

R11/533 is intended to mark the location of the latter village. The scale of the sketch is small and the estimated location for this site is only 200 m from Little Rangitoto. It is quite possible that the site shown by Bainbridge is in fact little Rangitoto. Jackson (1976: 2-3) also thinks the Bainbridge village is Little Rangitoto, associating it with the settlement of Te Tinana. Jackson (1976: 3) also quotes from a letter from Bishop Selwyn that refers to native settlements "They occupy both sides of a tidal creek which terminates in the estate of St John's College". The creek would be the Orakei Creek and the villages those shown in the Bainbridge sketch. It is quite possible that the settlement referred to would have been closer to the creek than Little Rangitoto. The Pukapuka No. 1 Native Reserve does not include Little Rangitoto. Perhaps the reserve location was determined by the presence of a Maori settlement, perhaps where Kati Te Wherowhero settled.

Site R11/1455 was recorded at 76 Lucerne Road on the inner side of the tuff ring. An area of shell midden was exposed in the side of an access track cut in the construction of a new house.

R11/1625 was an historic well recorded at 35 Dell Avenue.

To the east of Orakei Basin is site R11/88. The location was recorded from Maori Land Court records, although no details of which records are provided in the site record. A small area of disturbed and redeposited shell midden has been noted at this location. However, the village recorded in Bainbridge's sketch is fairly close to this location, a little to the east. It is possible that the original record was intended to be for this village.

R11/2342 has been recorded in close proximity to the Lucerne Access area.

The site is adjacent to northern side of the legal road. It was recorded during an archaeological assessment for part of the Orakei walkway (Baquié 2005).

Sites within management plan area: five sites have been recorded within the areas subject to the management plan. These are R11/87, Orakei pa, R11/1765 in the Kelvin Reserve, 11/2343 in the MacPherson Street Reserve, and two further sites recorded during the preparation of this report, R11/2536 at the end of Purewa Road and R11/2538 in the Orakei East Reserve.

R11/87 is the Orakei Pa, a ridge pa occupying the ridge top (and sides) between Hobson Bay and the Orakei Basin. The basic extent of the pa can be seen in Figure 10, the 1940 aerial photograph, which shows where the defensive ditches were present. There are also terraces on either side of the ridge on the slopes leading down to the basin and to Hobson Bay, the latter cut by Orakei Road. Investigations undertaken by Best (2002) and Tatton and Clough (2005) also found occupation evidence outside the defences along the ridge top to the north and south of the pa.

Until 1932 Orakei Road ran along the ridge through the pa. Land was taken for the present road, beside Hobson Bay, in 1932 and the old road alignment incorporated into the reserve in 1933. The original road alignment is that shown in Figure 5 and is the road shown in SO 667A (Figure 6) and SO 669 (Figure 7). The original alignment can be seen clearly in the 1940 aerial photograph (Figure 10). At that time the two southern defensive ditches had been filled and the eastern end of the two northern ditches had been similarly filled to make way for the road.

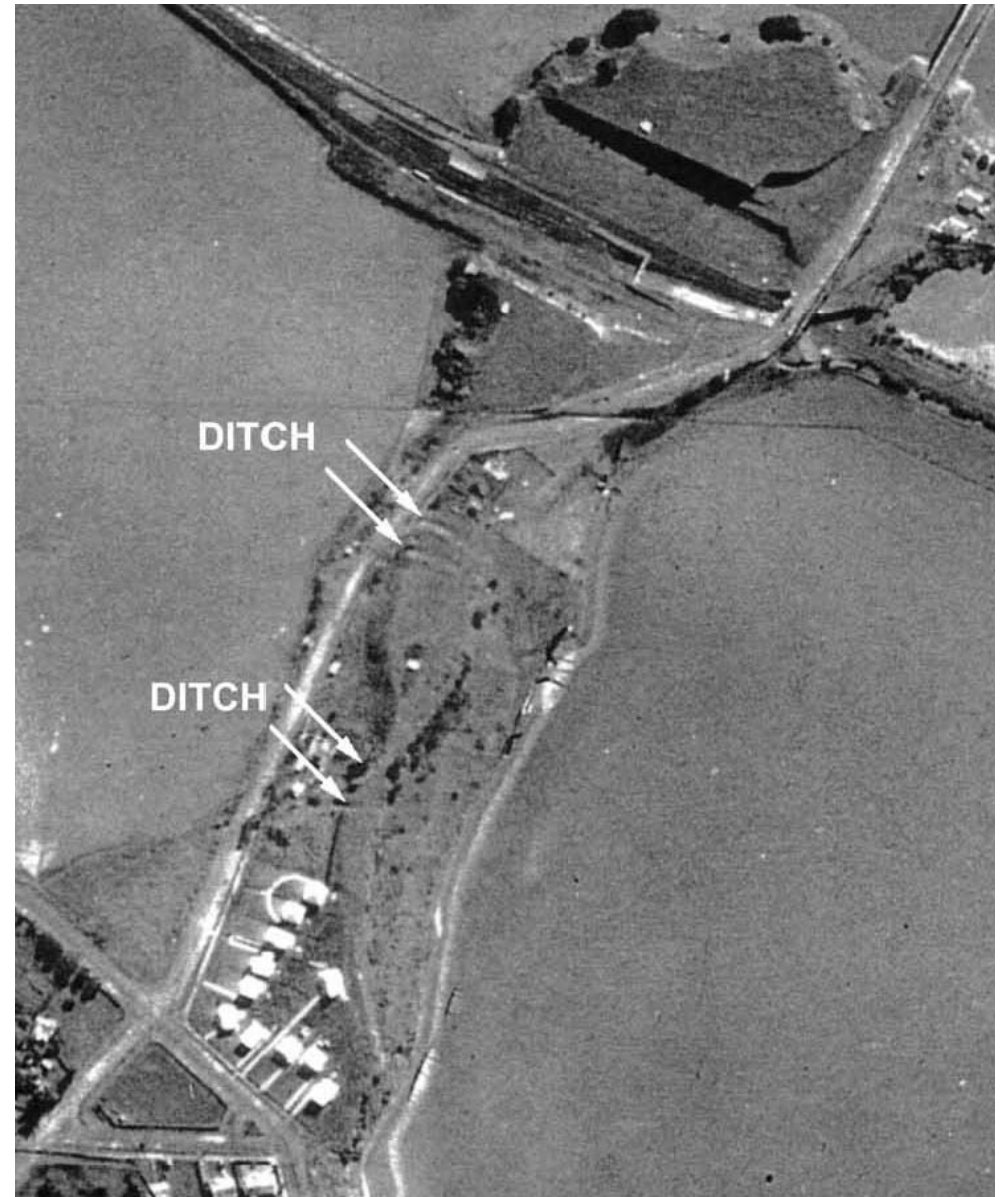


Figure 10: 1940's aerial photograph showing Orakei Pa (R11/87?)



Orakei Basin West Reserve access road midden (R11/87) – R. Foster 2010

The site was first recorded as a pa in the 1960s by R. Brown with a note that the site was “destroyed”. In 1969 the record was updated, noting that the “Site is located on ridge of high ground between Hobson Bay and Orakei Basin. The site appears to have been a ridge pa cut off by transverse ditch(es) and with lateral terraces on Hobson Bay side. Heavy build up of midden.” (NZAA Site Record File: R11/87). This record also notes that considerable damage has been caused by earlier market gardening and earthworks.¹¹ There is no source given for the information about the earlier market gardening. In 1980 a further inspection produced a rough sketch add showing additional terraces on the basin side of the ridge.

The first reported assessment of the pa was undertaken by Clough and Turner (1998) who undertook an assessment of the whole Orakei Basin shoreline. With regard to the pa the report commented on the extensive shell midden exposed by severe erosion on the slopes above the road that leads to the boat ramp and carpark around the southern edge of the basin. This erosion is still continuing.

