Final

April 2009

Foreshore Landscape Management Plan: Lake Hawea

contact

OPUS

Introduction

In 2007 Contact Energy Ltd (Contact Energy) was granted resource consents by the Environment Court to operate the Roxburgh, Clyde and Hawea Dams. This included the ability to store and release water from Lake Hawea.

Resource consent 2001.386 was granted to allow the damming of water at Lake Hawea by the Hawea Dam and contained an obligation on Contact Energy to prepare a Foreshore Landscape Management Plan. This plan was to be prepared to mitigate any effects on the landscape caused by Contact Energy's operation of the Hawea Dam. This condition with its focus on landscape and visual amenity reflects the Environment Court's concern that the range of attributes, in particular the physical, functional and scenic characteristics of lake Hawea that people enjoy are considered and responded to.

The Foreshore Landscape Management Plan has been developed in consultation with the Crown, the Queenstown Lakes District Council (QLDC) and the Hawea Community Association Incorporated and has the objective of ensuring an appropriate level of landscape amenity in the area of lake margins and adjacent land affected by Contact Energy's activities. The Plan is to be approved by the Otago Regional Council (ORC).

The Plan prioritises the removal of remnant trees and scrub which are on the bed of Lake Hawea in the vicinity of the Neck as well as the southern shore of Lake Hawea including between the Hawea Camping Ground site and the eastern edge of Hawea Township; the lake-ward side of the Gladstone Gap stopbank; and to the north of John's Creek hamlet.

Assessment of the Plan is to occur every five years and until 2042. For the five years 2009-14 a general focus will be on ensuring that existing high use areas are maintained to a higher degree of landscape amenity. A copy of resource consent 2001:383 is available on request from ORC (0800 474 082) or Daniel Druce, Contact Energy (03 440 0319).

Queenstown Lakes District Council Management of Recreational Amenity

The Queenstown Lakes District Council, Land Information New Zealand (LINZ) and Contact Energy have entered into a management agreement to manage recreational amenity on the southern foreshore. The areas over which this agreement applies are shown in this Plan and referenced where appropriate. This management agreement will allow the QLDC to provide for such things as walking or cycling tracks, signage and weed control.

Overview

Current Landscape and Visual Amenity:

The scenery and recreational opportunities associated with Lake Hawea are what make the landscape of the area memorable and distinctive. It is the physical, functional and scenic attributes of Lake Hawea that defines its specific landscape and visual amenity. Lake Hawea itself sits within a entrenched, north-south trending, glaciated valley while the landscape is comprised of the lake surface, lake edge and steep sided slopes that rise to high peaks, particularly at the northern head of the Lake.

Noticeable geographic features other than the lake include Mt Burke and the hills that separate Lake Hawea from Lake Wanaka to the west, Sentinel Peak, Terrace Peak and the southern extent of the Young Range to the north and Mt Arnold, Mt Jones, Dingle Peak, Corner Peak and Breast Hill and their associated ridges to the east. The Hunter Valley, the headwaters of which are drained by the Hunter River, is the main inflow to the lake; the Dingle Burn and the Timaru Creek catchments drain from the northeast and east. A large inlet on the west side of the lake leads to The Neck, a strip of land between Lake Hawea and Lake Wanaka.

The focus of human activity in this landscape is Lake Hawea township at the southwest end of the lake, the small cluster of homes and cribs at the mouth of Johns Creek at the southeast 'corner' of the lake, State Highway 6 (SH6) that traverses the western margins of the lake and the access roads to Hunter Valley Station and to Dingle Burn Station. A built feature of note is the Hawea Dam at the outlet of the lake to the Hawea River; this structure was developed in the late 1950's and raised the level of the natural lake by about 20 metres. The normal operating range on Lake Hawea as a hydro-electric storage lake is now 8 metres and during the winter or other periods of high electricity demand the lake level can be at the lower end of this range. This increases the extent of lake margin exposed around the shoreline.

Althought not a focus of this Plan, a corollary to visual amenity is recreational amenity and this currently has expression via such passive or visual means as 'taking in the view' from the southern foreshore at the township, Johns Creek, the elevated rest area/viewpoint on SH6, the picnic areas at Kidds Bush and Timaru Creek and the numerous informal beach access points off the highway and local roads. Boating is one of the main active recreations on the lake with a formed launching ramp and jetty just to the north of the Dam and beach launching at The Neck, Kidds Bush, Johns Creek and Willow Bay. Trout fishing is popular from boats and also from the various beaches, creek mouths and deltas around the lake. Waterskiing and swimming are popular summertime activities, particularly from the beaches at the south end of the lake.

