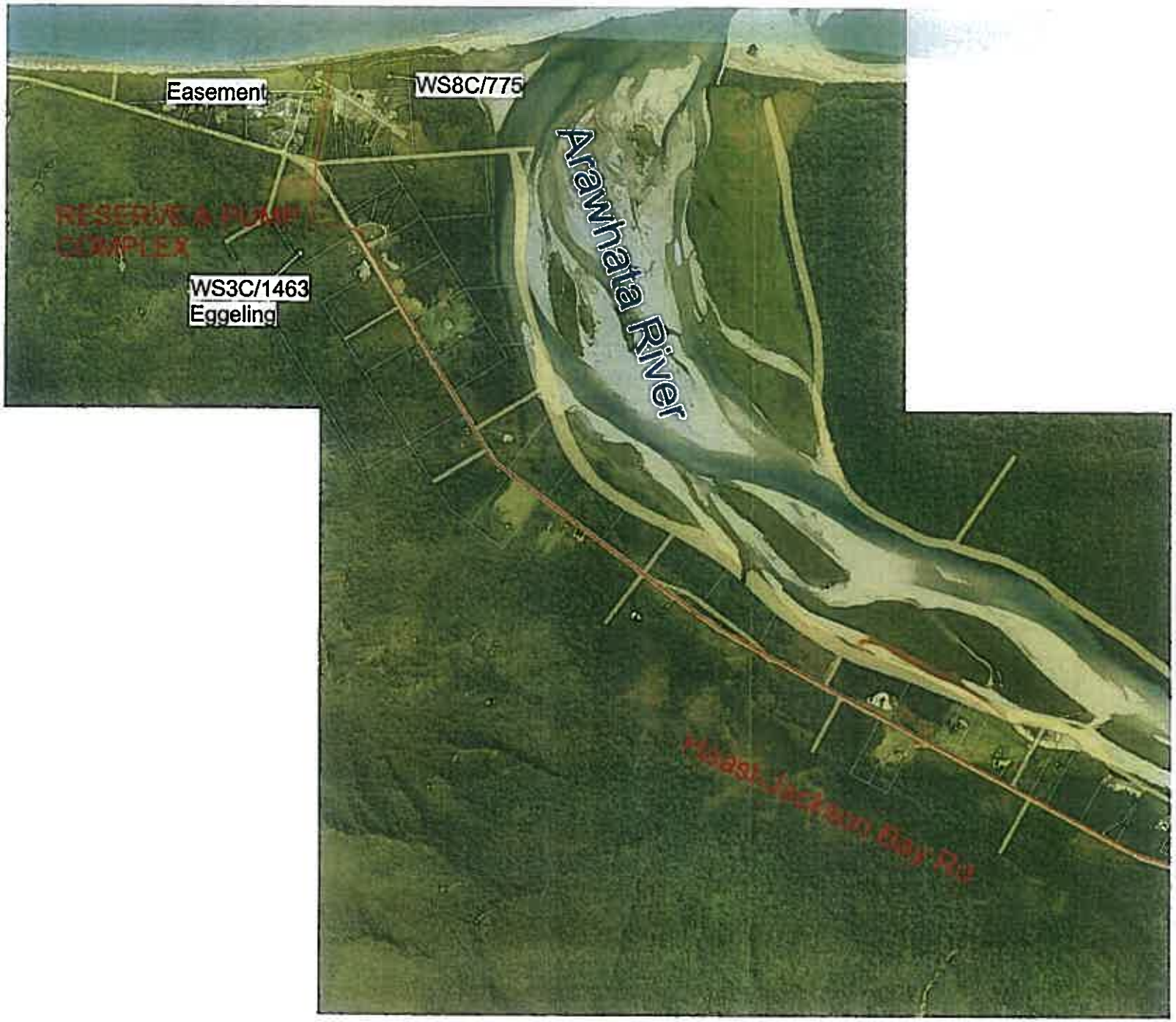
Okuru Enterprises

Overview - Cadastral

12/5/16

GEOTECH


S25_Stewardship_Area
Arawhata Riverbed
S25_Stewardship_Area
Arawhata
Jackson River
LEGEND
Pipeline
Cadastral
Property Titles
Road Parcels
Hydro Parcels
Easement
Okuru Enterprises
Tuning Fork Creek - Cadastral
DATE
12/5/16
GEOTECH



LEGEND

Pipeline

Cadastral

Property Titles

Road Parcels

Hydro Parcels

Easement

Okuru Enterprises

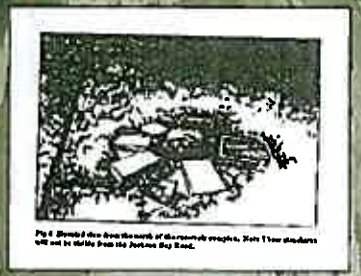
Neils Beach - Cadastral

12/5/16

GEOTECH

PUMP STATION
&
CONTROL ROOM

FILTER



View of car park entrance from
Jacksons Bay Rd, Facing West

View of Jacksons Bay Rd
Facing West-North West

Access Road
Pipeline
Cadastral Boundarys

Westcoast Regional Council

GEOTECH LTD

Jacksons Bay - South West and

Site Map Export Facidy

13/05/10 Jasmine

Created By: anonymous
Print Date: 30/05/2016
Print Time: 11:35 AM

Map 1.

showing land parcel, terrain and Turnip Fork Creek

WESTLAND

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Original Sheet Size A4

Projection: NZGD49 / New Zealand Map Grid
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Map Selection:

Land Info

Assessment	2581037400
Address	Private Bag 701 Hokitika
Vnz Desc	RS 28 33 291 396- 400 540 545 546 549-558 PT RS 542-544 PT SF RES 1692 BLKS I I II V VI ARAWATA SD
Area	

NCS Property Info

Assessment	2581037400
House No	4159
Street	Haast-Jackson Bay Road

Certificate Of Title

Legal Description	RS 28 33 291 396- 400 540 545 546 549-558 PT RS 542-544 PT SF RES 1692 BLKS I I II V VI ARAWATA SD
NCS Rates Info	Yes (1)
NCS Building Consents	Yes (3)
NCS Resource Consents	Yes (2)
NCS Licenses	No
NCS Water Meters	No

Map Legend:

- Proposed Fault Avoidance Zone
- Alpine Fault
- Railways
- Land
- Land Parcels
- Aerial Photos
- Lakes
- Hydro Parcels
- Adjoining TA

Created By: anonymous
Print Date: 24/05/2016
Print Time: 9:56 AM

Map 1

showing land parcel and Alpine fault (----)

WESTLAND

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Original Sheet Size A4

Projection: NZGD49 / New Zealand Map Grid
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Created By: anonymous
Print Date: 24/05/2016
Print Time 9:56 AM

1 Map

WESTLAND

Map Selection:

Land Info

Assessment	2581037400
Address	Private Bag 701 Hokitika
Vnz Desc	RS 28 33 291 396- 400 540 545 546 549-558 PT RS 542-544 PT SF RES 1692 BLKS I II V VI ARAWATA SD
Area	

NCS Property Info

Assessment	2581037400
House No	4159
Street	Haast-Jackson Bay Road

Certificate Of Title

Legal Description	RS 28 33 291 396- 400 540 545 546 549-558 PT RS 542-544 PT SF RES 1692 BLKS I II V VI ARAWATA SD
NCS Rates Info	Yes (1)
NCS Building Consents	Yes (3)
NCS Resource Consents	Yes (2)
NCS Licenses	No
NCS Water Meters	No