The Clough and Turner survey did not identify any further archaeological sites in the Orakei East and West Reserves.

At the time the Orakei Basin walkway was proposed, Best (2002) undertook a more thorough examination of the portions of the pa where the walkway was planned. He identified extensive midden deposits along the tuff ring and tentatively identified the location of defensive ditches.

Further study was done by Geometria (2003) using non-invasive techniques to locate subsurface archaeological features. This supported the information reported by Best (2002).

Together the Best and Geometria reports demonstrate that, as well as the lateral terraces with their large quantities of midden, extensive subsurface archaeological evidence of midden and other archaeological features are present over almost the entire ridge top of the pa. Such evidence also extends outside the defended area into the area adjacent to Orakei Road and the road entrance to the Orakei West Reserve (Lot 1 DP 121862, 217 Orakei Road) where the concrete remains of railway housing is still visible (Clough and Macready 2009: 11).

In his 2002 report Best (2002: Figure 8, reproduced here as Figure 11) shows the ditch locations he identified during his investigations, two at the southern end and a small portion of one towards the northern end. The ends one of the southern ditches are still visible but the northern ditches have been completely filled and cannot be easily identified on the ground. Best (2002: 13) includes a photograph from a 1967 University of Auckland excavation at the site. The photograph shows a cross-section of a ditch in the Orakei Road cutting. This is marked in Best’s Figure 8, and it does seem to correspond with the location of one of the two northern ditches in the 1940 aerial.

¹¹ It is possible that at least part of the earthworks was in fact the old road alignment, which is still visible along the ridge top.

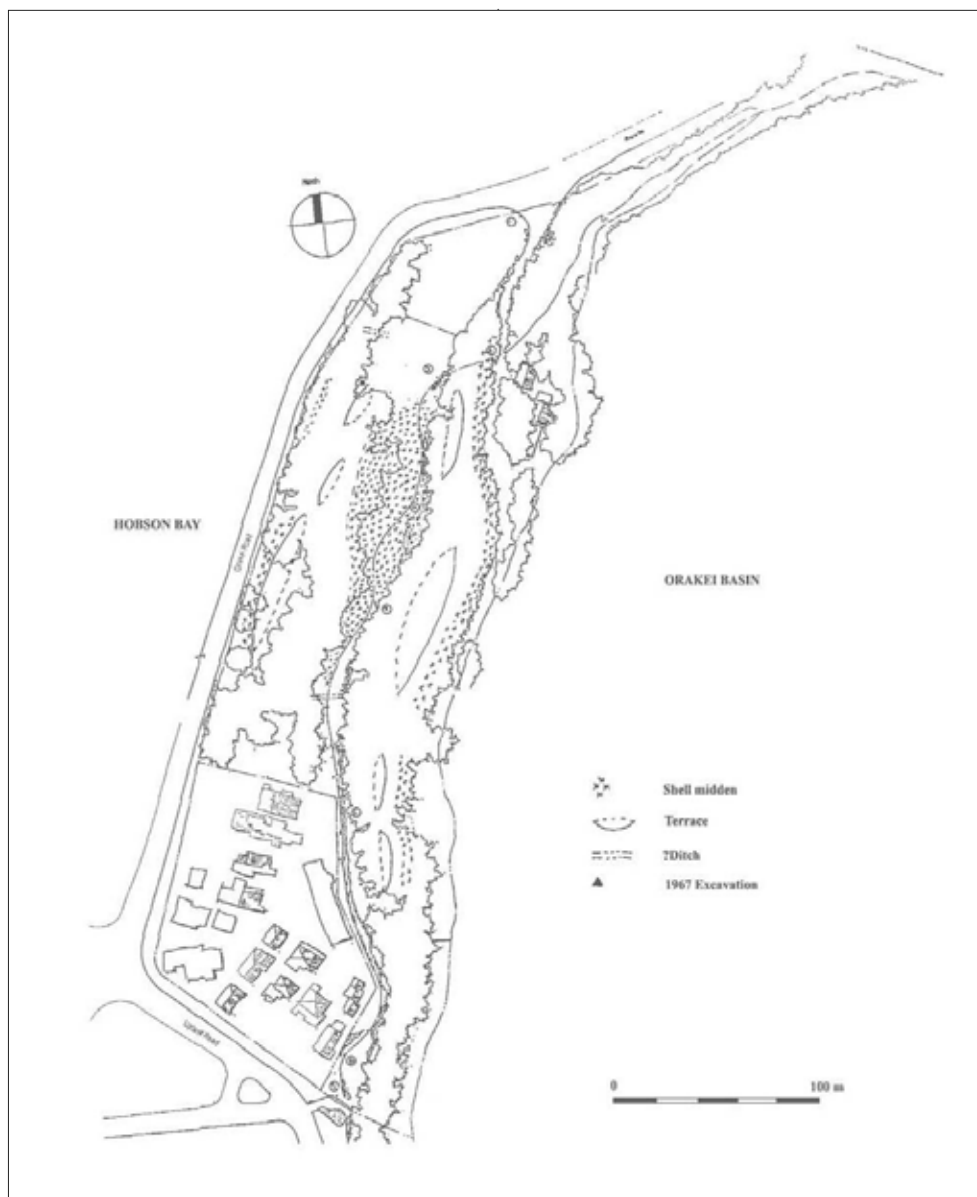


Figure 11: Archaeological features plotted on concept plan for proposed paths and amenities (Best 2002: Figure 8)

In 1987 Visser (1987) undertook a test excavation on a property on the north east tip of the peninsula (lot 1 DP 131613) where shell midden had been uncovered during development. A test trench excavated through the midden showed shell to a depth of 0.3 m and indications that other features might be present underneath the shell layer. Visser noted in his report that, although the Orakei Pa was 200 m to the south of his investigation, he considered the site he investigated to be “an extension of the Orakei Pa.” (Visser 1987: 1), and used the existing site number of the pa for the area he investigated. No evidence was presented, either from the investigated area or from any other source, that would either support that statement or allow one to determine whether or not there was any connection, direct or indirect, between the area he investigated and the pa some 200m away.

The idea that the whole peninsula should be considered as a single pa has continued. Clough and Turner (1998:4) refer to the “Orakei Pa complex” and state that “A large portion of the pa has already been destroyed and modified”, seemingly referring to the whole peninsula. This assertion was repeated by Baquié in the assessment he undertook for the first stage of the Orakei walkway (Baquié 2005: 5). In 2009 Clough and Macready stated that “the pa once incorporated the whole Orakei peninsula” (2009: 10). This claim was based on the investigation undertaken by Tatton and Clough (2005) at 217 Orakei Road that found occupation evidence that would have been outside the northern ditches of the pa, together with the presence of a small midden recorded at the northern tip of the peninsula (R11/2350) and the midden excavated by Visser in 1987 (Clough and

Macready 2009: 11).¹² Occupation evidence immediately adjacent to a pa is not unusual and to be expected and it may have had a direct association with the pa, or even predate it where defences were added to an existing settlement. With regard to the other recorded sites on the peninsula, the presence of shell middens some 200 m away cannot be proof that the pa covered the whole peninsula. It is more than likely that the occupants of the pa would have made use of the peninsula, as it was part of the landscape in which they and the pa existed, but there is no evidence that shows the recorded midden sites are related to the pa. All that can be said is that there is some evidence of some type of occupation in the wider area around the pa that may or may not have been associated with the occupation of the pa.

At the pa itself some of the western lateral terraces have been destroyed by the 1932 Orakei Road diversion. The 1980 site record notes that one terrace appears to have been used for the road and also showed two further terraces that lie the road and Hobson Bay. Apart from this the entire area of the pa is contained within the Orakei West Reserve.

