

Parkins Bay Golf Course

Revegetation Strategy
Prepared for Glendhu Bay Trustees Ltd

23 February 2016

Prepared by Darby Partners



Document: Darby Partners 2016. <i>Parkins Bay Golf Course: Revegetation Strategy</i> . Report prepared by Darby Partners		
Prepared by:	Haley Farmer Landscape Architect Darby Partners	
Reviewed by:	Richard Tyler Planning and Design Manager Darby Partners	
Status: FINAL	Revision / version: -	Issue date: 23 February 2016
Use and Reliance This report has been prepared by Darby Partners on the specific instructions of our Client. It is solely for our Client's use for the purpose for which it is intended in accordance with the agreed scope of work. Design Planning does not accept any liability or responsibility in relation to the use of this report contrary to the above, or to any person other than the Client. Any use or reliance by a third party is at that party's own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate, without independent verification, unless otherwise indicated. No liability or responsibility is accepted by Darby Partners for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.		

CONTENTS

1.0	INTRODUCTION	3
1.1	SITE CONTEXT	3
1.2	REVEGETATION STAGING	3
2.0	ENVIRONMENT COURT CONDITIONS	4
2.1	CONDITION 6 OBJECTIVES	5
3.0	REVEGETATION STRATEGY	7
3.1	TIMING OF PLANTING AND 5 YEAR REPLACEMENT PROGRAMME	7
3.2	10 YEAR MANAGEMENT STRATEGY (Refer Appendix 0.0)	9
3.3	PLANT SOURCING	11
3.4	PROTECTION OF EXISTING VALUES	12
3.5	CONSTRUCTION INTEGRATION	13
3.6	POPLAR REPLACEMENT	13
4.0	CERTIFICATION	14
4.1	INITIAL CERTIFICATION	14
4.2	STAGING CERTIFICATION	14
4.3	VISITOR ACCOMMODATION	14
4.4	REVISED REVEGETATION STRATEGY CERTIFICATION	14
4.5	FINAL REVEGETATION STRATEGY CERTIFICATION	14
5.0	ANNUAL REPORT	15
6.0	CONCLUSION	15
7.0	APPENDICES	15

1.0 INTRODUCTION

The proposed Parkins Bay Golf Course (The Site) is located on the southern banks of Parkins Bay on Lake Wanaka. The site forms part of the Glendhu Station landholding and covers a total area of approximately 180ha.

This document has been prepared to outline guidelines for the revegetation of the project in accordance with the Environment Court decision (April 2012) and RM140959.

It is intended as a master document to cover all aspects of revegetation for the site and may be updated during the course of the project with knowledge gained from site works. Each stage or sub-stage of the revegetation will be issued for certification with Council as an Appendix to this document.

1.1 SITE CONTEXT

The site is bound to the north by Lake Wanaka, to the east by the Fern Burn Stream and to the west by a wide gully that narrows towards the lake edge. The site is then bisected by the Wanaka / Mt Aspiring Road. To the north of the road the site is primarily flat, consisting of open terraced pasture that transition to the lake shore. South of the road the site gently rises to the farm terraces.

The land form and soils are the result of glacial activity and composed primarily of glacial till, post glacial alluvium and beach deposits, with a thin layer of topsoil and an organic layer of pastoral grass.

The ecological value of the site is degraded from a long history of farming activities. Generally, the indigenous species already present are not diverse, and provide relatively limited biodiversity. An exception is the Glendhu Bluff Reserve located immediately west of the site, which has a greater diversity of species. While this is not within the project area it provides a valuable seed source for natural regeneration.

Indigenous species generally represented throughout dry areas of the site include Kanuka (*Kunzea ericoides*), Matagouri (*Discaria toumatou*) and Mikimiki (*Coprosma propinqua*). In wetter areas a mix of Purei (*Carex secta*), Mountain Flax (*Phormium tenax*), and Rush species (*Juncus spp*) tend to be thriving, with small pockets of farm forestry, willow, and poplar also evident throughout various parts of the site.

1.2 REVEGETATION STAGING

The revegetation programme is proposed to be staged, in accordance with the Environment Court decision (April 2012) and RM140959. These stages may be further split into sub-stages during course of the project, to enable defined areas to be developed in accordance with best practice construction methodology. As outlined in Section 5.0 prior to the commencement of any construction within a stage/area, additional appendices shall be provided to the Council for certification. These additional appendices shall include:

1. Revegetation Document – Detailing any construction integration measures and fulfilment of condition 6 objectives;
2. Revegetation and Planting plan - Detailing revegetation areas, species composition, plant densities and any existing vegetation to be retained.

2.0 ENVIRONMENT COURT CONDITIONS

In April 2012 the Environment Court of New Zealand approved the project subject to conditions. This Document has been prepared in order to satisfy the conditions of the Decision.

Extract from the Environment Court Decision Dated 27th April 2012

Condition 6

The consent holder shall prepare and implement a Revegetation Strategy that achieves the following objectives.