Map Legend:

- Proposed Fault Avoidance Zone
- Alpine Fault
- Railways
- Land
- Land Parcels
- Lakes
- Hydro Parcels
- Adjoining TA

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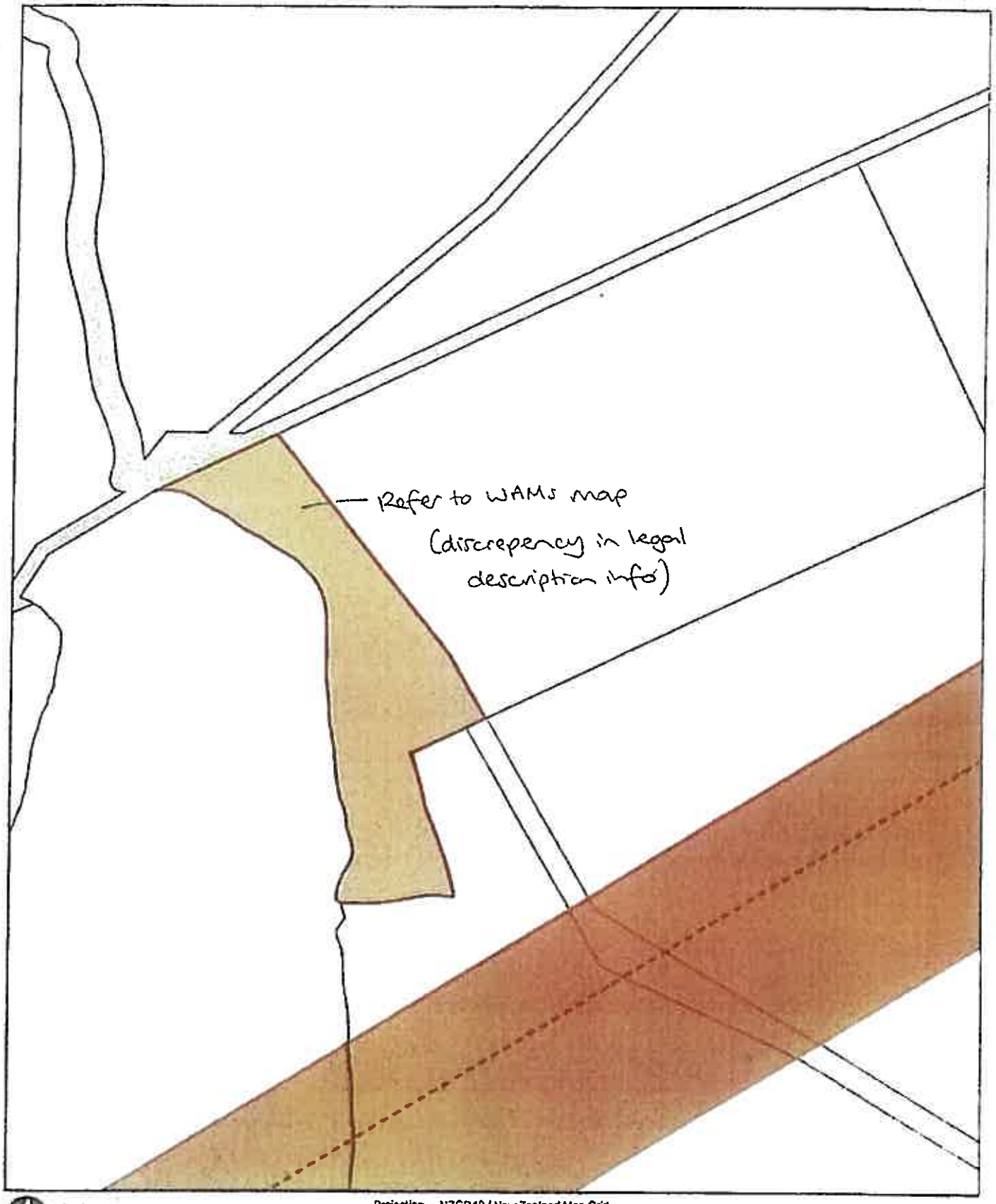
Map 2

WESTLAND



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Print Time: 10:41 AM

Map 2 of 2

Map Selection:

Land Info

Assessment	2581028401
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Vnz Desc	PAC 11-01-406 PT HAAST RIVERBED ADJ RS 2660 1069A PT RES 1688
Area	0

NCS Property Info

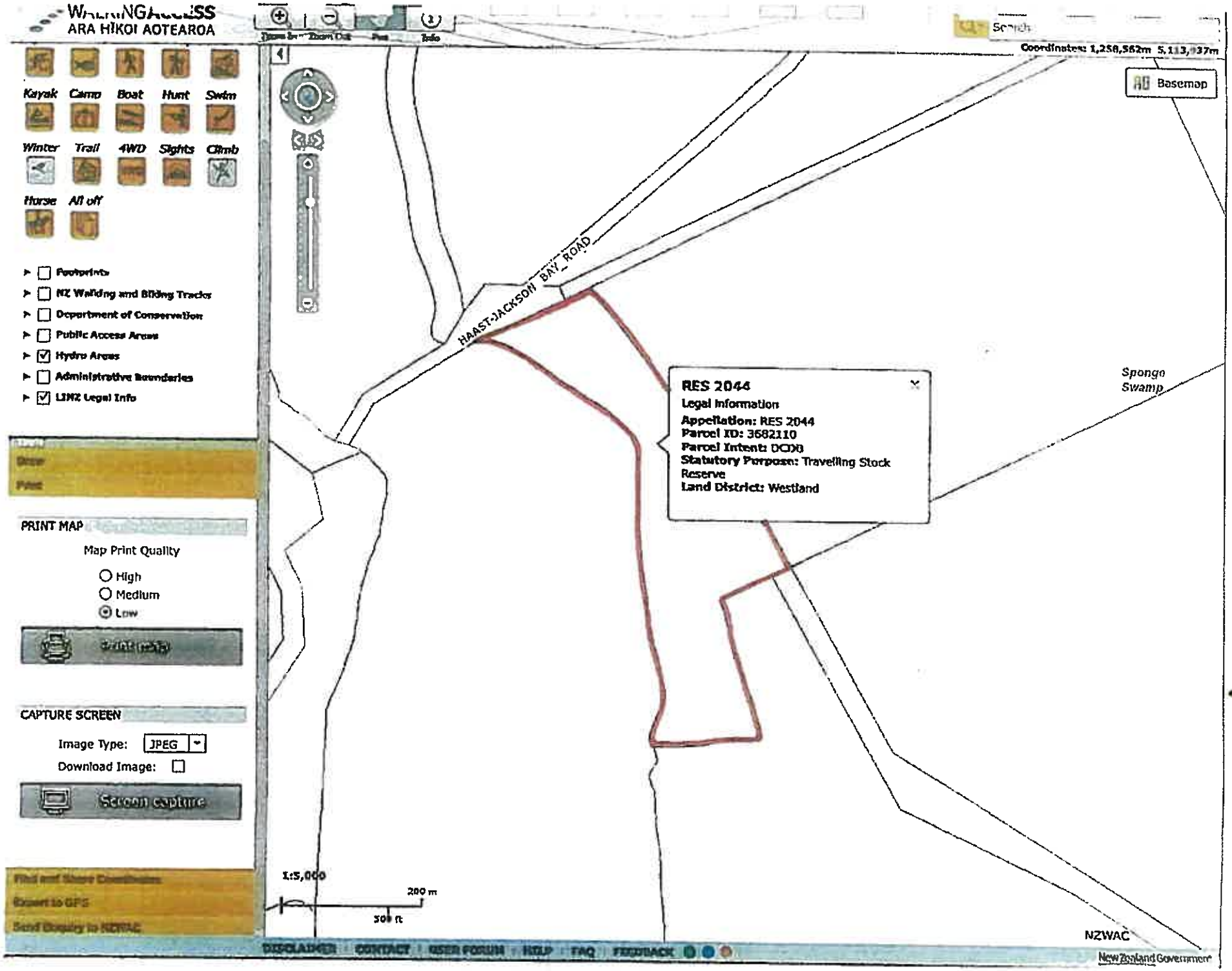
Assessment	2581028401
House No	0
Street	S Hway 6 Haast
Certificate Of Title	
Legal Description	PAC 11-01-406 PT HAAST RIVERBED ADJ RS 2660 1069A PT RES 1688