There can be no doubt that the original pa was within the area around the basin to the south of the present entrance to the Orakei West Reserve from Orakei Road and did not extend into the wider area of the peninsula. Although surface features along the ridge top within the pa have been modified, it is clear that much subsurface evidence remains.

R11/1765 is a shell midden in the Kelvin Reserve, recorded in 1992. The NZAA site record reports:

¹² Clough and Macready (2009) appended a new site located by R. Clough on the north eastern tip of the peninsula. Although prepared in 2008, this record has not been submitted to the NZAA site file. It is in fact exactly the same place as the area investigated by Visser (Visser 1987: Figure 2).

“Cockle shell midden was observed thinly scattered over the grassed area, and concentrated on the eastern slopes down to the creek, in the area between a flight of steps and the boundary fence of the last private house on the east side of Kelvin Road. In the past extensive midden was observed in the grounds of the second last house on the west side of the reserve, but is no longer visible (information from the previous owner). ... The more concentrated area of midden on the eastern slopes extends over an area c. 5 m x 3 m.”

As reported in 1992 shell midden is visible eroding from the bare eastern slopes (Figure 11). The site record form noted scattered shell across the reserve. Probing with a gum spear indicated that there is actually a layer of subsurface shell right across the headland. Probing indicated midden extended down the reserve to well over half way towards the tip of the headland. Disturbed shell midden was also observed in the garden of the property to the west. Examination of the northern tip did not find any evidence of midden or other archaeological evidence. However, it is quite probable that, despite modification from landscaping, other subsurface archaeological evidence apart from shell midden is likely to be present on this site.

R11/2343: is a small scattered area of shell midden recorded in 2005 just to the north of the bottom of the steps leading down into Macpherson Reserve from Meadowbank Road where a storm water pipe crosses the existing track. No in situ material appears to be present at this location and the shell appears to be thinly scattered shell redeposited from higher up. Some modern rubbish appears to be mixed

into the shell, indicating the shell may well have been deposited down the slope in relatively recent years.

R11/2536 is a midden was recorded during the assessment done in 2010 in relation to the management plan. It is to be found just to the west of the sealed end of Purewa Road, exposed in the side of the railway cutting (but in the legal unformed road that abuts the reserve proper). Here a layer of shell was noted in the top of the railway cutting, up to 100 mm deep and some 3.0 m long. It did not appear to extend as far (less than 1.0 m) as the sealed access track to the pump station. It is probable that this is the edge of a larger site that was mostly destroyed when the railway cutting was made. Further shell was also evident below the south west corner of the pump station. The site record, showing the location of this site is appended to this report.

R11/2358, a midden, is located on the southern side of the access steps from Lucerne Road to the water ski club building in the Orakei East Reserve. Small lenses of shell are evident in the cutting for steps to the club building. It was first noted several years ago and is referred to in Auckland City Council records, but appears never to have been recorded in the NZAA site record files. A new record has been prepared for this site.

It is difficult to build up a picture of the settlement pattern that existed in the wider area around the Orakei basin as there has been quite intensive 20th century development throughout most of the area. Only a few scattered sites, or locations where sites existed or are thought to have existed, have been recorded.

The Auckland isthmus was occupied for hundreds of years before Europeans came

to settle here. A wide variety of sites would have been present throughout the area that would have reflected the changing requirements of the inhabitants. Ngati Whatua had gardens and associated sites right across the area of which no physical evidence has been found. Their predecessors would have done likewise. The concentration of sites in the relatively undeveloped land around Kepa Road to the north of the basin suggests quite intensive use of favoured areas and give an indication of what has been lost elsewhere.

At the basin itself there is the Orakei Pa, a site where there is evidence of intense occupation over a period of time. The few middens that have been identified around the basin hint at occupation at various places right around the basin on the tuff ring and its slopes, although the small areas of midden that have been found do not indicate such concentrated use as that at the pa.

In an area like this, where so much evidence must have been lost without trace, it is important to preserve those places where evidence of the past use of the area are still to be found.

19 Archaeological survey

Apart from one specific project related to the Orakei walkway that considered parts of the Lucerne Road Access and the MacPherson Street Reserve (Baquié 2005), no reported archaeological survey has been undertaken in the area of the small reserves subject to the management plan.

The presence of site R11/2342 just outside the management area indicates that further archaeological evidence might be expected. With the exception of the Lucerne Road

access, which has difficult access and unclear property boundaries, each of the smaller reserves was inspected. Additional archaeological evidence was located in only two locations.

The first of these was at the northern end of the MacPherson Street Reserve where a small midden remnant was located (R11/2536). In this reserve the high water level of the basin made inspection of the overgrown shoreline difficult and it is possible that further midden may be exposed at the water's edge, although Baquié (2005) inspected part of this shoreline and did not record any sites. Within the Orakei East Reserve there was a site that had been previously noted but not recorded (R11/2538).

Elsewhere no in situ archaeological evidence was found, although in the case of the Bonnie Brae reserve fragments of shell amongst modern rubbish along the creek edge path may have been derived from a site or sites that were in the area now occupied by private housing immediately above the reserve. Similarly, at the MacPherson Street Access, fragments of shell along the edge of the path near the creek may have been derived from sites on adjacent properties.

Although only a few small sites have been identified, these have significance as they represent occupation evidence that would once have been far more widespread. It is also important to note that further evidence is likely to be discovered elsewhere throughout the reserves in the future as no archaeological survey or assessment can guarantee to identify all archaeological evidence in a given area.

Appendix 5:

Orakei Basin
Management – Issues
and Actions Report by
Andrew.Stewart Ltd



Appendix 5 has been prepared by Andrew.Stewart Ltd and the commentry it contains does not represent Auckland City Council policy. It is included in the management plan to provide a sense of the matters that have been discussed with community.

Introduction

Andrew.Stewart Ltd have been engaged by Auckland City Council to work with Council officers, elected representatives and community groups (in particular the Orakei Basin Protection Society Incorporated) to look at a number of issues associated with Orakei Basin.

Auckland City Council has a number of work streams that relate to the Orakei Basin including:

- scheduled capital works programmes, i.e. Orakei Basin Walkway, and Sluice Gates replacement
- regular parks maintenance activities
- regular road maintenance activities
- the Ecological Restoration of Bush and Natural Areas programme
- small Local Improvement Projects
- management of the Orakei Basin and Creek arms.

Issues associated with various elements of these projects, in particular aspects of coordination, have resulted in significant questions being raised by community stakeholder groups, in particular the Orakei Basin Protection Society Incorporated (OBPSI); the Environment Court appellants to the Orakei Walkway project (MOU Parties); and the Community Board Chair (both Eastern and Hobson Bay wards).

This report looks to identify the projects that have been initiated, what has or has not been delivered, and to make recommendations as to the best way forward to avoid these issues re-occurring. After the discussion of the project, is a list of issues raised by the community stakeholder groups followed by Auckland City Council's response. It should be noted that these cover issues that have been raised in the past, in some cases going back a number of years, as well as current issues. It also briefly discusses the projects that are currently underway or planned in the near future.

Lastly, the report identifies what we believe needs to be undertaken to ensure that the Orakei Basin is well managed manner into the future, and aims to set out a series of recommended action points to support the Orakei Basin Management Plan currently under preparation.

All parties acknowledge the validity of these issues, and want to move forward to resolve these and manage the Basin in a more comprehensive and successful manner into the future.

Previous projects

A detailed review of various reports, studies, management options and projects relating to the Orakei Basin, Orakei Creek and surrounding reserves, has been prepared by Andrew.Stewart Ltd titled "*Orakei Basin Reserve Management Plan – Background Information Review, December 2009*".