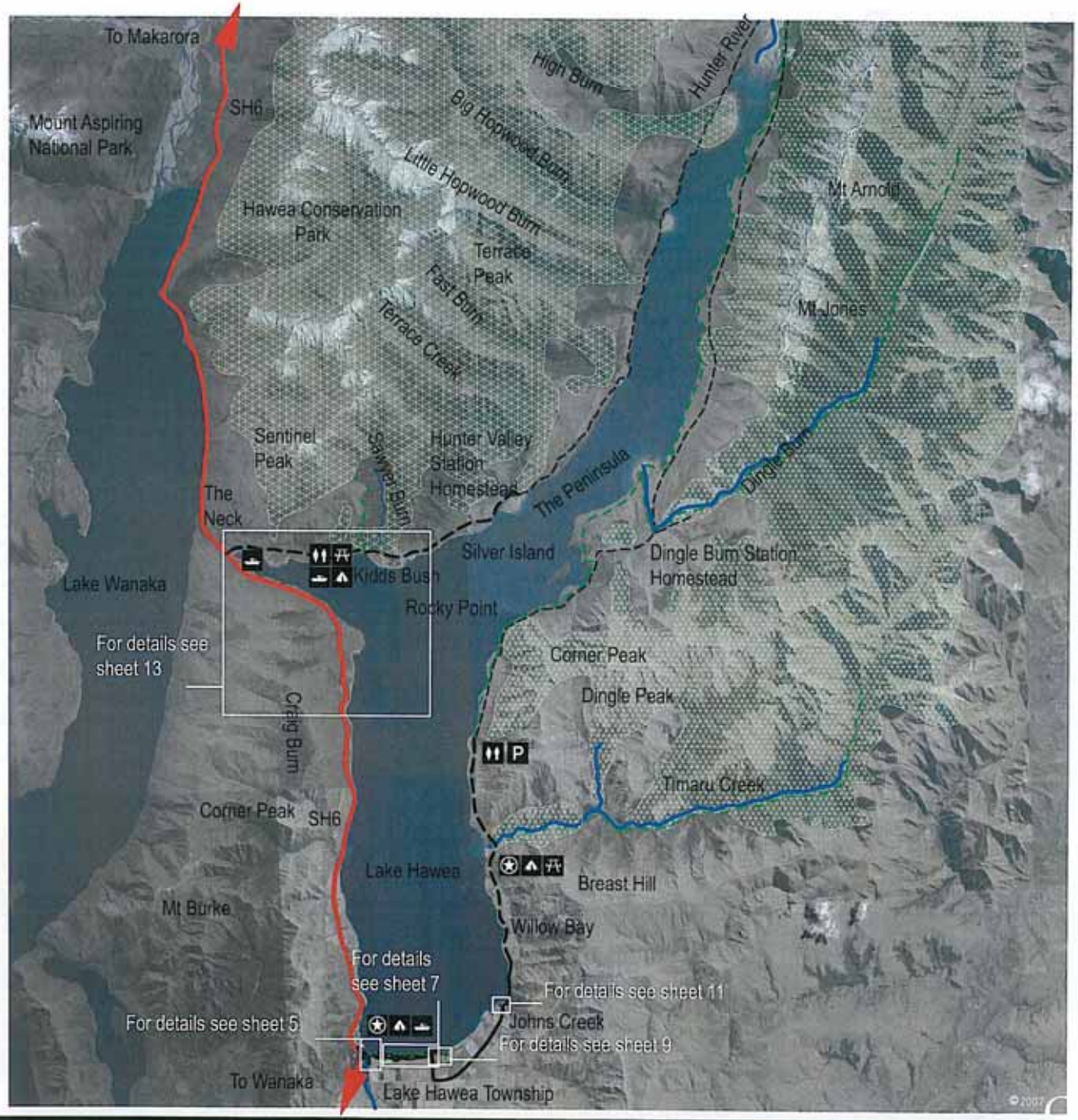
There is a commercial camping ground close to the boat launching ramp and more informal camping at Kidds Bush and Timaru Creek. Camper vans frequently overnight at the various beach access points along the southwest side of the lake, with more self sufficient campers occupying many of these points during the summer. There are Ngai Tahu nohoanga sites on the headland adjacent to the boat launching ramp near the Dam and at Timaru Creek.

The Department of Conservation (DoC) has recently constructed a combined walking, mountain biking and horse riding track on the east side of the lake from the end of the public road approximately 3km beyond Timaru Creek, north past Rocky Point and The Peninsula and ultimately to the eastern side of the Hunter Valley. This track will also provide access to the eastern extent of the proposed Hawea Conservation Park. A private 4WD track through Hunter Valley sheep station provides access from Kidds Bush to the western Hunter Valley.

The immediate foreshore to the Lake Hawea township is frequently used for informal activities such as walking, swimming or picnicking. An existing formed and gravelled walkway traverses the planted buffer area between the foreshore and the developed sections of the township. Within this foreshore reserve, there are barbeque areas, picnicking tables, public toilets and several viewpoints that look out over the lake.

Legend

- River
- State Highway
- Road sealed
- Road metalled
- Vehicle track
- Walking track
- Hawea Conservation Park
- Boat landing
- Public toilet
- Camping
- Picnic area
- Nohoanga site



Overview

Hawea Dam

Existing Amenity:

The intersection of SH6 with Domain Road across the top of the Dam provides the travelling public with the first clear view across Lake Hawea when arriving from the south. The Dam contains the outlet of the lake and forms the entry feature from SH6 to Lake Hawea township. At the midpoint of the structure is a natural ridge that forms a small peninsula out into the lake. Exotic trees have become established amongst the rock outcrop of the peninsula. A QLDC footpath follows the upper, lakeward edge of the Dam and connects the boat launching ramp and camping ground, which are situated about 500m to the north. On the steep slope immediately above the east end of the dam is an extensive area of native shrub planting that will, in time, enhance the entrance to the township. Immediately adjacent to the boat launching ramp is a shallow, sheltered beach that is a popular swimming spot during summer, particularly when the lake level is high. The boat ramp and camping ground have a well established cover of mature exotic trees.