Reserve 2044 (WAMS)

NCS Rates Info	Yes (1)
NCS Building Consents	No
NCS Resource Consents	No
NCS Licenses	No
NCS Water Meters	No

Map Legend:

- Proposed Fault Avoidance Zone
- Alpine Fault
- Railways
- Land
- Land Parcels
- Lakes
- Hydro Parcels
- Adjoining TA


WALKING ACCESS
ARA HĪKOI AOTEAROA
Kayak
Camp
Boat
Hunt
Swim
Winter
Trail
4WD
Sights
Climb
Horse
All off
Footprints
NZ Walking and Biking Tracks
Department of Conservation
Public Access Areas
Hydro Areas
Administrative Boundaries
LINZ Legal Info
PRINT MAP
Map Print Quality
High
Medium
Low
CAPTURE SCREEN
Image Type: JPEG
Download Image:
Screen capture
Search
Coordinates: 1,258,562m 5,113,937m
Basemap
HAAST-JACKSON BAY ROAD
RES 2044
Legal Information
Appellation: RES 2044
Parcel ID: 3682110
Parcel Intent: DCDB
Statutory Purpose: Travelling Stock Reserve
Land District: Westland
Sponge Swamp
1:5,000
200 m
500 ft
NZWAC
DISCLAIMER
CONTACT
USER FORUM
HELP
FAQ
FEEDBACK
New Zealand Government

Map 2.

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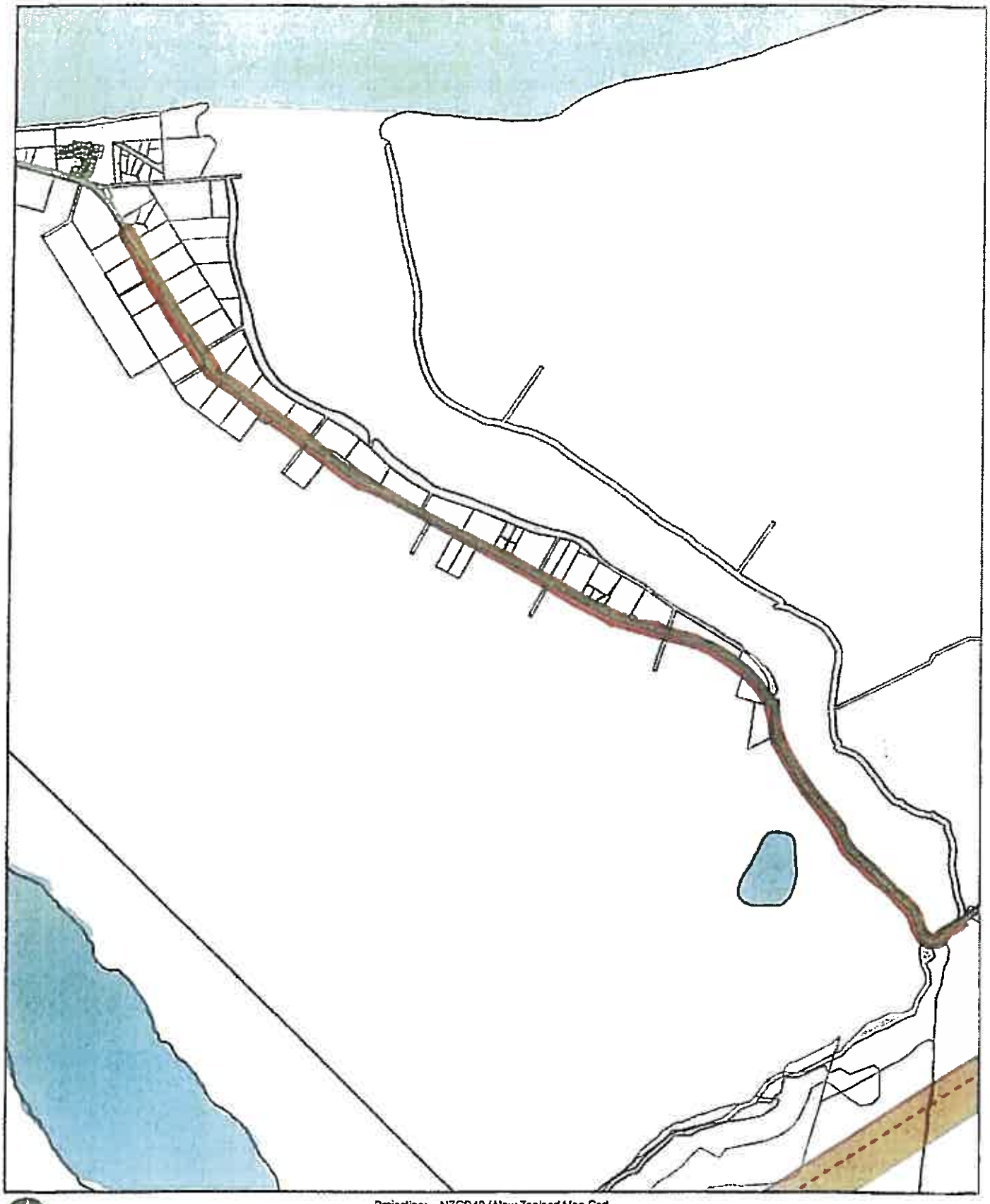
Map 3



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Print Date 24/05/2016
Print Time 1:58 PM

Map 3

WESTLAND

Map Selection:

Roads

Id	1790379
Name	Haast-Jackson Bay Road
Locality	Jackson Bay/Okahu-Haast
Territorial Authority	Westland District

Map Legend:

- Proposed Fault Avoidance Zone
- Alpine Fault
- Railways
- Land
- Land Parcels
- Lakes
- Hydro Parcels
- Adjoining TA

Map 4

Created By: anonymous
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Print Time: 9:13 AM

WESTLAND

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Created By: anonymous
Print Date: 24/05/2016
Print Time: 9:13 AM

Map Selection:

Land Info

Assessment	2581036200
Address	PO Box 8 Haast
Vnz Desc	RURAL SECS 290 526
Area	0

NCS Property Info

Assessment	2581036200
House No	0
Street	Arawata
Certificate Of Title	3C/814
Legal Description	RURAL SECS 290 526