However this report did not include SLIPs projects, the ERBNA programme, or current capital works, and therefore a brief discussion on these is provided below.

Previous SLIPs projects

Small Local Improvement Projects (SLIPs) are small projects that can help to improve local surroundings or provide opportunities to the community.

These projects can be proposed by individuals, or community groups who are often in the position to identify needs and opportunities in their area.

SLIPs funding is allocated by community boards on a bi-monthly basis (every two months), through two budget streams:

- one for capital expenditure projects
- one for operational expenditure projects.

Examples of possible projects are:

- school safety travel plans
- tree planting, weed removal/re-vegetation and park volunteer activities
- anti-graffiti murals
- community information boards
- heritage walks.

SLIPs can also be in the form of a grant. If a grant is awarded, it will be for no more than 49% of the total value of the project.

SLIPs 2000-2005 Orakei Basin weed species removal

The removal of privet was an ongoing project in Orakei Basin from 2000 to 2004. The privet removal was funded by SLIPs and undertaken by arboricultural contractors. A proposal was put to SLIPs on 30 January 2004 to secure \$20,000 for on-going privet removal and included provision for appropriate replanting. The application for this funding was initially approved.

At the June 2005 meeting the OBPSI made a presentation to the Hobson Community Board about concerns they had about over spraying and erosion around the Orakei Basin, and the use of SLIPs funds for further tree removal. The written submission supporting the presentation is included.

Following this presentation the SLIPs funding was withdrawn and re-directed to replanting of selected areas.

Consequently a site visit was held with Council Officers and OBPSI members, where it was agreed to plant suitable species at the five sites identified within the Basin as prone to erosion. It was also reported that a methodology had been put in place to ensure that over spray would not be repeated.

1 Lower side of the main access road (seaward side): Area to be planted, spraying of road edge to continue but no spraying of the bank will take place (remediation costs to be met by contractor).

2 Upper side of access road (bank): Spraying to cease and vegetation allowed to grow back. In addition several bare areas to be replanted (remediation costs to be met by contractor).

3 Area immediately above the rock wall (southern side of Basin): Grass in this area will no longer be sprayed, and will be allowed to grow back. Some topsoil and grass seed is to be introduced to facilitate re-growth. Once grass has re-established the edge is to be mechanically maintained and the rock wall spot sprayed as necessary.

4 Upper edge of bank along Upland Road: A planting plan was to be prepared to reduce spray requirements without blocking view (due to resident opposition).

5 Ski Club steps down to Basin from Lucerne Road: spraying the footpath edge to continue with replanting of the bank.¹³

Te Ngahere provided a planting plan (note this did not include a landscape drawing) for four of the five areas (excluded area 3) in May 2006.

The following issues were considered in the preparation of the planting plan:

- revegetate with native species that would enhance the landscape and recreational values of the reserve
- use of appropriate plant species in sensitive areas to retain view shafts and stabilise slopes.

Details for the four areas are as follows, with detailed planting information included in the plan:

- **Area A Below Orakei Basin Access Road:** approximately 1200m² = 1280 plants
- **Area B Above Orakei Basin Access Road:** approximately 250m² = 249 plants
- **Area C Upland Road:** approximately 250m² = 275 plants
- **Area D Above Lucerne Road Steps:** approximately 50m² = 60 plants

The cost of the Plan and Planting was \$19,320 (GST Exclusive). The quote did not allow for ongoing maintenance, though this was recommended. It is assumed that in scoping the project, the required percentage contribution was made to the Consequential Opex (maintenance) budget.

Auckland City Council has confirmed that these works were completed, but some planting was not successful due to tough site conditions which were subsequently replanted. Te Ngahere have advised that they have stopped trying to replant the banks along Upland Road due to repeated spraying.

Issues raised by stakeholders:

- Upper side of access road appears to be continually re-sprayed as vegetation is not growing back, continued erosion of the bank edge is occurring, in addition to silt runoff this is damaging the geological and archaeological values of the site. This is being exacerbated by the fact that the access road is only 1 lane with no formal passing bays.
- It appears the rock wall around the car-park has continued to be sprayed.
- Despite repeated assurances from Offices to OBPSI, continued spraying (on at least 3 occasions) of Upland Road bank appears to have resulted in plant death and erosion. This has not been adequately addressed.
- Planting around the Ski Club steps appears not to have occurred in the eroded areas as agreed, further the plantings that did occur were not maintained and have died. Plant death and continued spraying is resulting in significant erosion of the bank edge washing silt down the steps (the AWSC regularly need to clear the silt off the steps). In addition to the steepness of these steps, the silt can make them dangerous to walk down. A proper solution needs to be put into place that addresses drainage in this area and bank stability, and planting that can survive in the difficult conditions. There is also confusion as to where the boundary sits with the adjacent properties.

¹³ Information Memorandum from Grant Muir to Hobson Bay Community Board 8 August 2005.

Auckland City Council officer's response:

- **Access road** – Council officers recognise that the access road is an issue that needs immediate attention. It is proposed that first a traffic assessment be undertaken to determine the most appropriate carriage width (i.e. one with formal passing bays versus two lanes) and associated issues, followed by the necessary design. There is currently budget for this scoping work. This would then be used to develop a business case to secure funding for the necessary physical works. The timing of any physical works is uncertain, Council could substitute it for another project if accepted by Council at a high level, or sourcing funds from the paving renewals budget. The car park and boat ramp (motorized) also needs to be assessed for safer access and long term erosion control. Currently there is no discrete public access through the public car park. An engineering assessment of the car park water edge, a potential hazard, is underway.
- **Upland Road** – It is difficult to determine exactly who is responsible for the over spraying as spraying is undertaken by both Auckland City Council Arts Culture and Recreation Services maintenance contractors and Auckland City Council Transport maintenance contractors. The other factor here is time, the wide spray bands in some places have got that way because contractors have gradually sprayed little by little, resulting in a protracted process over time.

It should be noted that in some instances it has been found this type of situation can be caused by adjacent neighbours acting to protect views from their properties. The issue has been raised with Council's contractors on numerous occasions to try and address the issue.

- On the Upland Road cliff edge, Auckland City Council officers acknowledge that the plantings here have not been successful, and using herbicide to control the edge has not helped either. This area will be added to the 'No Spray' list and removed from the maintenance contract. It may be sown in grass and left to grow naturally rather than being planted up with native trees and shrubs, or stabilised using a geo-cloth or coconut fibre to facilitate plant growth. It is proposed that Council officers investigate possible solutions and cost for planting and edge control for consideration.
- **Ski Club steps** – Council officers propose to add the steps and associated drainage into the Renewal Programme as a high priority. Solutions are to be scoped and costed.

SLIPs 2008 Orakei Basin weed removal continuation

In 2008, the OBPSI noticed that privet trees along Troy Churton walk were marked with pink spray paint, which Council subsequently advised meant that those trees had been identified for removal. Following this, OBPSI meet with Council officers on site and it was agreed that a limited number of the privets would be removed. Unfortunately there was a break down in communications, and the contractor went on to remove all trees originally marked with pink spray paint. Infill planting has been undertaken.

Issues raised by stakeholders:

- Tree removal has opened the canopy and appears to have resulted in slips along the banks and track.
- Planting has not been successful allowing pest and weed invasion and exacerbating erosion and subsequent siltation in the basin.

Auckland City Council officer's response:

- Council officers propose to include Troy Churton track into the Renewal Programme for consideration and comparison with the other tracks in the basin and set as a high priority to address the erosion that has occurred to the track. Solutions are to be scoped and costed.
- Council officers will determine scope and cost to rectify failed plantings.