The concrete head works of the intake to the Dam protrude into the lake and, along with the steel handrails and gantry on top of the head works, are obvious built features when viewed from the crest of the dam. The local irrigation and community water intake and its associated pump house are located at the eastern end of the central peninsula. All of these sets of built elements are visually intrusive. To a lesser degree, the diversity of types of guardrails and fences, along with sections of exposed pipe work that are part of the irrigation priming and local water supply connections, on the top of the dam are also visually intrusive.

Potential Amenity:

Adjacent to the boat ramp carpark there is the potential to improve the use of the beach for swimming by excavating the embayment so that it is inundated at a range of lake levels. To complement this improvement of the swimming potential there would be the opportunity to review the health and stability of the trees around the bay, recontour and regrass, where necessary, the open space under the trees and reinforce the existing native plantings on the east side of the bay. These actions would enhance the amenity and recreational use of the boat ramp bay.

There is the potential to enhance the top of the Dam area by relatively simple means. The concrete post, steel and cable fence on the lakeward side of the dam should be standardised to one style while the standard w-section guard rails used on the riverside of the road can be retained. Sections of exposed pipe work are exposed to detect leakage and need to remain unburied.

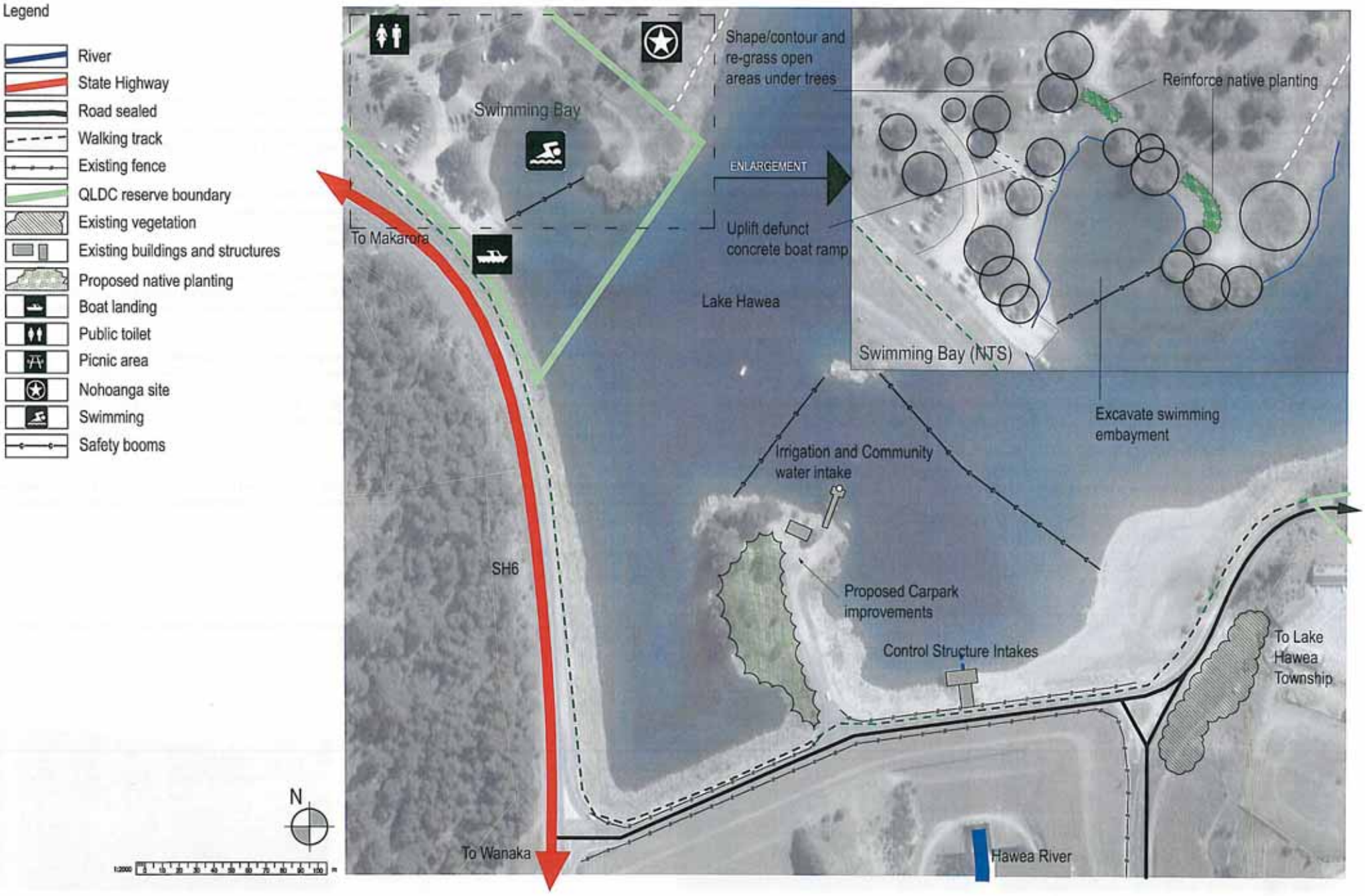
There is the potential to rationalise the hand railing on the intake head works in addition to the gantry and aerials on the roof of the head works. The access road to the end of the peninsula could be converted into a carpark to serve the viewing platform on the Dam intake head works.