NCS Rates Info	Yes (1)
NCS Building Consents	Yes (1)
NCS Resource Consents	Yes (5)
NCS Licenses	No
NCS Water Meters	No

Map Legend:

- Proposed Fault Avoidance Zone
- Alpine Fault
- Railways
- Land
- Land Parcels
- Lakes
- Hydro Parcels
- Adjoining TA

Map 5

Created By. anonymous
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Print Time 9:14 AM

WESTLAND

Scale: 1:7503
Original Sheet Size A4

Projection: NZGD49 / New Zealand Map Grid
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Created By: anonymous
Print Date: 24/05/2016
Print Time: 9:14 AM

RD 90M

WESTLAND

Map Selection:

Land Info

Assessment	2581036201
Address	PO Box 8 Haast
Vnz Desc	SEC 2118 BLK I ARAWATA S D
Area	0

NCS Property Info

Assessment	2581036201
House No	0
Street	Neils Beach
Certificate Of Title	WS3C/1463
Legal Description	SEC 2118 BLK I ARAWATA S D

NCS Rates Info	Yes (1)
NCS Building Consents	No
NCS Resource Consents	Yes (1)
NCS Licenses	No
NCS Water Meters	No

Map Legend:

- Proposed Fault Avoidance Zone
- Alpine Fault
- Railways
- Land
- Land Parcels
- Lakes
- Hydro Parcels
- Adjoining TA

Map 6

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Map 2

WESTLAND

Map Selection:

Land Info

Assessment	2581036521
Address	C/- Mrs N Harris Hunts Beach Private Bag Hokitika
Vnz Desc	LOT 1 DP 3786 BLK I ARAWATA SD
Area	

NCS Property Info

Assessment	2581036521
House No	0
Street	Neils Beach
Certificate Of Title	8C/775
Legal Description	LOT 1 DP 3786 BLK I ARAWATA SD

NCS Rates Info	Yes (1)
NCS Building Consents	No
NCS Resource Consents	No
NCS Licenses	No
NCS Water Meters	No

Map Legend:

- Proposed Fault Avoidance Zone
- Alpine Fault
- Railways
- Land
- Land Parcels
- Lakes
- Hydro Parcels
- Adjoining TA

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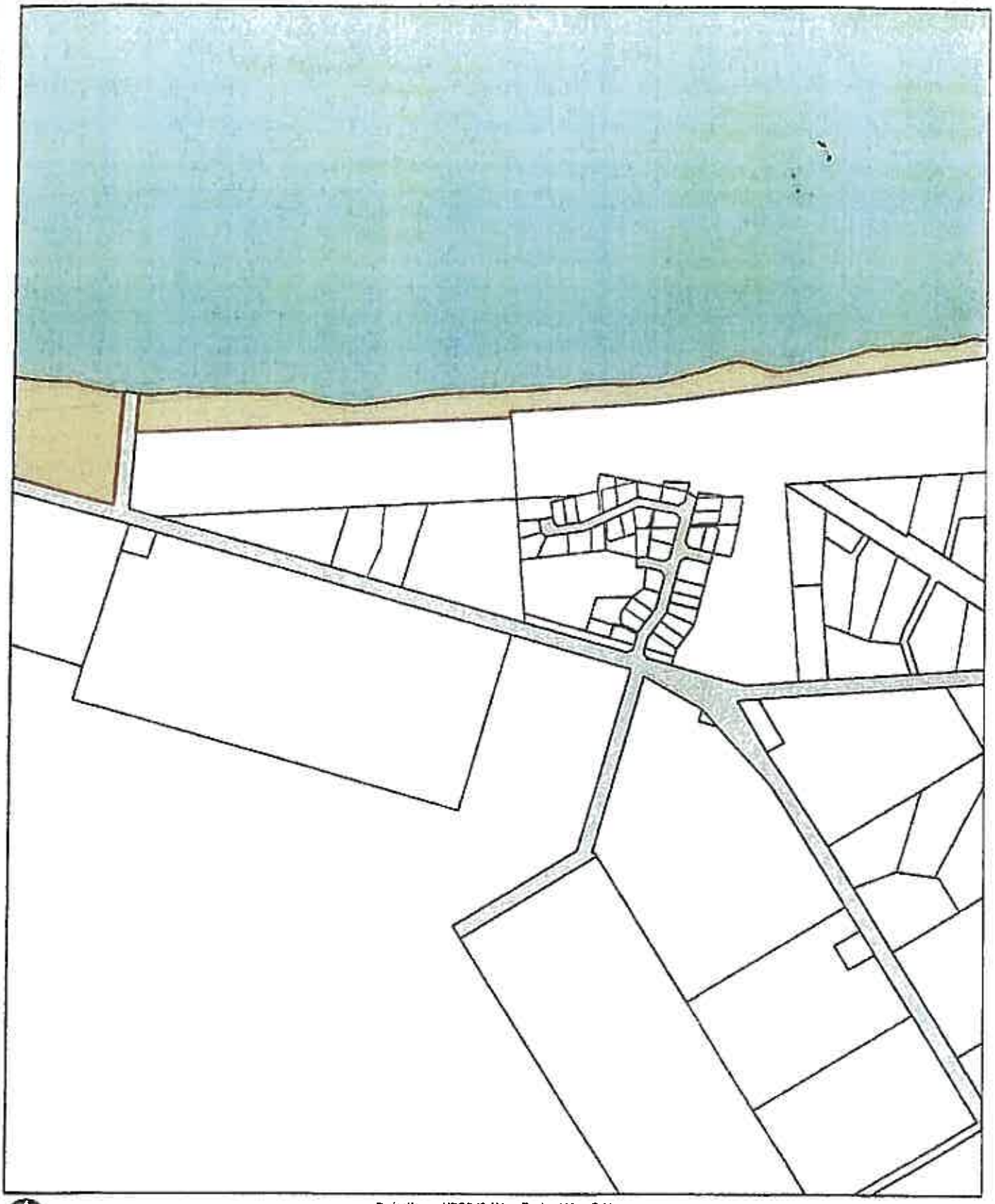
Map 7

WESTLAND



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Print Time: 9:26 AM

F 4011

Map Selection:

Land Info

Assessment	2581037400
Address	Private Bag 701 Hokitika
Vnz Desc	RS 28 33 291 396- 400 540 545 546 549-558 PT RS 542-544 PT SF RES 1692 BLKS I II V VI ARAWATA SD
Area	

NCS Property Info

Assessment	2581037400
House No	4159
Street	Haast-Jackson Bay Road

Certificate Of Title

Legal Description	RS 28 33 291 396- 400 540 545 546 549-558 PT RS 542-544 PT SF RES 1692 BLKS I II V VI ARAWATA SD

NCS Rates Info	Yes (1)
NCS Building Consents	Yes (3)
NCS Resource Consents	Yes (2)
NCS Licenses	No
NCS Water Meters	No

Map Legend:

- Proposed Fault Avoidance Zone
- Alpine Fault
- Railways
- Land
- Land Parcels
- Lakes
- Hydro Parcels
- Adjoining TA

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	WS8C/775
Land Registration District	Westland
Date Issued	27 August 1999