SLIPs 2007/2008 Macpherson Reserve re-vegetation stage

In February 2008 Te Ngahere provided BECA (as SLIPs Project Manager) a quote to undertake weed control and native revegetation at Meadowbank Reserve to ensure the plantings already in place are maintained and to follow the areas designated within the Auckland City Macpherson Reserve, Reserve Management Plan report' prepared by GHD Ltd and dated March 2005. The quote proposed works in 8 areas (corresponding to the Management Plan report), including:

- preparatory spraying
- weed clearance and removal of small invasive trees
- some ground preparation
- installation of new infill planting 'natives' to the area of works
- a letter drop to adjacent residents advising of the works.

The quote was accepted by Beca as Project Manager in March 2008 for a total value of \$27,780 (GST exclusive).

This project was undertaken, and the area has recently been included in the ERBNA contract.

Issues raised by stakeholders:

- Weeds are still a problem in the reserve.
- The planting has not been maintained.
- The track through this reserve is not to the necessary standard and is difficult to navigate due to the uneven surface created by the large size of the aggregate used.
- There are also stormwater management and erosion issues along this track.
- This reserve is of particular importance as habitat potential for shag nesting and roosting, which needs to be preserved and protected.

Auckland City Council officer's response:

- The area has recently been added to the ERBNA contract which seeks to restore vegetated areas to weed free native forest.
- Track condition – the track has been recently reviewed as part of the City Wide Renewals Programme (where all assets are rated in against a set criteria to allow prioritization of sending across the City), and given a Condition 3 rating (average). Council officers have put the upgrade of this track forward for consideration in the 2010-2011 Paving Renewals Programme although it has been suggested that this could possibly be funded via the SLIPs Programme.
- It is recommended that the habitat potential, in particular for shags, also be given particular reference in the Orakei Basin Management Plan currently under preparation.

SLIPs 2008 – Slope stability assessment

Council officers recall OBPS asking that a geotechnical study be undertaken during a site visit to discuss the SLIPs privet removal along the Troy Churton track. The study area discussed was the bank immediately above approximately 150m of the track, just below Orakei Road.

A meeting was held on 12 June 2008 with a number of Community Board members (including Desley Simpson and Diane Gribben) and council officers, during which the need for a geotechnical report was discussed. The Community Board approved the works based on the meeting. A memorandum from council's SLIPs Coordinator to the Chair of the Hobson Bay Community Board dated 20 June 2008, states with respect to this issue:

"This is another issue that has been raised by the OBPG. They have concerns about an area of bank that has been cut away to make a path. A Geotech engineer has been organised to inspect the site and recommend the best course of action for ensuring this area is stabilised...The cost for the geotech inspection will be covered from the Hobson SLIPs budget and is expected to be around \$800.00.

The inspection will occur over the week of 23rd-30th June with the corresponding report expected the following week."

Consequently Tonkin & Taylor were engaged to undertake a visual assessment of the stability of the slope above the section of walkway located between Orakei Basin and Orakei Road immediately south west of the railway line (approximately 150m).

The report was prepared on the basis on limited information and a brief walkover inspection and concluded:

"... we conclude that the risk of future instability is subjectively assessed to be low for the slopes in general, but with a possibly increased risk of future instability associated with a surface depression identified at the top of the slope. As noted above, ongoing fretting and erosion of the over steepened cut slope immediately up-slope of the walkway is expected to continue but the probability of a larger scale slip is subjectively assessed as low. Should such fretting and erosion be of concern then installation of a retaining wall over that over-steepened section, ie up to the level of the root layer, could be considered."

The geotechnical report was forwarded to Desley Simpson on the 22 June 2008.

Issues raised by stakeholders:

- The geotechnical study was supposed to address the erosion down the access road, which has been repeatedly raised with Council (ref section 0).

- On the 13 June 2008 Desley Simpson e-mailed the OBPSI and Diane Gribben, advising:

"Within the next 2 weeks ... a geological expert will come and look at the basin, particularly the road down behind the scout hall and the bank up to Orakei Rd to scope ideas for a retaining wall or retaining feature for that bank"

- The bank edge continues to erode. In addition to silt runoff this is damaging the geological and archaeological values of the site.

Auckland City Council officer's response:

- There appears to have been a misunderstanding between the Council officers, Community Board Representatives, and the OBPSI.
- As discussed in section 0 above Council officers recognise that the access road is an issue that needs immediate attention.



Source: Tonkin & Taylor 1 August 2008 Orakei Basin Visual Assessment of Slope Stability

Projects in and around Orakei Basin

A number of projects are already underway, planned or proposed within the Orakei Basin area. These are discussed briefly below.

Underway – Orakei Basin Walkway

The Walkway started as a SLIPs project advocated by the then Hobson Bay Community Board Chair Troy Churton. Since 2003, SLIPs funding has been allocated to the Orakei Basin Walkway Project (incorporating a boardwalk and bridge along the rail embankment, and boardwalk and bridge in the Creek), and carried forward over the Financial Years. The current SLIPs contribution is \$587,000, with \$437,000 from the Hobson Community Board and \$150,000 Eastern Bays Community Board. The shortfall has been funded through the Citywide Coastal Upgrade Programme, with \$820,000 in the 2009/10 Financial Year and \$700,000 in 2010/11. Future funding is available through the Citywide Coastal Upgrade Programme.

This project is split into two stages:

- **Stage 1** – comprises a mix of asphalt path, timber bridge, wooden boardwalk and concrete path, connecting Purewa Road to Orakei Road via the rail embankment located between Purewa Creek and Orakei Basin.

This project is currently consented, and involves:

- vegetation clearance to allow construction
- undergrounding of the last three sections of power lines from the Purewa Rd Pump Station to the gates control box
- physical works
- weed control in the area affected by physical works
- replanting to mitigate vegetation removal.

Works commenced on site mid February and are expected to be completed September/October 2010.

- **Stage 2** – comprises a connection from the Macpherson Reserve track to a wooden boardwalk, bridge and track connection to Lucerne Road. This project is consented, although there are a number of design issues to be resolved. It will also involve:
 - vegetation clearance to allow construction
 - physical works
 - installation of an artificial bird roost
 - fencing
 - weed control in the area affected by physical works
 - replanting to mitigate vegetation removal.

Works are planned for September/October 2010.

A project specific management plan titled "*Orakei Basin Walkway Management Plan for the Basin*" has been prepared, containing project specific information, and is updated as new information comes to hand. Copies of this document are held by representatives of the OBPSI and appellants to the resource consent application Lynda Scott and David and Susan Gibbs.

Issues raised by stakeholders:

- The OBPSI believe that the allocated SLIPs budget was to improve Orakei Basin, not to be spent on the walkway.
- OBPSI refer to the SLIPs update in the May 2008 Community Board update that states:

Orakei Basin Walkway SLIPs Contribution = \$450,000 – estimates are being obtained to upgrade existing path and address flooding issues and for a weed control/ecological plan. Unable to progress any design issues until after the management plan is in place, expected to be started in May. Resource consent obtained for bridge over creek. Once all prices confirmed a further meeting will be held with Board rep to finalise works.
- MOU Parties and Brian Halsted do not believe Condition 11, relating to ensuring there is adequate clearance between the Stage 2 track and shag colony, has been met.

- MOU Parties do not believe any work should proceed on the walkway until the Management Plan is complete.
- Work on Stage 2 of the walkway should not commence until the artificial roost has been installed.
- Planting needs to be extended to include the rail embankment outside of the works zone, and needs to be completed this year.
- The stormwater swale through the works site at Purewa Rd needs to be resolved as soon as possible to address the health and safety risk, erosion of the bank, and sediment being washed into the basin.