The planting of beech, manuka, cabbage tree and other hardy native species common to the area would enhance the 'naturalisation' of the peninsula. Over time there may also be the potential to remove either the irrigation and town water intakes and the associated buildings from the peninsula. The removal of these structures would assist the peninsula to return a more natural form. The removal of the irrigation intakes may occur as part of the installation of power houses at the downstream base of the Hawea Dam. A short term solution would be to paint the existing buildings on the peninsula a colour sympathetic with the surrounding environment.

Implementation Actions:

The actions required around the Hawea Dam Area are as follows:

- Undertake topographical survey of swimming embayment adjacent to the boat ramp. Apply for long term resource consent to deepen/contour embayment so that the embayment remains inundated during the normal summer operating levels of the lake.
- Plant native species around northern side of swimming embayment. General health and stability of existing trees to be checked by an arborist with dead wood and unstable limbs being removed. Contour, grass and fertilise open areas to improve amenity.
- Remove defunct concrete boat ramp.
- Plant native trees and shrubs on the peninsula on the Dam face and install irrigation.
- Upgrade the no-exit road on the peninsula to include car-parking and a sealed turning area.
- Investigate the removal of non-essential gantry and aerials on the control tower. This issue is linked into the proposed generation at the Hawea Dam as well as control systems for the operation of the dam so this may be difficult to progress in the short term.
- Replace concrete post and wire cable fence across the top of the Dam with standardised design (future action).



Hawea Dam

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Township Foreshore

Existing Amenity:

The buffer of vegetation that forms the long and narrow barrier between the foreshore and Lake Hawea township has a long history of input and landscape development by the local community, QLDC, LINZ and Contact Energy and its predecessors. For the most part the hardy mix of native and exotic species within this reserve is now well established. Recently the QLDC has formed a gravelled walking track from the Lake Hawea Motor Lodge to beyond the eastern end of the township. Picnic and barbeque areas, carparks and various view points have also been formed.

Contact Energy and its predecessors have carried out various erosion control measures along the lake foreshore from the Dam east towards Skinner Crescent. These works and any on-going erosion are regularly monitored and reported upon, as outlined in the Lake Hawea Erosion Management Plan.

Within the immediate frontage of the township, there are two erosion-related areas; one potentially active and the other stabilised:

1. Flora Dora Cliffs: This length of foreshore extends from the Dam to Scotts Beach to the east. Past remedial works in this area have had mixed success, with some of the rip rap protected slopes remaining while other rip rap has been substantially scoured by wave action. The rip rap in the beach profile supports the slightly elevated profile of the shoreline at this location. From a landscape perspective, the eroded rip rap has blended into the debris slopes that have formed along the base of the cliffs. The grass and scrub cover that has now established on the lower slopes has naturalised the erosion scarps. However there are now a number of undercut and unstable trees at the top of the scarps that give this section of foreshore reserve an unkempt appearance.

The management of the erosion of these areas of rip rap will be covered by the Lake Hawea Erosion Management Plan as an area requiring specific assessment. Any preferred solution should also encompass issues of landscape and amenity.

2. Skinner Crescent Terrace: This relatively short section of foreshore is between Scotts Beach and the next beach east. Past remedial works in this area involved some shaping back of the terrace and the placement of rip rap. This has been largely successful in protecting the terrace face, though the rip rap retains an unnatural appearance.

Longshore drift transports gravel and sand along the Hawea southern foreshore which then accumulates around the Dam. The practice is to periodically uplift this material and recycle the sediments back to Flora Dora and Skinner Crescent sections of foreshore.

Contact Energy is aware of a proposal to have a public memorial constructed at a prominent point along the foreshore. This could occur near the existing lookout above Scotts Beach.

Potential Amenity:

There is scope for further landscape development along the township's foreshore, but there is also the need for continued maintenance and replacement planting. In places the tree species are of a type and size that are or will obscure the views to the lake from the walking track, the viewpoints and private residences. Over time these trees should be replaced with more appropriate species or trimmed to allow the outward view but maintain the shelter. The health and stability of trees along the top of the Flora Dora Cliffs also needs to be considered and any deformed, unstable or dead trees removed.

"Hawea 2020", which is a community plan prepared in June 2003 for the broader Hawea area notes the following:

- The existing open space and variety of reserves should be maintained and enhanced;
- Pedestrian/cycleways throughout the area should be increased;
- The wilderness character of the reserves should be maintained.

The community plan also notes the need for strong pedestrian/cycle and bridle linkages throughout the Hawea area and currently this is limited to the lake edge in the township area. Continuing lake edge access along the southern foreshore to Johns Creek is seen as desirable. It is assumed that ultimately the link between the township and Johns Creek would be a formed track above the beach, but in the meantime there is the ability to walk along the beach itself.

In terms of maintenance and enhancement of reserves, the following is proposed by the Community Plan:

- Planting should be native, but managed so that view shafts are retained. Some exotics could be used to retain autumn colours. Wilding species should be removed;
- The maintenance of signs should be improved, with more signs used to indicate where tracks are, and any restrictions on them;
- Signs at the start of tracks should be basic, simple and effective, and consistent;
- The foreshore should be more user friendly for families, e.g. the use of prams, and footpaths should not be loose gravel. In addition, there should be provision for parking at the start of tracks.