- To provide a vegetation cover framework of Kanuka and other appropriate native species in the short term, which can become the basis for biodiversity enhancement as the project develops,
- To provide screening for residential buildings for viewers from the road in accordance with the attached plans and the Revegetation Strategy,
- To reflect the underlying of landform and soils in the native vegetation cover of the site,
- To achieve eventual revegetation of the Gully shown on Parkins Bay Plan B dated 12 April 2012 with a mix of locally sourced native species including Totara.
- To achieve eventual revegetation of the Moraine Slope shown on Parkins Bay Plan B dated 12 April 2012.
- To ensure that the "rough" areas of the golf course, being the vegetated areas not required to be mowed or otherwise maintained, regenerate naturally (excluding noxious weeds).
- To link with other revegetated areas outside the site;

The Revegetation Strategy shall identify those steps that need to be undertaken in each of the three areas shown on the attached plans referenced:

- Glendhu Station Stage 1: Master Plan,
- Glendhu Station Stage 2: Master Plan,
- Glendhu Station Stage 3: Master Plan, dated September 2009 to give effect to the Strategy.

The Revegetation Strategy shall include:

- timing of planting and replacement/additional planting over 5 years;
- details of the management proposed from the time of granting consent up to 10 years after initial planting - site preparation, weed control, pest control, any watering or fertilisers, stock control and maintenance;
- details of plant sources;
- protection measures for existing values - wetlands, lake shore, lake water quality;
- integration of planting with other components of the development - earthworks, construction;
- fencing of the regeneration area for stock to pass through parts of the site;
- the replacement of the existing poplar trees next to the clubhouse and shearer's accommodation if they become diseased or die. Root stock shall be sourced from the existing healthy Lombardy poplars which are to be taken and grown on for this purpose.

Prior to the commencement of the construction the consent holder shall provide an initial Revegetation Strategy for certification by Council. This strategy shall define the different stages and areas of work. Prior to the commencement of any construction within a specific stage/area of work a detailed Revegetation Strategy shall be provided to the Council for certification. During the development, the Strategy may be altered to add new material, to reflect increased knowledge or to represent best practice methodology, and any amendments to the Strategy shall be provided to the Council for certification. The Final Revegetation Strategy shall be provided to the Council prior to the commencement of the final stage/area of work. **RMA140959 Granted 22nd December 2012.**

Condition 8

Prior to the construction of visitor accommodation / residential units for:

- a. Stage 1 and 2 (as specified in Condition 5), certification shall be obtained from the Council that the planting conforms to the certified Revegetation Strategy for those stages and that more than 75% of the plants are live and healthy at a period of 12 months from the date of establishment. All diseased or dying plants shall be replaced to the satisfaction of the Council.
- b. Stage 3 (as specified in Condition 5), certification shall be obtained from the Council that the planting conforms to the certified Revegetation Strategy for that stage and that more than 75% of the plants are live and healthy and at an average height of 3 metres. All diseased or dying plants shall be replaced to the satisfaction of the Council.

Extract from the Environment Court Decision Dated 27th April 2012

Condition 9

Planting for all visitor accommodation residences implemented in accordance with the Revegetation Strategy shall be irrigated for a period of five years from establishment to ensure optimal growth rates. To avoid fire risk all planting shall be located at an appropriate distance from any residential villa.

Condition 10

All planting implemented in accordance with the Revegetation Strategy is to be:

- a. Maintained for a period of ten years from the first season of planting to the satisfaction of Council.
- b. All diseased or dying plants shall be replaced to the satisfaction of Council.
- c. An annual report on the maintenance and health of planting is to be provided to the Council for a period of ten years from the first season of planting.

The Council may serve notice of its intention to review, amend or add to the Revegetation Strategy to require additional planting, as may be required in order to achieve the Objectives outlined in Condition 6. Revegetation is to be protected by a covenant registered on the land title that will protect the planting in perpetuity

2.1 CONDITION 6 OBJECTIVES

2.1.1 OBJECTIVE 1 – VEGETATION COVER

To provide a vegetation cover framework of Kanuka and other appropriate native species in the short term, which can become the basis for biodiversity enhancement as the project develops;

Section 3.3 of the Revegetation Strategy refers to plant sourcing and the proposed species composition. The proposed species shall be carefully selected to provide a mix that will establish quickly and become the basis for biodiversity enhancement as the project develops. Kanuka (*Kunzea ericoides*) shall be the predominant species throughout most revegetation areas.

2.1.2 OBJECTIVE 2 - SCREENING

To provide screening for residential buildings for viewers from the road in accordance with the attached plans and the Revegetation Strategy;

Key areas of mitigation vegetation associated with the Visitor Accommodation units are carefully positioned to enable visual screening from key viewpoints in the surrounding landscape.

The revegetation strategy proposes to use Kanuka (*Kunzea ericoides*) as the predominant species for screening the residential buildings. In some areas where trees need to be removed as part of the development, existing Kanuka specimens will be transplanted to the residential buildings to provide instant screening, when viewed from the road. Additionally Kanuka will be contract grown and planted to similar areas as the species is fast growing and will provide effective screening within a relatively short period of time.

2.1.3 OBJECTIVE 3 - LANDFORM

To reflect the underlying of landform and soils in the native vegetation cover of the site;

Section 3.3 of the Revegetation Strategy refers to plant sourcing and the proposed species composition. The proposed species shall be carefully selected to provide species compositions which reflect the localised landform and soils.