Auckland City Council officer's response:

- **Funding** – the Community Boards allocated the funds to the Walkway Project and have not at any time resolved at a Community Board meeting (the necessary forum) to re-direct this funding to another project, other than the Hobson Board re-allocating \$32,000 in 2008 financial year to undertake removal of invasive weeds and replant native species.
- **Funding** – in a letter from Desley Simpson dated 25 June 2008, it is stated that *"Hobson Board are supportive of completing walkway and have earmarked a substantial amount of funding for implementing this project, with a view of completion within their current term of office."*
- **Condition 11** – this situation has been extensively reviewed and discussed. It was evident that agreement would not be reached. Information has been supplied to Auckland City Council Team Leader Compliance Monitoring as required by the condition of consent, and advice received that compliance has been achieved. It is currently proposed that the artificial bird roost be installed at the same time the creek bridge piling occurs. This will be subject to a specific construction management plan required by condition of consent.

- **Orakei Basin Management Plan** – Clause 5.1 requires that the Plan for the Management of the Basin (Orakei Basin Management Plan currently being prepared) be developed in conjunction with the walkway project. Public comment on Council's intention to prepare the Orakei Basin Management Plan has already been sought.

Comments supporting the walkway project were received as part of this process and also directly on Council's communications on the walkway project.

- Council officers to discuss planting along rail corridor with OnTrack. Additional funding will be required for planting in this area.
- **Stormwater Swale** – this is the responsibility of Auckland City Council Transport Assets and Operations. They have prepared a design to address the problem, which involves installing a new stormwater line to re-direct the stormwater to an existing manhole that currently discharges to Purewa Creek. The swale and eroded area would then be backfilled, stabilised and planted. It is proposed to undertake this work as soon as possible before the on-set of winter, however remediation of the site will be undertaken once the works on the walkway and gates area completed.

Underway – Orakei Basin Management Plan

A management plan is currently being prepared covering public open spaces adjacent to the Orakei Basin, and the Orakei Basin and Orakei Creek arms. Public comment on the proposal to prepare the management plan has been sought and the submissions phase on the draft management plan will occur in May/June 2010.

The Orakei Basin Management Plan will set the objectives and policies for these open spaces and the water body of the Orakei Basin and Orakei Creek. It is proposed that the management plan result in the establishment of an advisory group that will have a role in the development and implementation of an action plan and in seeking funding to implement it. The advisory group and action plan will:

- identify necessary studies and works required to deliver the objectives and policies of the management plan
- assess budget requirements
- prioritise actions accordingly.

The management plan will set the objectives and policies for the long term management of Orakei Basin and surrounding public open spaces. Although the management plan cannot address land management of adjacent private properties, it is intended that the advisory group work with the local community and landowners to advocate for land use practises which support the objectives of the management plan.

It is proposed that once completed, a process is undertaken to classify under the Reserves Act 1977, those areas of public open space covered by the management plan which are not held under the Reserves Act. The management plan could then be made a reserve management plan under the Reserves Act and have formal statutory weight. This is considered to be the best way to ensure its policies and resultant actions are adhered to.

Issues raised by stakeholders:

- That ERBNA and SLIPs information be included in the management plan.
- That a comprehensive restoration plan be prepared and included in the management plan.
- That the management plan be written in conjunction with the Orakei Walkway Management Plan.
- That the management plan recognise the importance of McPherson Reserve and vegetated area of Lucerne Road Reserve as an important habitat for shags.

Auckland City Council officer's response:

- This document, the Orakei Basin Issues and Actions Report will be attached as an appendix to the management plan and referred to in it.
- Council officers have agreed to commence work to prepare the comprehensive vegetation and weed management plan proposed in the draft Orakei Basin Management Plan, during the management plan submission period and ahead of schedule.
- Processes to approve the Orakei Basin Management Plan will continue in parallel with the Walkway Management Plan.
- Council officers agree that shag habitat is important, and support this issue being raised within submissions on the draft management plan.

Planned – Orakei gates replacement

This project involves replacing the sluice gates under the rail embankment that impound the water in Orakei Basin. This project is consented and works are programmed to fit within Stage 1 of the Walkway, and are scheduled to commence on site in June 2010.

The resource consent to impound Orakei Basin expires 31 March 2041.

Underway – Slips 2009 Orakei Basin weed removal continuation

This work was part of the 2009 SLIPs Orakei Basin Weed Removal Continuation project that was initiated and approved by the Hobson Bay Community Board. The SLIPs scoping form discussed three elements:

- **Restoration plan** – to establish a common strategic direction for ecological restoration of area and help coordinate the different parties involved
- **Priority one** – large area of bamboo (approx 865m²) in south eastern corner, to be mulched and then sprayed under ERBNA contract.
- **Priority two** – smaller patch of bamboo (approx 210m²) to east of priority 1 site, to be mulched and then sprayed under ERBNA contract.

In addition to the works identified in the SLIPs form (as described above), the plans attached to the scoping form also showed an area of privet removal. The privet removal plan showed a dotted line with text *"proposed area of privet removal. Works would start from the grass track and work towards to ski club as funds allow"*.

It is understood that a Beca project manager engaged by the SLIPs team, provided copies of the plans to the OBPSI prior to the pre-start meeting (as per council officer communications to Coralie Beckham and

Lynley Olsen 11 December 2009), which was held 12 June 2009. The intention of the bamboo and privet removal was discussed at the pre-start meeting.

Originally Te Ngahere proposed to do staggered strips of removal along the track, but it was decided due the requirement to have machinery on-site (and associated collateral damage this can cause) it was more appropriate to undertake removal within concentrated areas. The areas done were considered more suitable as the privet was not as dense as in other areas.

An ecologist from Te Ngahere walked over the area with the subcontractor Treescape, discussed the scope of works, and instructed Treescape to mark the privets for removal other than those within 2m of the shoreline. This included privet over 2m in height. Once Treescape had marked the trees, the ecologist undertook a second walkover to check.

Privet removal was undertaken within two areas (approximately 1640m² and 1370m²) with approximately 20 privet trees being removed. The works also included the removal of some brush wattle.

That this change in approach did not follow due process and was not approved by the Community Board or Auckland City Parks Adviser, or what was agreed with the OBPSI. However, Auckland City Council officers have faith that Te Ngahere, based on their qualifications and expertise, made the best decision in this instance.

During the bamboo removal works, private property owners requested for additional bamboo removal to be undertaken on their property, which was approved by the Board and privately funded. The total cleared area of private and public land was hence considerably larger than that shown to OBPSI at the 12 June 2009 meeting.

Replanting of these areas is to be undertaken under the ERBNA contract, commencing in June/July 2010 as discussed in section O.

The Restoration Plan, titled "*Weed Control and Native Revegetation Plan for Orakei Basin (Hobson Ward) November 2009*", is in final draft waiting for Community Board sign off.

The content and extent of the Restoration Plan has been extensively debated, and it has been agreed:¹⁴

- That it should be viewed as the first phase of a comprehensive restoration plan for the basin.
- That Desley Simpson (Chair of the Hobson Bays Community Board) would approach Colin Davis (Chair of the Eastern Bays Community Board) to see if they would support an extension for their area.
- That the board would supply an additional SLIPs proposal to extend they plan to cover the remaining aspects of restoration:
 - pest management
 - erosion
 - birds
 - drainage and engineering work.