Prior References
WS8A/496

Estate	Fee Simple
Area	11.9030 hectares more or less
Legal Description	Lot 1 Deposited Plan 3786

Proprietors
James Mason Russell, Paul Frederick Wilson, Helen Ngaire Rasmussen, June Avis Robinson, Gina Lee Duncan, Nicole Rebecca Mahuika Wilson, Alan Lester Russell, Leonard George Russell Te Koeti, Barbara Ann Greer and Tahana Tauwhare, jointly as responsible trustees

Interests

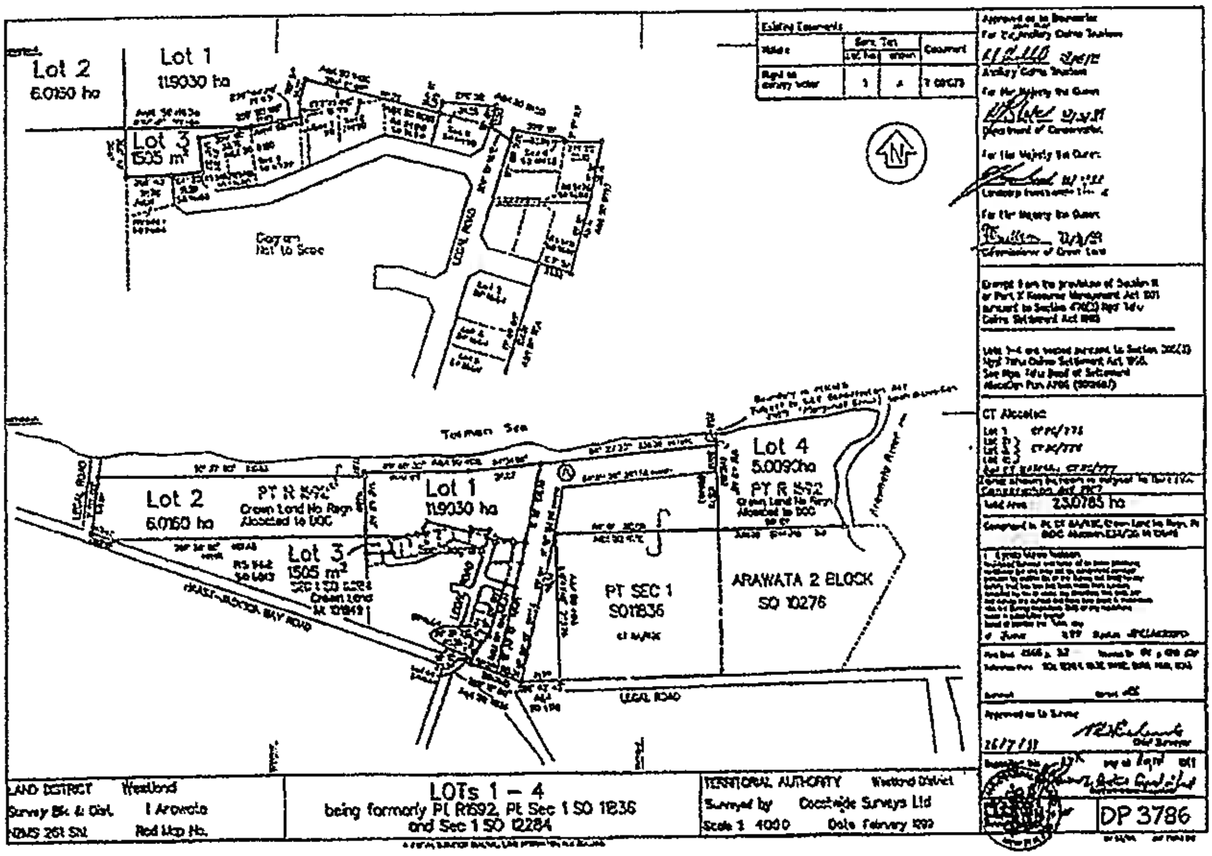
91679 Transfer creating the following easements in gross

Type	Servient Tenement	Easement Area	Grantee	Statutory Restriction
Convey water	Lot 1 Deposited Plan 3786 - herein	A DP 3786	Okuru Enterprises Limited	

Subject to Part IV A Conservation Act 1987

Subject to Section 11 Crown Minerals Act 1991

7850583.3 Status Order determining the status of the within land to be Maori Freehold Land - 18.6.2008 at 9:00 am



Lot 2
6.0150 ha
Lot 1
11.9030 ha
Lot 3
1505 m²
Diagram
Not to Scale
LEGAL ROAD
Tasman Sea
Lot 4
5.0090ha
PT R 592
Crown Land No Regn
Allocated to DOC
PT R 592
Crown Land No Regn
Allocated to DOC
PT SEC 1
SO11836
ARAWATA 2 BLOCK
SO 10276
Crown Land
LEGAL ROAD
Existing Easements
Right to convey water
LAND DISTRICT Westland
Survey Blk & Dist. I Arawata
LOTs 1 – 4
being formerly Pt R592, Pt Sec 1 SO 1836
and Sec 1 SO 12284
TERRITORIAL AUTHORITY Westland District
Surveyed by Coastwide Surveys Ltd
Scale 1: 4000
Date February 1999
Approved as to Survey
Chief Surveyor
Total Area 23.0785 ha
CT Allocated
DP 3786

Okuru Enterprises draft proposed consent conditions
Westland District Council Land Use consents

These conditions relate solely to the land use consent to which Westland District Council is the consent authority. Separate consents and conditions, independent of these listed below, apply to the Coastal Permits, Water permits, Discharge permits and the Deed of Easement issued by Department of Conservation under the Conservation Act. The project is clearly controlled by all existing consents and consent conditions.

1. Pre-construction

1.1. Prior to the commencement of any work, the consent holder (Okuru Enterprises Ltd) will prepare, submit and have approved, a construction rehabilitation plan to the satisfaction of the Department of Conservation and Westland District Council. This plan will describe in detail the steps that will be taken to restore areas disturbed as a consequence of construction.

1.2 The consent holder will restrict damage to trees and vegetation and keep the construction footprint to a minimum. Significant trees inside the construction zone which are to be retained shall be marked by tape tied around the tree. Tagged trees inside the construction zone, and any significant trees outside the agreed construction zone which are damaged as a consequence of the consent holder's construction, shall have their value assessed by the Department of Conservation using the Royal New Zealand Institute of Horticulture system of assessing tree value. The consent holder will pay the Department of Conservation for damage done in accordance with this scale.

1.3 A long-term pest control programme (animal and plant) relating to both construction and operational phases of the project, shall be drafted and submitted to the Department of Conservation for approval. The programme must meet the Department's requirements in regard to the management of animal and plant pests, and the protection of kiwi and kiwi nest areas. The pest control programme will not involve the use of leg hold or kill traps that are uncovered or sited in such a place that kiwi have access to the trap. Poisons will also be non-accessible to kiwi. Carcasses from animal control programmes are to be removed or buried to such a depth that scavenging animals cannot easily access them in the Tuning Fork Creek catchment. Once approved, the programme shall be lodged with the Westland District Council.

1.4 In order to mitigate the threat posed to the Haast Brown Kiwi population by the pipeline construction, a kiwi management plan for the project will be developed in consultation with the Department of Conservation, funded by the consent holder. As part of this plan, the consent holder is to commission and support a survey to determine the number of kiwis living within or

alongside the route of the proposed pipeline, and conduct a radio-tagging study of those birds whose territories include part of the route.