As noted in the introduction to this plan the Queenstown Lakes District Council, Land Information New Zealand and Contact Energy have entered into a management agreement to manage recreational amenity on the southern foreshore. This management agreement will allow the QLDC to manage recreational issues such as signage or walking / bicycle tracks.

Implementation Actions:

The actions required around the Township Foreshore are as follows:

- Arborist to remove dead or unstable trees.
- Repair of fencing and track as shown on Plan.
- Following any future storm events, areas damaged (such as occurred at Scott's Beach in 1999) are to be remediated to a level of landscape amenity at least equal to that which pre-existed the storm event.

Legend

- Scarp/Cliffs
- Road sealed
- QLDC reserve boundary
- Vehicle track
- Walking track
- Existing fence
- Existing vegetation
- Proposed car park
- Public toilet
- Picnic area
- Public BBQ area
- Public Lookout

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Township Foreshore

07/16

Gladstone Gap

Existing Amenity:

This area is the eastern extension of the Lake Hawea township foreshore, but has a simple, rural landscape character. An existing unformed walking track extends east along a terrace above the beach and runs to the Gladstone Gap. More active walkers can continue along the beach to Johns Creek. An unmetalled vehicle track runs across the paddock from Lakeview Terrace and into the Gladstone Gap.

Wave cut cliffs formed in the early 1980s at various intervals along the Muir Road terrace between the eastern township and the Gladstone Gap area. The debris slopes at the base of the cliffs are currently stable and have become sparsely vegetated, but could easily be eroded in a high lake level event. There are sections of 1-3m high vertical scarps above the debris slopes and above this are more extensive, grassed slopes. These open slopes and scarps are a distinct visual contrast to the tree covered slopes that front onto Lakeview Terrace and those towards Gladstone Gap.

Potential Amenity:

The scarps and steep slopes between the eastern end of the township and Gladstone Gap form a barrier for persons wishing to access the beach. Two formed walkways leading off the terrace to the beach are proposed.

The existing walking track runs along the edge of an existing fenceline and can pose a hazard to walkers. It is proposed to formalise the walkway on the shore side of the fence to promote the safe use of the walkway away from the lakeshore cliffs. Where the walkway enters into a mix of native trees and pine west of the Gladstone Gap the walkway will be left unchanged, but can be monitored for deterioration.

The Hawea Community Association has expressed a desire to see further picnic areas developed in the low contained 'flat' that is between the beach and the Gladstone Gap Flood Barrier. The existing vehicle track from Lakeview Terrace could be smoothed and gravelled with car parking provided to the top of the terrace above the Gladstone Gap. A short graded walking track would then lead to a number of picnic spots within the shelter of existing clumps of matagouri, kanuka and the lee of the Gladstone Gap terrace. On-going maintenance would involve the spraying of noxious weeds such as broom and the removal of pine trees and the control of their spread. Broken down fences in the undergrowth and along the beach front should be removed or upgraded. Access to the beach from the Gladstone Gap will be provided by two stiles or gates.

Implementation Actions:

The Gladstone Gap will not be an initial priority under the Plan although the existing walking track running above the lakeshore cliffs towards the Gladstone Gap will be rerouted to the landward side of the existing stock fence (refer Township Foreshore Plan, page 06/16). The Development Timeframes on page 16/16 propose development of the Gladstone Gap in year three or four of this Plan.

Gladstone Gap

09/16

Johns Creek

Existing Amenity:

The charm of this particular area is its separation from other development, the simple nature of the foreshore and the adjoining reserve and that this corner of the lake is often more sheltered than the open foreshore of Lake Hawea township. Rip rap provides protection to the cliffs and road in a short section beyond Johns Creek.

Potential Amenity:

Any enhancement of the foreshore in this area should include the upgrade of the existing low, timber fence behind the back of the beach and the dwellings on the east side of the creek, future planting of native shrub species between the fence and the beach. Irrigation may be initially required to bed down the native shrub species. The QLDC managed reserve could be further developed to provide for increased visitor numbers, particularly in summer months. This could occur by the establishment of additional shading trees.

Relative to "Hawea 2020", Johns Creek is noted as having "a few well placed reserves with potential for enhancement", and as a destination for a track along the lake foreshore and as a locality where public toilets are required.