Issues raised by stakeholders:

- The resulting privet removal was not what was discussed or agreed, and this has resulted in open canopy. It appears that this has been undertaken in a manner contrary to Te Ngahere's own recommendations in the Restoration Plan (section 4.4 Long Term Control: Tree Privet of the Plan).
- It does not appear the privet and bamboo removal were priorities under ERBNA or the Restoration Plan.
- OBPSI do not believe there was sufficient understory developed in the privet removal area to allow the extent privet removal (canopy opening) that occurred.
- It is unacceptable that the privet logs have been left in piles. This will stop the understory from growing and encourage residents to dump their organic waste in the reserve.
- It is believed that more bamboo was removed than planned.
- OBPSI believe \$20,000 to cut down 20 privet (which were suppose to be under 2m high, and were not removed from site), equating to \$1,000 per tree, is excessive. ERBNA plants should not be used for SLIPs projects. OBPSI were advised by Beca that the privet removal cost \$20,000.
- OPBG supports Council's ecologist and Dr Andrea Julian's plan, and would support Te Ngahere implementing this.
- A holistic restoration plan for the entire basin needs to be prepared as per the Meeting Minutes 5 October 2009.

Auckland City Council officer's response:

- Council officers acknowledge that the change in approach (re privet removal) was not approved by the Community Board or delegated Council officer as required, and that OBPSI should have been consulted. However, generally speaking Council officers have faith that Te Ngahere has the qualifications and expertise to make the best decision in this instance.
- Te Ngahere considered the recommendations they had made in both the Restoration Plan and ERBNA principles and believed there was sufficient natural undergrowth coming up along with some plantings from previous years to partially open the canopy (more so in some areas than others). This will allow the understory to further develop, and some canopy opening is inevitable in this process.
- The privet removal was always seen to be necessary in the long term under ERBNA, however was given a lower priority than other areas due to the significant budget that would be required to undertake the works. However, along with the bamboo removal, the privet removal was fast tracked using available SLIPs money as otherwise this area would have had to been left for several years due to the cost of doing these works.
- As mentioned by Council's ecologist, removing the large area of bamboo will have removed a significant nesting area for the rats and mice, which will provide benefit in the long term.
- The ERBNA philosophy is that material less than 8 inches in diameter is mulched and spread over the site where possible. Branches and logs larger than this are generally left on site in tidy piles to create valuable habitat for insects and lizards, as well as for mosses and lichen to grow on. Over long periods, these rot down returning the nutrients to the land (part of the natural cycle). It is noted that these areas should not be too large to stop a canopy from forming around them. Removing such material off site would also significantly increase the cost of the works. However, even if there were additional budget available, it would be recommended that the practise continue due to the ecological benefit.
- However, removing some of the privet logs this will be discussed with Te Ngahere to determine what the right treatment for the area is, and obtain costs for appropriate level of removal.
- As discussed above the works were always considered necessary under ERBNA, and the SLIPs contribution allowed them to be fast tracked. ERBNA planting also looks to include understory planting to facilitate the removal of weed trees. Therefore it is considered appropriate that ERBNA replant these areas. This was also clear in the SLIPs scope that was signed off by the Community Board.

¹⁴ Auckland City Council Meeting Minutes 5 October 2009.

- The SLIPs funded area of bamboo removal was the same as shown on the SLIPs Scoping Form. An additional area located on private land, behind and to the west of the council area, was also cleared by Te Ngahere at the request (and payment) of the private landowner. The SLIPs team has confirmed there was no mistake between the planned and actual area removed.
- Te Ngahere have advised that they are undertaking long term control of the bamboo removed on the private property, and that the landowner has agreed in principle to replanting (as per ERBNA) when the site is ready. However please note there is no resource consent requirement or contractual requirement for this.
- As discussed in section 0 Council officers intend that work on the comprehensive vegetation and pest management plan to be developed as part of the Orakei Basin Management Plan, be commenced ahead of schedule.
- It is also proposed that the current working group (Council officers, OBPSI; MOU Parties; Community Board representatives) continue in advance of the proposed advisory group to be recommended in the Orakei Basin Management Plan. This group will be involved in assessing the key issues, costs to rectify, prioritising key works, so budgets can be sought.

Underway – ERBNA Orakei Basin

Summary of ERBNA

Management of the vegetation in and around Orakei Basin has been ongoing since at least 2002. Initially this was done under the Weed Control in Bush and Natural Areas (WCBNA) contract, which primarily focused on weeds. The scope of WCBNA was extended under the new Ecological Restoration of Bush and Natural Areas (ERBNA) contract in 2007, to a more holistic approach to restoration of these areas includes replanting.

ERBNA is essentially an ecological restoration contract covering weed and pest control and revegetation planting on certain types of reserve land referred to as 'Bush and Natural Areas'. Due to budgetary restrictions, it is not possible to include all such areas across all Auckland City Council reserves. ERBNA covers approximately 265 hectares over 33 Auckland City's bush reserves, and aims to restore Auckland significant areas of bush to native forest.

The underlying philosophy of ERBNA is to return significant areas of bush across Auckland City to weed free native forest via a four stage process.

The four stage process to carry out this work takes a number of years and depends on a number of factors at each site such as the weed species present, amount of weed seeds in the seed bank, native regeneration, lie of the land and of course budget.

The four stages are:

- Stage 1 involves removing existing weeds found within each reserve.
- Stage 2 involves following up on these weeds in the following year to ensure that all weeds present at each site are under control.
- The site then moves into Stage 3 which is the seed bank phase. This can take a number of years to move through and involves targeting weed seedlings as they germinate.
- Finally once most of the seed bank has germinated and there is enough native cover/canopy across the site then the reserve would move into Stage 4 which is known as the Forest Protection phase. At this point the reserve has reached maturity and pretty much looks after itself other than a few visits per year to ensure no new weeds are invading or germinating from the seedbank.

Overlaying this 4 stage process are 2 supplementary phases known as Long Term Control and Tradescantia Control. Tradescantia control targets a specific weed (*Tradescantia flumensis*) which is almost impossible to eradicate and can quickly come back if not kept on top of regularly.

Once each reserve progresses through the 4 stage process and reaches the Forest Protection phase, the amount of money needed to maintain each of these areas drops significantly meaning that more funding becomes available to add new reserves into the ERBNA contract. Council officers currently have a prioritisation list

and bring new reserves into the contract as funding allows so that over time the number of reserves that have been covered under ERBNA increases. The decision on what reserve areas are added first depends on a number of factors such as quality of bush area, proximity to existing reserves, amount of hectares as well as a number of other factors.

The Long Term Control phase is where large weeds which provide decent canopy cover (such as privet) is left to grow and provide shade for native plants to regenerate in. Once there is enough undergrowth coming through these large weeds can be programmed for removal. A good example of a reserve in the Forest Protection phase is Dingle Dell Reserve in St Heliers.

Each year Te Ngahere provides a brief plan of the proposed works for the coming year for each of the 33 sites within the ERBNA contract. Te Ngahere provides monthly reports to ACR Services Service Delivery team.

It is important to note that this contract is separate and distinct from the regular parks maintenance contracts which cover grass mowing, garden maintenance, litter, park furniture, lighting, etc. Tree maintenance is also separate and is managed by Street Amenity Services. In this context tree maintenance is concerned largely with reactive works such as when a park tree falls, or becomes dangerous.

ERBNA Orakei Basin

Currently ERBNA does not cover all the reserves surrounding Orakei Basin and Creek (refer to attached plans). However Macpherson reserve has recently been added, with works scheduled to commence this winter. The Orakei area of works has been generally broken up into 3 work areas to help work through the park in an orderly fashion.

Most of the reserve is in the 3rd stage of the process which is known as the Seed Bank phase. The only exception being the land nearest the railway at the city end of the reserve. This was added into the ERBNA contract at a later date and has not yet moved into the seed bank phase.

The budget allocation to Orakei Basin is approximately \$20,000 - \$30,000 per annum, which equates to approximately 12 full day's work for a team of five. It should be noted that this is a pretty small budget for the area covered and the works required.