2. Construction

2.1. Throughout the construction of the weir, the temporary access track and the pipeline across Res 1692 and Res 2044, the Department of Conservation is to have a representative on site for fifty precent of the time. This position is to be funded by the Consent Holder, and is to be responsible for representing the Department's interests in the construction process. The cost to the consent holder in respect of this condition is not to exceed $10,000.00.

2.2. Should the consent holder elect to install two pipelines, both shall be laid at the same time.

2.3. All gravels and other material bought to the site shall be from a weed free source. All machinery shall be cleaned with a water blaster prior to being taken to site.

2.4. The pipeline and temporary access track across Res 1692 and Res 2044, is to be located within a twenty five meter wide corridor agreed to by the Company and the Department of Conservation. This corridor will be marked at either side by tape at five meter intervals during construction.

2.5. Within this corridor, the actual site for the pipeline is to be agreed between the Department of Conservation and the Company. The total width of disturbance caused by the construction process, the pipeline and the access track is to be as narrow as possible, preferably no more than three meters wide. The access track and the pipeline are to be bedside each other unless they have to be separated to avoid trees or other ground obstacles.

2.6. The construction and installation of the pipeline over the entire length is to be carried out so as to avoid, remedy or mitigate any adverse effect on ground water and surface water drainage which may impact on wet land and indigenous forest values. The pipeline route is to avoid wet ground as far as possible.

2.7. The pipes are to be flown to the site be helicopter.

2.8. Dogs are not to be taken into the Tuning Fork Creek catchment by personnel involved in the construction and operational phases of the project.

3. Post-construction

3.1. The hill section of the access track is to be temporary, with a helipad being installed at the weir site for long term access to the weir.

3.2 At the completion of construction, all debris and rubbish including cruise tape and waste timber is to be removed and the site left in a clean and tidy state.

3.3 Regeneration of disturbed areas is to be undertaken in partnership with the Department of Conservation, and according to the approved construction rehabilitation plan. Site specific plants will be used.

3.4 The consent holder shall pay for and erect a sign asking that dogs are not to be taken into the Tuning Fork Creek catchment. This sign will fit the design standard prescribed by the Department of Conservation.

4. Weir

4.1. The construction zone required for the construction of the weir is to be kept to a minimum. The area of disturbance is to be agreed between the Company and the Department of Conservation and is to be marked by a continuous unbroken strip of cruise tape. The impact within this area shall be the minimum possible and care shall be taken to ensure that river banks are not damaged and the good construction practice is followed.

4.2 As far as possible, all construction personnel shall be flown in to the weir site.

4.3 As much formwork, mesh frames and other work as is possible shall be carried out at the base construction zone and flown to the site.

4.4 Upon the completion of the construction of the weir, the area of disturbance is, as far as is practicable, to be returned to natural contours and is to be revegetated to the approved rehabilitation plan, and to the satisfaction of the Department of Conservation.

5. Temporary access track

5.1. As far as possible on the hill section of the track cut banks are to be avoided. Where retaining structures are necessary to stabilise cut banks, this shall be done using locally obtained rocks or timber bought to site. Timber used is to be of H3 treatment or less.

5.2 Vehicle movements on the access track during construction are to be kept to a minimum and shall generally be restricted to:

i) The 12 ton digger making one return journey to the weir.
ii) The plant used to transport the pipe welding equipment to make one return journey to the weir.

No other vehicles shall be permitted in the construction zone east of Jackson Bay Road without the written approval of the Department of Conservation. No vehicle movements shall occur outside of the construction zone.

Not withstanding the above, minimal additional vehicle movements shall be permitted in the event of an emergency or vehicle breakdown requiring removal or replacement.

6. Public access

6.1. The consent holder is not to adversely affect the rights of public access to Mount Aspiring National Park and Conservation land, other than as a consequence of limited fencing around works for the purposes of safety and security.

6.2 Permanent vehicle access along the pipeline route is not permitted. The consent holder has indicated that such access will not be required.

7. Natural hazard avoidance and mitigation engineering standards

7.1. All works and structures shall be designed in accordance with relevant recognised New Zealand and international standards by qualified experienced persons acknowledged within their profession as being competent in their respective fields. Particular regard shall be had to seismic resistance, reasonable avoidance of risk, and the consequence of failure. Design certificates and reports including design standards used and assumptions made shall be lodged with the Westland District Council.

7.2 At its expense, the consent holder shall submit all design plans, specifications, calculations and design certificates to an independent engineer for audit and certification that appropriate standards have been met and that accepted professional design principles have been followed, especially in respect of seismic resistance and reasonable avoidance of risk. The engineering audit and certification shall be lodged with the Westland District Council.

7.3 The above conditions shall be fulfilled before commencement of construction and site works (other than exploratory investigations), including the detailed design and method of fixing the pipeline to the Arawhata River bridge.

7.4 The pipeline and associated structures shall be constructed in accordance with the certified plans and specifications. Any deviations or changes shall be approved by the Design Engineer. Copies of all changes and accompanying certification shall be lodged with the Westland District Council. No changes or deviations from the certified plans and specifications shall be allowed unless agreed in writing by the Westland District Council, and in respect of land administered by the Department of Conservation, that Department.

7.5 Both the Design Engineer and the Certifying Engineer shall carry full professional indemnity insurance cover appropriate to the full level of their potential liability.

7.6 The company shall carry full public liability insurance to the value of NZ $5million or 10% of the total capital value of the project, whichever is the greater amount, for the life of the project, including the decommissioning period.

8. Jackson Bay Road

8.1. The actual location of the pipeline, depth, method of laying, compaction, methods of crossing rivers and timing of work shall be subject to full working drawings, plans and specification that will be submitted to the Westland District Council's Group Manager – District Assets (or his nominated representative) for approval, prior to work commencing. The location of the pipeline will be sited to avoid adverse effects on ground water drainage.

8.2 Road closures shall be avoided during the construction period. Where there is no alternative, road closures shall be kept to an absolute minimum to cause minimal disruption to services and travel. The road shall not be closed overnight, and at all time the road is closed machinery shall be on hand to effect immediate road reopening for emergency services.

8.3 The road shall be reinstated to at least its present subgrade condition and sealed to a width of 12 meters from the Arawhata River bridge to Neils Beach. A bond to the full sum of the estimated cost of sealing shall be imposed to ensure performance. Upkeep of the road for 12 months after pipelaying is completed shall be at the full cost of the applicant.

8.4 The applicant shall indemnify the Council, Telecom and the electricity supply authority against all costs and damage to roads or services resulting from pipeline failure, blowout, inspection or maintenance over the full lifetime of the project.

9. Noise

9.1. Construction noise emanating from a site where construction noise is ancillary to the principal shall meet the limits recommended in, and be measured and assessed in accordance with New Zealand Standard NZS:6802:1999.

9.2 The building and plant will be designed and laid out to ensure the noise levels below are not exceeded at or within the boundary of any residential site or the notational boundary of any rural dwelling:

Day	45-55 dBA Leq
Night	35-45 dBA Leq
	70-75 dBA Lmax

These noise levels meet the recommended range of noise limits for residentially zoned sites as per NZS 6802:2008 – Environmental noise. Noise measurements shall be measured in accordance with NZS 6801: 2008

Acoustics - Measurement of environmental sound and assessed in accordance with NZS 6802: 2008 Acoustics - Environmental noise.