In developing these plant compositions, fieldwork has been carried out to identify and select species which are already present within existing areas across the site. Fieldwork also identified on site topography and soil conditions in which plant compositions will thrive.

2.1.4 OBJECTIVE 4 – GULLY REVEGETATION

To achieve eventual revegetation of the Gully shown on Parkins Bay Plan B dated 12 April 2012 with a mix of locally sourced native species including Totara;

Revegetation of the Gully will consist of a mix of locally sourced native species suited to the sites specific location and landform.

Species will include a mix of wetland plants, marginal species and native shrubland. Kanuka (*Kunzea ericoides*) will be included within the mix to ensure integration with adjacent revegetation areas. Enrichment planting of the gully with locally sourced Totara (*Podocarpus totara*) will be implemented once initial revegetation planting has established.

Ongoing Management of the Gully will be in general accordance with Section 3.2 of the Revegetation Strategy, which outlines the proposed 10 Year Management Strategy.

2.1.5 OBJECTIVE 5 – MORAINES SLOPE REVEGETATION

To achieve eventual revegetation of the Moraine Slope shown on Parkins Bay Plan B dated 12 April 2012;

Revegetation of the Moraine Slope will consist of a mix of native species suited to the sites specific location and landform.

Species shall include a mix of alpine ground covers and tussock grasses, quick growing species such as Kanuka (*Kunzea ericoides*) and hardy native shrubs including Mingimingi (*Coprosma propinqua*).

Revegetation shall be staged to enable ground covers to initially stabilise the existing landform and soils. Enrichment planting to increase biodiversity will be implemented progressively once initial species have established.

2.1.6 OBJECTIVE 6 – GOLF COURSE REVEGETATION

To ensure that the "rough" areas of the golf course, being the vegetated areas not required to be mowed or otherwise maintained, regenerate naturally (excluding noxious weeds);

Golf Course areas outside of play shall be identified on sub-stage appendices as 'naturalized rough' and will be excluded from mowing and maintenance operations to encourage natural regeneration of native species.

Weed management practices within these areas will include targeted spot spraying of pest weed species with a selective herbicide. This practice will allow any naturally dispersed seed to regenerate with minimal competition from non-native weed species.

The Glendhu Bluff Reserve is home to significant areas of established native vegetation with viable native seed and a present bird population. Given the Reserves immediate proximity to the golf course, seed dispersal and natural regeneration throughout all areas of the development is expected to be significant.

2.1.7 OBJECTIVE 7 – LINKS OUTSIDE SITE

To link with other revegetated areas outside the site;

Revegetation of areas directly outside the site includes the Moraine Slope, Gully, Glendhu Bluff Reserve and the Lake Shore area. The Glendhu Bluff Reserve has been identified as having diverse vegetation and bird population that will provide potential for natural seed dispersal.

At a region scale revegetating areas can be found throughout the Wanaka Ecological District.

The Revegetation strategy for Parkins Bay aims to link with revegetating areas at a local and regional scale, to produce positive outcomes for local indigenous flora and fauna. The strategy achieves this by proposing native revegetation species that:

- Produce viable seed source for natural regeneration via bird and wind dispersal;
- Provide habitat for native fauna;
- Provide food supply for native flora and fauna;
- Emulate the historically native vegetation cover;
- Encourage increased biodiversity over time (refer objective 1)

3.0 REVEGETATION STRATEGY

3.1 TIMING OF PLANTING AND 5 YEAR REPLACEMENT PROGRAMME

3.1.1 GENERAL PROCEDURE

All planting and maintenance operations shall be carried out by a landscape contractor suitably qualified, experienced in native revegetation schemes and familiar with the requirements for establishing native plants within the area.

Plants shall be set out and spaced appropriately in an entirely natural manner, generally avoiding straight lines and regular geometric patterns whilst ensuring an even spread across planting areas.

To avoid potential fire risk, tree planting shall be located at an appropriate distance from any building.

A selection of plant sizes will be used dependant on the species, location and screening requirements.

3.1.2 SITE PREPARATION

3.1.2.1 MANAGEMENT FROM CONSENT TO SITE PREPARATION

The staged approach to revegetation requires some interim site management prior to site preparation. This initial management is essential for maintaining the sites existing values and preventing a potential influx in pests.

Prior to site preparation the following management practices shall continue to be undertaken, as required:

- Reduction in intensity of stock grazing;
- Removal of all tall grasses via controlled grazing;
- Animal pest control operations and;
- Weed control operations.

3.1.2.2 SITE PREPARATION PRIOR TO REVEGETATION

Site Preparation is essential for plant success and reduces competition from non-native weed species.

The following site preparation practices shall be undertaken, as required:

- Removal of any existing non-native vegetation above 0.5m in height;
- Removal of any tall grasses via grazing or line trimmer (and removed from site);
- Spot spraying where revegetation plants are to be located with a selective Herbicide and follow up spot spraying.

3.1.3 PLANTING METHODOLOGY

The following planting practices shall be undertaken to assist positive survival rates:

- Plants shall be placed below existing soil surface to allow a shallow depression for water to gather, in particular on steep slopes where run-off may flow past plants during drier conditions;
- Slow release fertiliser and rain crystals shall be included in planting pits, as required, to encourage root establishment and provide latent water retention in between periods of rain.
- In the absence of rabbit proof fencing, plant protectors shall be fitted, as required in open ground, to provide protection from wild deer / grazing animals, possums and rabbits;
- Plants shall be planted at 1.5m spacing unless noted otherwise on the plans.