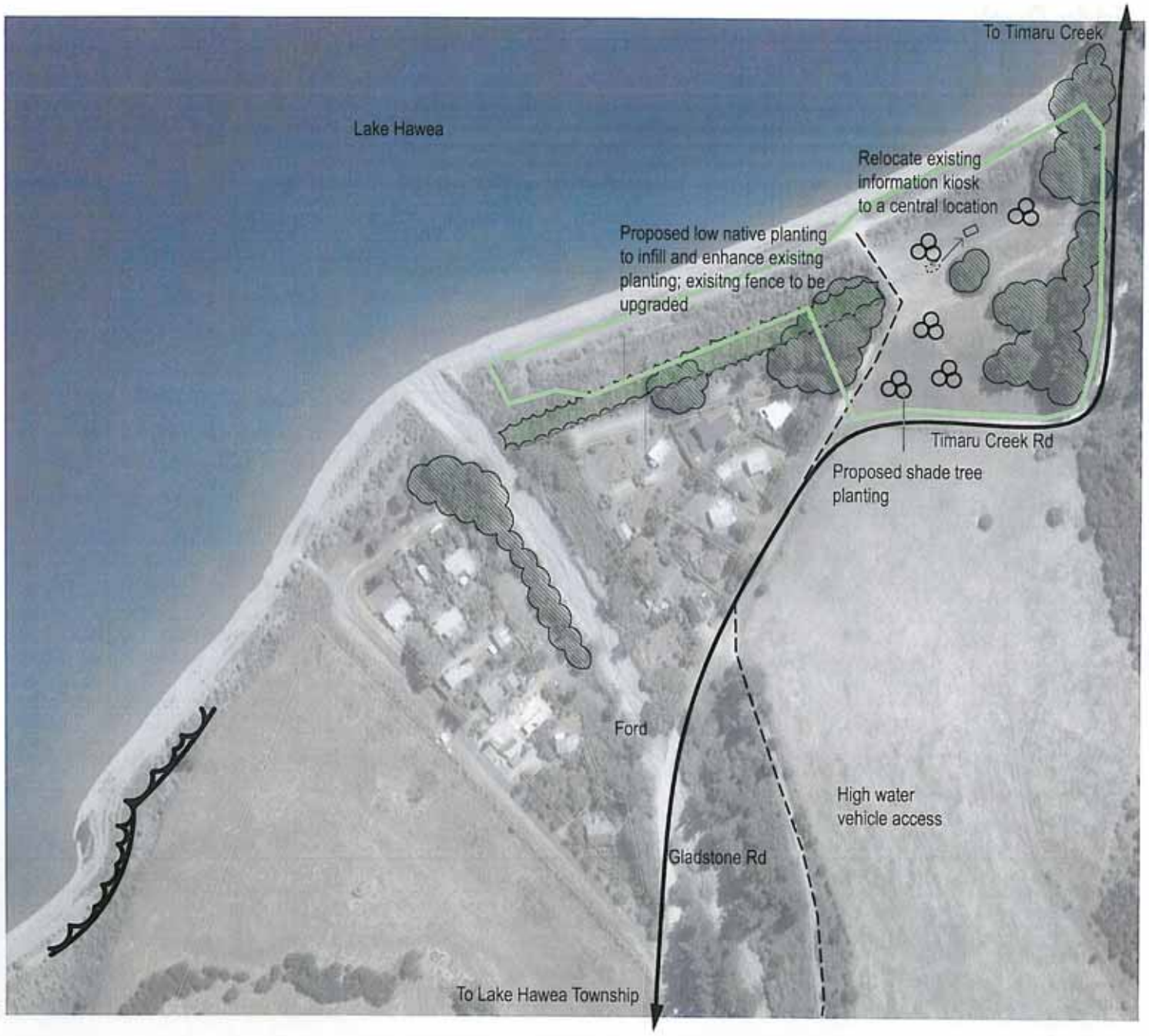
Implementation Actions:

The actions required around Johns Creek are as follows:

- Reform or repair existing timber fencing between houses and lake shore.
- Planting in front of houses to be restricted to low-medium height native species. Installation of irrigation as required.
- Shade plantings established in open area of reserve. Develop grassed areas.

Legend

- QLDC reserve boundary
- Existing buildings and structures
- Road sealed
- Vehicle track
- Walking track
- Existing vegetation
- Proposed native planting
- Existing fence
- Scarp/Cliffs



Johns Creek

Kidds Bush

Existing Amenity:

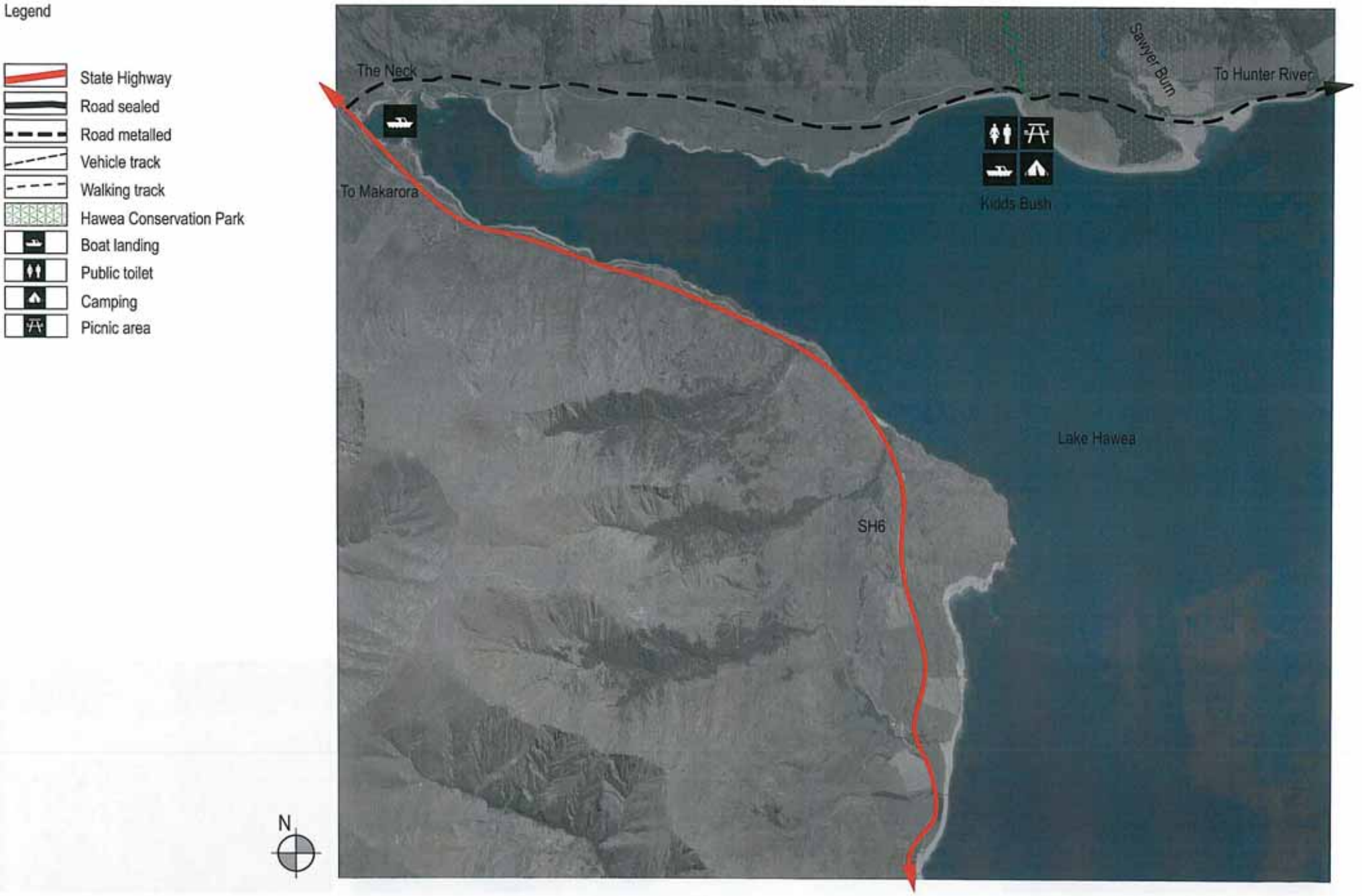
The amenity of the The Neck and Kidds Bush area is defined by its lack of built development and relative isolation, reinforced by the natural bush cover on adjacent hill slopes and the local inlet often being more sheltered than the main body of Lake Hawea. Boats can be launched by 4WD from the beach at The Neck and the steeper beach adjacent to the DoC picnic shelter and toilets at Kidds Bush. A nature walk provides an easy loop track through beech forest. The Sawyer Burn Track climbs through the forest to the bushline and has commanding views of Lake Hawea and the surrounding mountains. Groups of self-sufficient campers stay at the Department of Conservation's Kidds Bush Reserve over the summer period.

Potential Amenity:

Given the type of experience that is currently provided and sought in this area it is unlikely that any improvement to landscape amenity is required.

Implementation Actions:

- None required at this time; on-going monitoring.


Legend
State Highway
Road sealed
Road metalled
Vehicle track
Walking track
Hawea Conservation Park
Boat landing
Public toilet
Camping
Picnic area
The Neck
Sawyer Burn
To Hunter River
To Makarora
Kidds Bush
Lake Hawea
SH6
N

Kidds Bush

Broader Extent of Lake Hawea

Western Shore

Overview: There is an almost continuous view of the lake from SH6 as the highway parallels the western lakeshore from Hawea Dam to The Neck. Various informal vehicle tracks lead down from the highway to a number of creek mouths and their associated gravel beaches such as that at Craig Creek. These areas are used for fishing, swimming and informal camping. Between the beaches are various steep rock faces that rise directly from the lake. At The Neck the beaches generally have a shallow grade, with much of the shoreline becoming exposed during low water.

Implementation Actions:

- None required at this time; on-going monitoring.

Northern Lake

Overview: The northern lake shoreline extends back into the Hunter Valley and forms the frontage of two high country sheep stations; Hunter Valley and Dingle Burn. This part of the lake is quite isolated. The shoreline grades from grazed paddocks on the western side to steep slopes and gullies covered with beech forest to tussock-covered mountaintops. The 'skeletons' of several stands of drowned trees and Silver Island are distinctive features within this part of the lake, as are the Hunter River and Dingle Burn deltas.

Implementation Actions:

- None required at this time; on-going monitoring.