9.3 Notwithstanding compliance with the above standards, any use must also comply with the Westland District Council district plan and the Resource Management Act 1991. The building must comply with the Building Act 2004.

9.4 Prior to construction of the export facility and as part of the building consent process, the consent holder shall submit to the Westland District Council, a report that shall be prepared by a qualified and experienced acoustics engineer. The report is to address all potential noise sources from the operation of the export facility, and indicate the means by which the noise performance standards specified in these conditions will be complied with.

9.5 Once the plant is operational, the consent holder shall submit a noise monitoring plan to be approved by the Westland District Council. Monitoring will be completed at intervals as documented in the plan, and results shall be forwarded to the Council. All costs associated with noise measurement will be met by the consent holder.

10. Historic and archaeological sites and sites of significance to Maori

10.1. When undertaking pipeline construction within the vicinity of Neils Beach settlement, test putting or trenching shall be undertaken. The consent holder will provide resources to enable a cultural monitor to be present during earthworks within the cultural zone for the Neils Beach subdivision.

10.2 All work will conform with accepted practices and to an approved accidental discovery protocol, which will be submitted as part of the construction plan.

11. Liaison with residents

11.1. The consent holder shall appoint an employee or agent with sufficient power to liaise with those affected by the project, consider their concerns and take appropriate action. This liaison office shall be resident in the area from the time of commencing detailed design and on-site investigations, throughout the construction period and of the operational life and decommissioning of the project. The person may from time to time change, but the position shall remain filled.

11.2 The consent holder shall notify publicly (by way of a site board and by circular to neighbours and affected parties) the name and contact details of the project manager and liaison officer described above.

12. Foredune area and offshore pipeline construction

12.1. Except for the purposes of restoring the land surface and preventing damage to the environment, all construction activity shall be confined to as small an area as possible. Disturbance to the dune area shall be kept to the minimum possible.

12.2 The construction area through the dunes shall be marked with cruise tape and all indigenous vegetation within the area carefully removed and transplanted to a nursery area. At the completion of pipeline laying the land contours shall be reinstated and the area revegetated with plant material previously removed. This work shall be carried out after consultation with the Department of Conservation.

12.3 All cruise tape and construction debris shall be removed from the fordune and beach area at the conclusion of the construction period and before commissioning.

13. Visual impact

13.1. The final pipeline corridor from the Arawhata River bridge to Tuning Fork Creek shall, as far as possible, maintain the overhead canopy of trees. The route selected, method of laying, and replanting programme shall be such that the pipeline is not discernable when viewed with the naked eye from the Arawhata River bridge one year after completion of laying this section of pipeline.

13.2 All buildings, tanks and other structures shall be screened with appropriate indigenous planting so as not to be visible from any point on the Jacksons Bay Road.

13.3 All building and structures on public land shall be painted or otherwise coloured and maintained in natural shades to blend with the landscape.

14. Reservoir complex – Neils Beach

14.1. Earthworks shall be kept to a minimum and all exposed surfaces revegetated as soon as possible after site works are completed in order to reduce visual impact and the possibility of erosion or slips.

14.2 All access roads, vehicle manoeuvring areas and car parking areas shall be sealed or otherwise hard surfaced and stormwater originating from the site must be disposed of to the satisfaction of the Westland District Council. These detailed plans will form part of the building consent process.

14.3 Any security lighting or night lighting shall be positioned and shielded to avoid glare when viewed from Jackson Bay Road or any residential property.

14.4 The access road to the reservoir complex the pipeline route and all construction activity between the reservoir site and Jacksons Bay Road shall be located and undertaken in a way that does not adversely affect natural drainage patterns, or increase the risk of flooding to nearby properties.

15. Monitoring

15.1. Full working drawings of all aspects of the project are to be lodged with the consent authority at least one month prior to the commencement of construction in order that the consent authority is able to monitor progress.

15.2 Prior to construction commencing, the applicant is required to prepare and submit to Westland District Council a work programme demonstrating the critical path of all phases of the project. The work programme is to be lodge with Westland District Council at least one month prior to work commencing.

15.3 Notwithstanding any of the conditions of consent, the consent holder shall use the best available options to avoid, remedy or mitigate adverse effects on the environment. The Council may at any time seek advice or undertake inspections as it considers necessary to ensure that the consent holder is meeting its obligations under the consent and the provisions of the Resource Management Act.

16. Administration charges and levy development

16.1. A development levy of 0.5 percent of the assessed value of the development policy shall be payable to the Westland District Council, for the upgrade/maintenance of Jackson's Bay Wharf. The assessment and application of the development levy shall be in accordance with Schedule 12 of the Local Government Act 2002.

16.2 Pursuant to section 36 of the Resource Management Act, the applicant shall pay to the Westland District Council the reasonable costs incurred by the Council in the implementation and monitoring of the consent.

17. Decommissioning bonding

17.1. After finalising the design but before commencing construction the consent holder, at its cost, shall obtain a report from an independent engineer setting out the measures and costs necessary to decommission the facility to the extent that they no longer constitute any significant risk to the environment or to property. The report shall be submitted to the Westland District Council and the estimated cost of decommissioning shall be the amount set out in condition 17.2 below.

17.2 Pursuant to Section 108 of the Resource Management Act 1991, the consent holder shall provide a guarantor (acceptable to the Westland District Council)

a bond for the amount calculated in condition 17.1 above in the event that the project is terminated.

Okuru Enterprises Taonga, Kōiwi Tangata and Pounamu Accidental Discovery Protocol

1.0 Purpose

The purpose of the 'Accidental Discovery Protocol' is:

- To manage and protect the integrity of 'known' and 'unknown' archaeological sites from damage and loss.
- To maximise the opportunity to retrieve physical and archaeological evidence from disturbed sites.
- To obtain quality information on the lives, activities, food and resource use, trails and campsites of resource use, trails and campsites of Ngāti Mahaki /Ngāi Tahu ancestors from archaeological sites.
- To provide a process to enable compliance with the (Historic Places Act 1993)

2.0 Definition

"Archaeological site" means any place in New Zealand that –

a) Either –

i) Was associated with human activity that occurred before 1900; or

ii) Is the site of the wreck of any vessel where that wreck occurred before 1900; and

b) is or may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand" (Historic Places Act 1993).

3.0 Process for Discovery of Archaeological Sites

The applicant shall consult with Te Rūnanga o Makaawhio to determine, in accordance with Tikanga Maori, if there are any matters of protocol which tangata whenua wish to undertake in relation to the commencement of any development works, significant events or the commissioning of completed works.

Te Rūnanga o Makaawhio shall be invited to provide a cultural monitor to be on site during initial and all earthworks in and or adjacent to the Neil's Beach subdivision. The cultural monitor will be paid at a rate to be negotiated with Te Rūnanga o Makaawhio.

In the event of any discovery of suspected cultural remains or pounamu (i.e. shells, charcoal or charcoal stained soil, fire-fractured stone, or bones) the contractor / workman shall take the following action:

1. Cease all works immediately;
2. Advise the cultural monitor and the site supervisor of a find;
3. The site supervisor shall contact Te Rūnanga o Makaawhio as well as Heritage New Zealand to advise on the significance of the find;
4. Heritage New Zealand must be advised in all cases (note that it is an offence under section 99 of the HPA 1993 to modify, damage or destroy and archaeological site without the prior authority of the New Zealand Historic Places Trust).