3.1.4 TIMING

Revegetation planting shall be undertaken during favourable weather conditions (overcast days if possible) and at the earliest suitable opportunity during the planting season (preferably over autumn/spring months).

3.1.5 5 YEAR MAINTENANCE

For the first 5 years following planting the following maintenance operations shall be undertaken, as required:

- Replacement of diseased/damaged/dying plants;
- Fertiliser as required;
- Replacement of mulch (where used);
- Animal pest control operations and;
- Weed control operations.

Timing and staging of these operations are detailed in Appendix 1.

3.1.6 PLANT REPLACEMENT

For the first 5 years following initial planting all diseased or dying revegetation plants shall be replaced to the satisfaction of Council

As outlined in Section 5.0 an annual report summarising plant health, success/failures and any proposed replacement plants, shall be submitted to council. In the following planting season any replacement planting shall be implemented and managed in accordance with the Revegetation Strategy.

3.2 10 YEAR MANAGEMENT STRATEGY (Refer Appendix 0.0)

3.2.1 WEED CONTROL

For the first 5 years following initial planting all weeds within revegetating areas will be hand/spray released as required. After 5 years (or when the plants reach a suitable height) weed control may be carried out through line trimming as appropriate.

Key areas of revegetation or high amenity areas in and around buildings or access routes may be mulched with woodchip to suppress weeds – this approach will improve moisture retention in the soil and may reduce the need for weed control operations.

3.2.1.1 Weed Control Threshold

The broad-scale approach to weed control aims to suppress rather than eradicate weed species.

During weed control operations, site inspections shall identify areas that have been recently colonised by weeds, and areas that contain the potential for weed influx.

These findings and appropriate control methods shall be summarised in the annual report provided to council (Section 5.0).

Proposed amendment to the Initial Revegetation Strategy (Appendix 0.0 – Management Schedule), shall be made if appropriate control methods do not contain/reduce the presence and extent of weed species.

3.2.2 PEST CONTROL

Where required the following pest control operations shall be undertaken up to 10 years after initial planting:

- Fencing to exclude stock access;
- Broad scale trapping and baiting stations to control rodents, mustelids, possums, rabbits and feral cats (as required);
- Seasonal shooting programmes where appropriate.

All pest control operations shall be carried out by a suitably qualified professional, in accordance with best practice and appropriately signed in areas subject to public access.

3.2.2.1 Pest Control Threshold

The broad-scale approach to pest control aims to suppress rather than eradicate pest populations.

During pest control operations, site inspections shall record the extent of any damage to revegetation plants, pest sighting and the success/failures of operations. These findings shall be summarised in the annual report provided to council (Section 5.0).

Proposed amendment to the Initial Revegetation Strategy (Appendix 0.0 – Management Schedule), shall be made if excessive damage is observed to plants.

3.2.3 STOCK CONTROL

Stock will be excluded from all proposed revegetation areas, through a combination of existing and proposed fence systems located along site boundaries.

As per Environment Court – Parkins Bay Plan B Dated 12 April 2012, retained existing and proposed fences will allow for stock passage outside of the site boundary.

3.2.4 IRRIGATION

The proposed revegetation species palette shall comprise species naturally adapted to the local environment and climatic conditions. To encourage root development revegetation planting shall be timed to ensure “raining in” through the winter/spring months. Plant pits shall include an initial dose of water retention crystals to provide a reservoir for each plant through potential dry periods.

All Visitor Accommodation mitigation revegetation areas will be irrigated for a period of 5 years from establishment to ensure optimal growth rates.

In the event of prolonged drought, temporary/manual irrigation methods may be employed to reduce stress on larger areas of revegetation.

3.2.5 FERTILISING

Slow release fertiliser and rain crystals shall be included in planting pits to encourage root establishment and provide latent water retention in between periods of rain.

For the first 3 years following initial planting an annual fertiliser treatment will be applied. Applications will be slow release fertiliser 'top dressed' around the root zone. Fertiliser procedures shall follow best practice and operations shall be undertaken during favourable weather conditions.

3.2.6 VISITOR ACCOMMODATION REVEGETATION HEALTH / REPLACEMENT

For certification of stage 1 and 2 all visitor accommodation revegetation shall be managed so that more than 75% of plants are live and healthy at a period of 12 months from the date of establishment. All diseased or dying plants shall be replaced to the satisfaction of the Council.

For certification of stage 3 all visitor accommodation revegetation shall be managed so that more than 75% of plants are live and healthy and at an average height of 3 metres. All diseased or dying plants shall be replaced to the satisfaction of the Council.

As outlined in Section 5.0 an annual report summarising plant health, success/failures and any proposed replacement plants, shall be submitted to council. In the following planting season any replacement planting shall be implemented and managed in accordance with the Revegetation Strategy.

3.3 PLANT SOURCING

All revegetation plants shall be sourced from within the Wanaka Ecological District. Plant propagation techniques shall follow best practice to ensure plants are healthy and have been appropriately hardened off prior to planting.