Eastern Shore

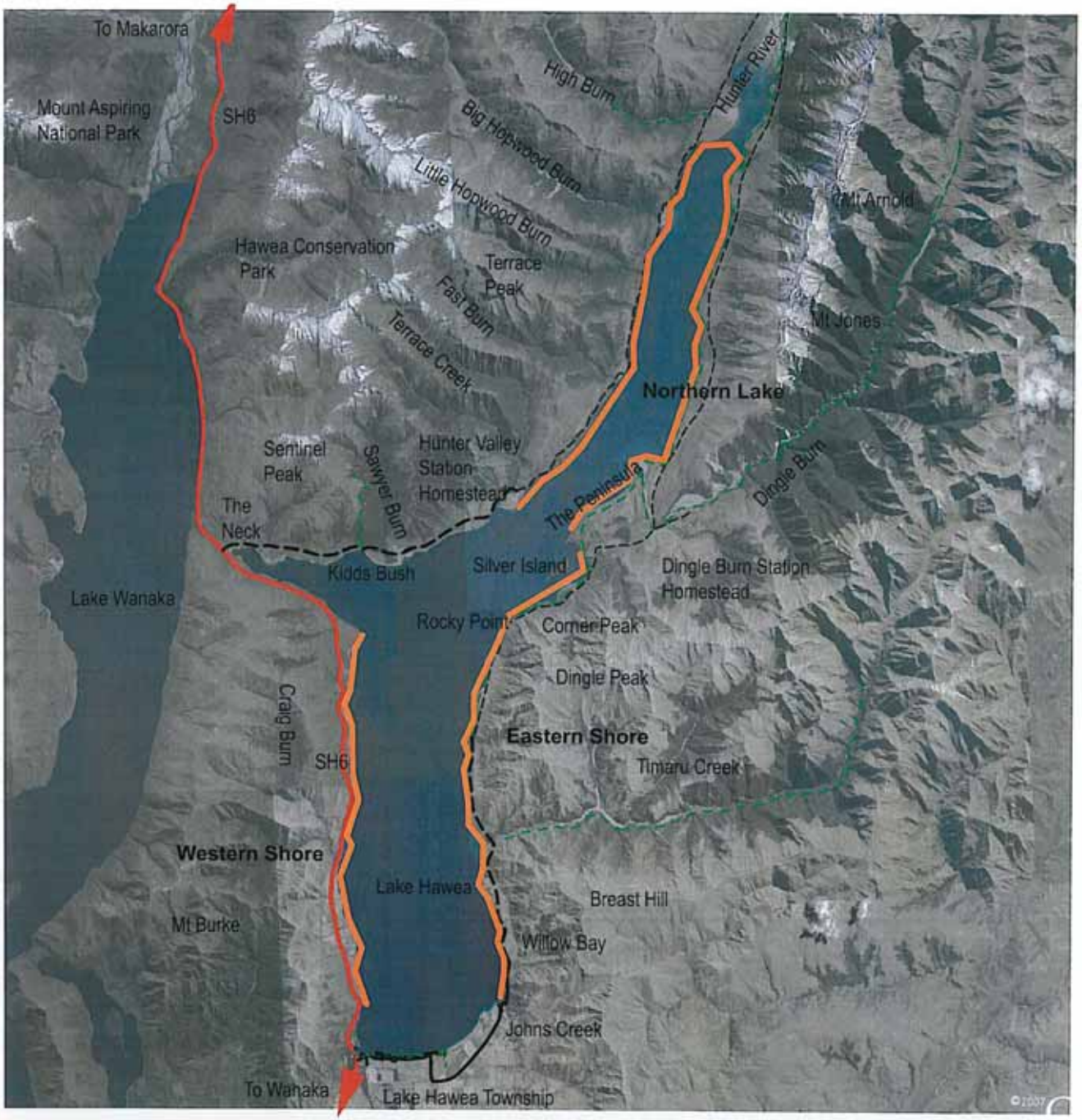
Overview: Timaru Creek Road provides access to the eastern shoreline of the lake, to the cribs at Willow Bay, to the Timaru Creek picnic, camping and nohoanga sites and beyond to Dingle Burn sheep station. From Johns Creek to north of Timaru Creek, the lake edge consists of rocky beach with the occasional gravel delta at creek mouths; the largest being Timaru Creek. Beyond the DoC carpark at the start of the private access track to Dingle Burn station, the shoreline changes to sheer rock cliffs.

Implementation Actions:

- None required at this time; on-going monitoring.

Legend

- State highway
- Road sealed
- Road metalled
- Vehicle track
- Walking track
- Area of interest



Greater Lake Hawea Area

Lake Hawea Development Timeline

Implementation Action	Date for Completion*
Hawea Dam & Swimming Embayment	
Topographical survey of swimming embayment and resource consent application	Year one
Development of planted and open areas around swimming embayment	
Painting of buildings on peninsula	
Planting of native trees and shrubs on peninsula	
Upgrade of no-exit road on peninsula by sealing and creating turning area	
Investigation of removal of non-essential gantry structures on Control Tower	
Contouring / excavation of swimming embayment	Year two
Concrete post and wire cable fence on Dam to be replaced	Year three - four
Township Foreshore	
Removal of dead and unsafe trees	Year one
Repair fencing and track	
Remediate Scott's Beach and Esplanade landscape amenity following storm events	On an as-required basis after any high water storm events

Implementation Action	Date for Completion
Gladstone Gap	
Re-route existing walking track east to Gladstone Gap	Year three - four
Construction of beach access points	
Construction of parking areas and benched access track	
Removal of defunct fences and debris, upgrade stock fences and construction of stiles as required	
Picnic site construction	
Johns Creek	
Reform or repair existing timber fencing, access gate, painting etc	Year one
Planting of native shrub species, irrigation as required	
Planting of shade species in reserve. Develop open reserve area (i.e. plant shade trees, improve grass area)	
Other Areas	
Eastern, northern and western shore	Ongoing monitoring

*Subject to resource consent or other permissions

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