4. In cases of wāhi taonga, wāhi tapu and pounamu

4.1 The appointed cultural monitor and site supervisor will consult with the nominated Te Rūnanga o Makaawhio representatives to determine further actions to avoid, reduce, remedy or mitigate any damage to wāhi taonga and wāhi tapu.

4.2 The applicant shall consult with Te Rūnanga o Makaawhio on any matters of protocol, which they may wish to undertake in relation to the find and prior to the commencement of any investigation.

4.3 The applicant shall consult with the Heritage New Zealand for advice of any requirements under the HPT 1993.

5. In cases of suspected Kōiwi Tāngata

5.1 The site supervisor shall take stops to immediately stop work, shut down all machinery or activity, and secure the area to ensure that the remains are not touched.

5.2 The applicant shall notify the nominated Te Rūnanga o Makaawhio representatives and the police.

5.3 The applicant shall consult with the Heritage New Zealand for advice of any requirements under the HPT 1993.

5.4 The site supervisor must ensure that staff are available to meet and guide Police (note that the Coroners Act applies), Te Rūnanga o Makaawhio, and Heritage New Zealand staff to the site and to assist with any requests made.

5.5 The areas shall be marked off and if the remains are of Māori origin, Te Rūnanga o Makaawhio will decide what will happen to the remains and advise the Police and other parties of their decision.

5.6 Work may only recommence in the area with the approval of the Police, Te Rūnanga o Makaawhio and the Heritage New Zealand.

6. In all other cases

6.1 The expert and the site supervisor shall determine what further actions are appropriate to avoid, reduce, remedy, or mitigate any damage to archaeological sites;

6.2 Heritage New Zealand shall be consulted for advice of any requirements under the HPT 1993.

7. Responsibilities

Te Rūnanga o Makaawhio

7.1 To inform the applicant in accordance with tikanga Māori, if there are any matters of protocol which tāngata whenua wish to undertake in relation to the commencement of work or significant events.

7.2To provide the contact details of the cultural monitor and also the Runanga contact person

7.3 To adopt a policy of guaranteeing response to notification of a site find, within a 24-hour time frame.

a. this will consist of contacting appropriate people and organizations depending on

the nature of the "find";
b. arranging a time for inspection of the site;
c. coordination of the appropriate action to remove or otherwise any archaeological material from the site.

The Applicant

7.4 To ensure staff are aware of the applicant's responsibilities under this Accidental Discovery Find Protocol.

7.5 To implement a reporting procedure in the instance of a "find" of any archaeological material.

7.6 To ensure that all statutory obligations under the Historic Places Act 1993 are met.

7.7 To provide the following reports to Te Rūnanga o Makaawhio no less than 25 working days prior to any earth moving works:

- A schedule of the dates of all significant earthmoving events, their sequence and duration;
- A summary of all measures being undertaken to ensure that adverse effects on archaeological values are avoided, remedied or mitigated.

7.8. To invite Te Rūnanga o Makaawhio to attend any episode of archaeological, monitoring or earthmoving activity.

7.9 To provide Te Rūnanga o Makaawhio with a copy of all-archaeological monitoring and investigation results with an invitation to respond, comment or meet to discuss any results.

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION

ARCHSITE
archaeological site recording scheme

Summary Site Record

NZAA SITE NUMBER: E37/12

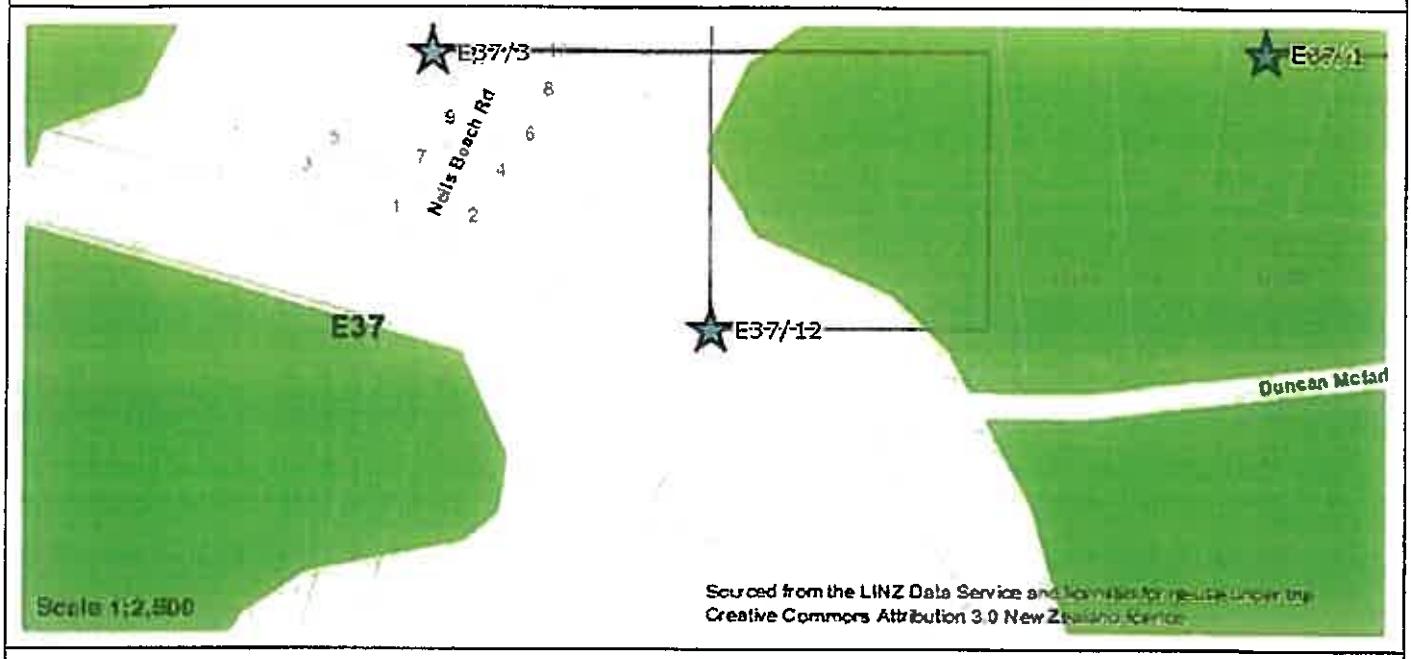
SITE TYPE: Historic - domestic

SITE NAME(s):

Record last updated: 26/05/2016

SITE COORDINATES (NZTM) Easting: 1251954 **Northing:** 5119040 **Source:** CINZAS

IMPERIAL SITE NUMBER: S97/10 **METRIC SITE NUMBER:** E37/12



Finding aids to the location of the site

The old road runs from the Jackson Bay Rd east of the turnoff to Neils Beach, and heads towards Arawata River. The NZMS260 cadastral shows the surveyed road line. The house is on the LHS of the road at the far end of the surviving road.

Brief description of the site

Old road that runs for about 170 - 200 m. At the end of the road is an old house site. Surface material includes ceramics, glass, bricks and a shovel head.

Condition of the site when last visited

Fair - Some intact features, but others may be unclear or damaged

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: emmabrooks 26/05/2016