It is proposed that the majority of the plants will be sourced at small revegetation grades (e.g RX90 or PB2) and encouraged to establish naturally on site.

3.3.1 SPECIES COMPOSITION

The composition of proposed revegetation species shall be selected based on native species that:

- Grow naturally in the locality;
- Are suited to the sites environmental conditions, landforms and soils;
- Establish quickly and become the basis for biodiversity enhancement;
- Link with revegetation areas outside the site.

*Additional appendices provided to council for specific stage/area certification shall detail species composition, densities, areas and numbers. Variation from the Project Plant List may occur to reflect increased knowledge and to continue to comply with the above criteria.

3.3.1.1 PROJECT PLANT LIST*

Riparian Margins/Wetland Areas/Gullies	
Indicative Species Mix	
Botanical Name	Common Name
Carex maorica	<i>Maori Sedge</i>
Carex secta	<i>Makura</i>
Juncus sarophorus	<i>Broom Rush</i>
Chionochloa rubra	<i>Red Tussock</i>
Phormium tenax	<i>Flax</i>

Grey Shrubland	
Indicative Species Mix	
Botanical Name	Common Name
Coprosma propinqua	<i>Mingimingi</i>
Kunzea ericoides	<i>Kanuka</i>

Mixed Shrubland	
Indicative Species Mix	
Botanical Name	Common Name
Aristotelia fructicosa	<i>Mountain Wineberry</i>
Coprosma rugosa	<i>Needle-leaved mountain coprosma</i>
Grisselinia littoralis	<i>Kapuka/Broadleaf</i>
Hoheria angustifolia	<i>Narrow-leaved Houhere</i>
Kunzea ericoides	<i>Kanuka</i>
Plagianthus regius	<i>Manatu/Ribbonwood</i>

3.4 PROTECTION OF EXISTING VALUES

3.4.1 EXISTING VEGETATION

As outlined in Section 4.2 prior to the commencement of any construction within a specific stage/area, additional appendices shall identify and detail further any protection or construction integration measures.

Such appendices shall identify healthy existing indigenous vegetation, indigenous vegetation as shown on Appendix 1.0 (EC Stage 0 Master Plan) and/or vegetation of significant value that is to be retained and delineated during the construction process.

These areas of vegetation shall then be maintained and/or enhanced in accordance with the Revegetation Strategy.

3.4.2 WETLANDS

The existing wetlands on site are degraded due to historical farming practices.

To these areas a mix of riparian, wetland and gully revegetation is proposed that will improve land stability, biodiversity and water quality.

As outlined on the Environment Court – Parkins Bay Plan Bi Dated 12 April 2012, two wetland areas outside of the development site shall be fenced to exclude stock and allow natural regeneration of native species to occur. Eventual regeneration of these areas will improve land stability, biodiversity and water quality.

3.4.3 LAKE SHORE

The lake shore of Glendhu Bay forms a well-defined transition between the terraced pastoral landscape to the south and Lake Wanaka. The existing values of the lake shore are linked with clear waters, open views and sporadic patches of native shrub and riparian grasslands. Any proposed revegetation along the lake shore shall be reflective of this character and enhance the transition between the terraced landscape and Lake Wanaka.

3.4.4 LAKE WATER QUALITY

Ephemeral and permanent watercourses flow through the site, feeding the receiving waters of Parkins Bay, Lake Wanaka. Comprehensive revegetation including wetlands and watercourses will provide habitat for native species, increase biodiversity, reduce erosion and improve the quality of water reaching Lake Wanaka.

Where applicable, sub-stage revegetation and planting plan appendices shall identify the 20m Esplanade in accordance with condition 49 *'Riparian vegetation buffer strips are to be maintained between the golf course and Lake Wanaka and the golf course and the edge of the Fern Burn watercourse. These buffer strips must be a minimum of 20m wide and not be subject to the application of any fertiliser, pesticide or irrigation'*

3.5 CONSTRUCTION INTEGRATION

The timing of construction operations shall be managed to ensure existing vegetation and revegetation is protected from potential disturbance.

As outlined in Section 5.0 prior to the commencement of any construction within a specific stage/area, additional appendices outlining the approach to construction integration shall be provided to the Council for certification.

3.6 POPLAR REPLACEMENT

Hardwood cuttings shall be taken from the healthiest Poplar specimens on site and grown on by an appropriately qualified nursery. These specimens shall be maintained using appropriate nursery techniques to provide healthy specimen material suitable for future propagation.

If replacement of the existing poplars on site is required; the above specimens will provide a viable healthy source of parent material to allow replacement.

4.0 CERTIFICATION

4.1 INITIAL CERTIFICATION

Certification of the initial Revegetation Strategy (dated 23rd February, 2016) shall be obtained prior to the commencement of any construction.

4.2 STAGING CERTIFICATION

Prior to the commencement of any construction within a specific stage/area, additional appendices shall be provided to the Council for certification. These shall include:

- Revegetation Document – Detailing any construction integration measures and the fulfilment of conditions 6 objectives;
- Revegetation and Planting plan - Detailing revegetation areas, species composition, plant densities and any existing vegetation to be retained.

4.3 VISITOR ACCOMMODATION

Prior to the construction of visitor accommodation, certification will be obtained confirming:

- Stage 1 - that planting conforms to the certified Revegetation Strategy and that more than 75% of the plants are live and healthy at a period of 12 months from the date of establishment. All diseased or dying plants shall be replaced to the satisfaction of council.
- Stage 2 - that planting conform to the certified Revegetation Strategy and that more than 75% of the plants are live and healthy at a period of 12 months from the date of establishment. All diseased or dying plants shall be replaced to the satisfaction of council.
- Stage 3 - that planting conform conforms to the certified Revegetation Strategy and that more than 75% of the plants are live and healthy and at an average height of 3 metres. All diseased or dying plants shall be replaced to the satisfaction of council.

4.4 REVISED REVEGETATION STRATEGY CERTIFICATION

During the development, the initial Revegetation Strategy may be altered to add new material, to reflect increased knowledge or to represent best practice methodology. Any amendments to the Strategy shall be provided to Council for certification.

4.5 FINAL REVEGETATION STRATEGY CERTIFICATION

The final Revegetation Strategy shall be provided to Council for certification prior to the commencement of the final stage/area of work.

5.0 ANNUAL REPORT

An annual report shall be prepared and submitted to council every July for the first 10 years following initial planting.

This report shall include a summary of:

- Key species health, success/failures;
- Pest control success/failures;
- Weed control success/failures;
- Proposed replacement planting (if required);
- Proposed amendment to Initial Revegetation Strategy, to reflect increased knowledge or to represent best practice methodology (if required).

5.1.1 PROJECT PROGRESSION SITE VISITS

On completion of each specific revegetation stage/area or upon request a site visit with a project Landscape Architect and Council representative shall occur. Site visits shall be a method to demonstrate revegetation implementation, maintenance and the realisation of the Revegetation Strategy objectives.

6.0 CONCLUSION

In conclusion, this document outlines the high level revegetation strategy, management programme and certification process. It is in accordance with the Environment Court decision (April 2012) and RM140959 and demonstrates a comprehensive approach to achieving revegetation at Parkins Bay Golf Course.

7.0 APPENDICES

APPENDIX 0.0	MANAGEMENT SCHEDULE
APPENDIX 1.0	STAGE 0: REVEGETATION STAGING PLAN
APPENDIX 1.1	STAGE 1: REVEGETATION STAGING PLAN
APPENDIX 1.2	STAGE 2: REVEGETATION STAGING PLAN
APPENDIX 1.3	STAGE 3: REVEGETATION STAGING PLAN
APPENDIX 1.4	PARKINS BAY GOLF COURSE MASTERPLAN
APPENDIX 1.5	INDICATIVE VEGETATION CATEGORIES PLAN

MANAGEMENT SCHEDULE Parkins

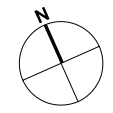
Bay - Revegetation Strategy -

13.0123.02.16.16

APPENDIX 0.0

Short Term Management (1-5 Years)	Year 1 Programme				Year 2 Programme				Year 3 Programme				Year 4 Programme				Year 5 Programme			
	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	
Weed Control																				
Hand release weeds around native revegetation planting (as required)	x		x		x		x		x		x		x		x		x		x	
Line trim around native revegetation plantings (as required)	x				x	x			x	x			x	x			x	x		
Spray release areas of native revegetation with an approved herbicide (as required)	x	x	x		x	x	x		x		x		x		x		x		x	
Fertiliser Application																				
Slow release fertiliser application to revegetation plants installed as a top dress	x				x				x				x							
Pest Control Operations																				
Active baiting and trapping to control rodents, mustelids, possums, rabbits and feral cats (as required)	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x		x	
Monitoring																				
Record key species health, success/failures and pest control success/failures for annual report			x				x				x				x				x	
Replacement Planting																				
Replacement planting implemented (if required)			x				x				x				x				x	
Proposed Amendments to Initial Revegetation																				
Summary of proposed amendment to Initial Revegetation Strategy, to reflect increased knowledge or to represent best practice methodology (if required)				x				x				x				x			x	

Long Term Management (5-10 Years)	Year 6 Programme				Year 7 Programme				Year 8 Programme				Year 9 Programme				Year 10 Programme			
	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	
Weed Control																				
Line trim around native revegetation planting (as required)		x				x				x				x				x		
Spray release areas of native revegetation with an approved herbicide (as required)	x				x				x				x				x			
Pest Control Operations																				
Active baiting and trapping to control rodents, mustelids, possums, rabbits and feral cats (as required)	x		x	x	x		x	x	x		x	x	x		x	x	x		x	
Shooting programme (as required)		x				x				x				x				x		
Monitoring																				
Record key species health, success/failures and pest control success/failures for annual report			x				x				x				x				x	
Replacement Planting																				
Replacement planting implemented (if required)			x				x				x				x				x	
Proposed Amendments to Initial Revegetation																				
Summary of proposed amendment to Initial Revegetation Strategy, to reflect increased knowledge or to represent best practice methodology (if required)				x				x				x				x			x	



KEY/DEVELOPMENT SCHEDULE

- STAGE 1:**
- 1 18 HOLE GOLF COURSE/DRIVING RANGE
 - 2 CLUBHOUSE
 - 3 SHEARER'S QUARTERS (12 VISITOR ACCOMMODATION UNITS)
 - 4 ACCESS ROAD, CARPARK AND GOLF UNDERPASSES
 - 5 JETTY
 - 6 PUBLIC ACCESS TRACKS
 - 7 MAINTENANCE COMPOUND
 - 8 PRACTICE GREEN
 - 9 IRRIGATION POND

● VISITOR ACCOMMODATION RESIDENCES (UNITS 24, 29, 31, 32, 34, 35, 36, 42, 43 & 44)

- 2Ha MITIGATION REVEGETATION
- ROADING AND BUILDING PLATFORM EARTHWORKS
- INDIGENOUS SHRUBLAND (REVEGETATION/REGENERATION)
- DRY GRASSLAND/ UNIMPROVED PASTURE
- PUBLIC ACCESS (WALKING OR BIKING TRAILS)
- ROAD NETWORK WITH PUBLIC ACCESS EASEMENT FOR WALKING & BIKING
- PRIVATE ROADS
- ALTERNATIVE PUBLIC ACCESS TRACK, WHEN MAIN TRACK CLOSED DUE TO FARM ACTIVITY

POST EC REVISIONS:

No.	DESCRIPTION	DATE	DRAWN	REVIEWED	APPROVED
A	Golf Course Layout Updated (RM150467)	13.01.16	ZC	HF	-
A	Revised Stage Boundary	09.02.16	ZC	HF	RT

GLENDHU STATION

STAGE 1: REVEGETATION STAGING PLAN

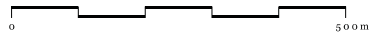
Scale: 1:2000 (2xA0); 1:8000(A3)

PB_18_3_LA-004, 09 Feb 2016

REVISION:
S1_EC_A

MVB: Parkins Bay18_Revegetation3_DevelopmentCAD/PB_18_3_LA-004 (Stage 1 Revegetation Staging Plan).dgn

HARRY PARTNERS LIMITED
 Level 10/100 Market Street, Auckland
 PO Box 104, Queen's Wharf, Auckland
 T: +64 (0)9 308 7000 F: +64 (0)9 308 7001 E: info@harrypartners.com

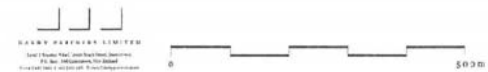




KEY/DEVELOPMENT SCHEDULE

STAGE 3:

-  PROPOSED REGENERATION FENCING
-  VISITOR ACCOMMODATION RESIDENCES (UNITS 6, 17, 21, 22, 26, 27, 37, 39, 40, 41, 45, 48)
-  REMAINING REVEGETATION
-  INDIGENOUS SHRUBLAND (REVEGETATION/REGENERATION)
-  DRY GRASSLAND/ UNIMPROVED PASTURE
-  PRIVATE ROADS



GLENDHU STATION
STAGE 3: Master Plan

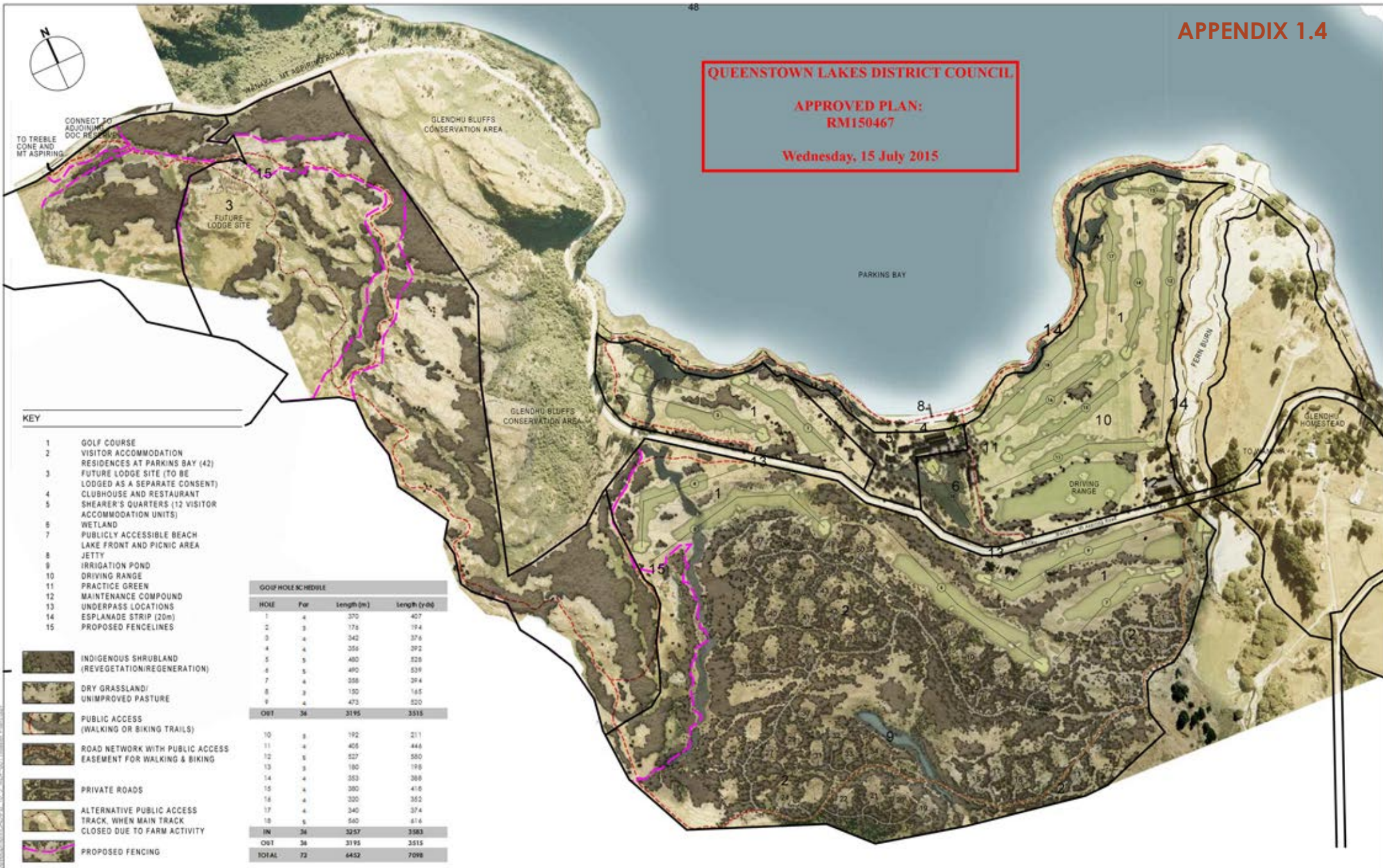
Scale: 1:2000 (2xA0); 1:8000(A3)



REVISION:
S3_EC

MDP-Rev EC-Stage 3, SEP 2009

QUEENSTOWN LAKES DISTRICT COUNCIL
APPROVED PLAN:
RM150467
Wednesday, 15 July 2015



- KEY**
- 1 GOLF COURSE
 - 2 VISITOR ACCOMMODATION RESIDENCES AT PARKINS BAY (42)
 - 3 FUTURE LODGE SITE (TO BE LODGED AS A SEPARATE CONSENT)
 - 4 CLUBHOUSE AND RESTAURANT
 - 5 SHEARER'S QUARTERS (12 VISITOR ACCOMMODATION UNITS)
 - 6 WETLAND
 - 7 PUBLICLY ACCESSIBLE BEACH LAKE FRONT AND PICNIC AREA
 - 8 JETTY
 - 9 IRRIGATION POND
 - 10 DRIVING RANGE
 - 11 PRACTICE GREEN
 - 12 MAINTENANCE COMPOUND
 - 13 UNDERPASS LOCATIONS
 - 14 ESPLANADE STRIP (20m)
 - 15 PROPOSED FENCELINES

- INDIGENOUS SHRUBLAND (REVEGETATION/REGENERATION)
- DRY GRASSLAND/ UNIMPROVED PASTURE
- PUBLIC ACCESS (WALKING OR BIKING TRAILS)
- ROAD NETWORK WITH PUBLIC ACCESS EASEMENT FOR WALKING & BIKING
- PRIVATE ROADS
- ALTERNATIVE PUBLIC ACCESS TRACK, WHEN MAIN TRACK CLOSED DUE TO FARM ACTIVITY
- PROPOSED FENCING

GOLF HOLE SCHEDULE			
HOLE	Par	Length (m)	Length (yds)
1	4	370	407
2	3	176	194
3	4	342	376
4	4	356	392
5	5	480	528
6	5	490	539
7	4	358	394
8	3	150	165
9	4	473	520
OUT	36	3195	3515
10	3	192	211
11	4	408	444
12	5	527	580
13	3	190	198
14	4	353	388
15	4	390	416
16	4	320	352
17	4	340	374
18	5	540	516
IN	36	3257	3583
OUT	36	3195	3515
TOTAL	72	6452	7098

V:\098_Parkins Bay\15_Master\15_Development\2015_10_3_MDP\001_Master_Plan.dwg
 15/07/2015 11:00:00 AM
 1:0000(A3)
 1:0000(A3)

HARRY PARKERS LIMITED
 1000 Parkers Road, Christchurch, New Zealand
 Phone: +64 (0)3 366 1000
 Fax: +64 (0)3 366 1001
 Email: info@harryparkers.co.nz

SCALE: 1:4000 (A1), 1:8000 (A3)

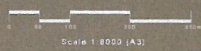
500m



KEY

	Natural Regeneration Area
	Proposed Kanuka & Mixed Shrubland Revegetation
	Indicative Lakeside Planting
	Proposed Wetland Planting
	Exotic Planting
	Turf Grass
	Unimproved Dry Grassland
	Proposed Fenceline

DARRY PARTNERS LIMITED
 12-133 Waverley Street, Lower Hutt, New Zealand
 P.O. Box 1045, Wellington, New Zealand
 T +64 (0) 4 499 7141 F +64 (0) 4 499 7142



PARKINS BAY
 INDICATIVE VEGETATION CATEGORIES PLAN

Scale: 1:8000 (A3) revegetation-plan-revd.dgn September 2009