At Orakei, within the current restoration rate, it is expected to reach the Forest Protection phase in the 2012/13 season for the areas in Orakei currently covered by ERBNA. Macpherson Reserve will take approximately an extra 2-3 years to reach this point meaning it's unlikely to reach the Forest Protection phase before 2015/16. This is dependent on successful under planting and being able to remove weed trees over the long term.

Within the management areas are specific locations where the native canopy is closing underneath allowing the removal of weed trees.

This is an important part of the process that needs to balance a number of factors. In particular is the relative size of the trees. For example it would be detrimental to wait for the regenerating natives to grow large or to the same size as the weed canopy before removing the weed canopy, because there would be significant risk of mortal damage to the native trees during the felling process. It would also be difficult for the native understory to reach this size due to the lack of access to light. Therefore the optimum time for weed tree removal is when they reach approximately 1-2 metres in size and the number of native trees/plants will cover the area felled within a short time after sunlight has accessed the area.

Over time, more mature privet trees will need to be removed to allow the native understory to grow. No removal of large flame trees is proposed at this stage.

Although Te Ngahere proposes to remove the fallen branches and flame tree saplings that have come up under the main flame tree canopy, so that the regenerating natives can grow. Flame trees are a useful nectar source, but they tend to be invasive, and to prevent the development of impenetrable coppices, must be controlled by regular removal of broken and fallen branches.

It is proposed to keep the grassed banks as they are. It is recognised that the grass stabilises the bank and that it is important to maintain the view corridors to the Basin water. The only spraying of grass that will occur is spot spraying where it is proposed to plant.

ERBNA does not look to control grass or perennial turf weeds such as plantains, dandelions etc. The ERBNA contract focuses solely on removing pest plants in an area and does not control annual weeds to any large extent, only smothering weeds and vines which will ultimately impact on native regeneration.

Approximately 4,000 plants have been planted around Orakei under the WCBNA and ERBNA contract. This planting has focused in a number of areas especially under large weed trees (i.e. privet) to try and create a native understory. Some areas planted in the last 3 years are along Troy Churton Walk, the track along to the Ski Club and along the upper bank edges of Upland Road.

Plants range in size from 1litre to PB5, however PB3 are typically used as these are considered to be the optimum size balancing cost (i.e. number of plants that can be purchased) and most likely chance of survival. The plants are all native plants and are locally eco sourced from the Tamaki ecological district.

There is insufficient budget to undertake comprehensive plant survival monitoring. However, areas planted are typically checked periodically after planting and any areas where plants have died are identified and infilled in the following planting season.

Te Ngahere generally assume a 75% survival rate, however it has been less than this in some areas of the Basin. This is due to a number of factors such as difficult soil conditions, dry environmental conditions, and accidental spraying by other contractors/neighbours.

A number of attempts have been made to address the problems of plant deaths along Upland Road. It is currently proposed to remove spraying of this margin from the maintenance contract, and an alternative method/treatment developed. However, it should be noted that in some instances it has been found this type of situation can be caused by adjacent neighbours acting to protect views from their properties.

In addition to weed control and planting, the ERBNA scope for Orakei Basin has been extended to include animal pest control. This pest control programme targets control of rats and possums and is currently looked after by the ERBNA team. Please note that this may end up being looked after by volunteers in the future.

Future works

The goals for the 2009 – 2010 Financial Year under ERBNA are:

- continuation of the current weed management programme
- planting of approximately 920 plants
- maintenance of planted area to ensure good growth and survival
- no more tree removal until further notice from Auckland City Council
- start pest control.

The plants are to be planted this season (Autumn/Winter), in the following areas:

- The follow up area in Work Area 1 (at the end of Troy Churton Walk near the railway) – approx 150 plants (ref Area 1 on the plan included as Attachment B). This area is currently being affected by the building of the new walkway and it is proposed that any plants not used in this area will be used along the boundaries of the bamboo areas.
- The boat ramp adjacent to the sea scouts – approx 20 plants (ref Area 2 on the attached plan).
- Thin strip between the track and the water – approx 250 plants (ref Area 3 on the attached plan).
- Privet and bamboo removal area – approx 500 plants (ref Area 3 and 4 on the attached plan).

While the area of bamboo removal still requires ongoing control, planting is planned around the edges of this area where the mulch has already composted down. Planting in this area is planned each year for the next 3 years.

Approx. 800-1000 plants are expected to be planted each year depending on canopy removal/budget etc. Generally, planting will focus on under story planting so that eventually long term weed control weed trees such as large privets can be removed. As time progresses it is likely that the volume of planting to be undertaken will diminish as each area is regenerated.

At this stage Te Ngahere do not plan on undertaking further planting along Upland Road due to high plant loss. This area may be grass seeded and left to grow naturally as grass rather than being planted up with native trees and shrubs.

It should be noted that if a complaint is received by the Auckland City call centre regarding a dangerous tree or blocked path, the Parks Arborist is required to investigate and mitigate the situation. This may involve the removal of the tree.

Issues raised by stakeholders:

- ERBNA does not recognise the unique qualities of Orakei Basin, and needs a more specific approach. This should be addressed by the comprehensive Restoration Plan.
- OBPSI believed they were told ERBNA were going to plant eroded areas and steep slopes (at the pre-start meeting for the 2009 SLIPs Orakei Basin weed removal continuation project).
- OBPSI would like to see where planting has occurred, and exactly where it is proposed this year.

Auckland City Council officer's response:

- It is proposed that a site walkover be held so Te Ngahere can demonstrate where planting has occurred, where it is proposed, and where the native canopy is closing.

Proposed – SLIPs 2010 Orakei Basin planting and access

The proposed Stage 1 walkway presents a good opportunity to undertake additional planting to further address vegetation issues in areas of close proximity to Stage 1 of the walkway.

Originally the boardwalk only the rail embankment was intended for walkers only, and did not include handrails. This also presented an opportunity to access the basin's waters from the boardwalk. However when the resource consent application was notified and number of submitters requested that Stage 1 be upgrade to incorporate a cycleway. This change was then discussed in the public hearing process and carried through to the final design. Consequently, the boardwalk now also includes a handrail, removing the access opportunity to the basin.

Following this change, a number local residents, members of the Orakei Basin Yacht Club and the OBPSI have requested alternative access be provided to the water's edge.

The Eastern Bays Community Board has supported the scoping of this project. If the scoped stage is approved by the board, it will be delivered as a contribution to the Stage 1 walkway project.

Issues raised by stakeholders:

- What is planned for the pump station.
- Planting around the track and Purewa Road reserve should be part of the Walkway Project not funded through additional SLIPs, as it was required by a condition of consent.

Auckland City Council officer's response:

- Metrowater, which is responsible for this pump station, indicate that periodic odours will continue until this building is removed. This could be within the next two to five years, depending on the priorities of the new water management body post super city.
- Metrowater agree that public submissions on the Orakei Basin Management Plan seeking that Metrowater remove the building as soon as practicable, could influence this timeframe.
- Metrowater has been advised of progress with the walkway and the proposed SLIPs landscaping/access project, both of which will result in a higher level of surveillance, with a corresponding lower level of vandal damage. Metrowater will hence benefit from spending less on maintenance. Therefore they may be amenable to giving the building a higher maintenance/removal priority.

Action plan

The issues raised in this document are examples of issues raised with Council officers, Community Board members, and with Council agents. These come through in many forms, such as complaints, verbal discussions, verbal and written presentations at Community Board meetings, through project specific consultation and public notification processes.

Many of these issues have been observed and pointed out in a site walkway undertaken by Andrew.Stewart Limited with representatives of the OBPSI, and extensive discussions held with the OBPSI and other stakeholders (i.e. the Auckland Water Ski Club, Sea Scouts etc). Additional issues raised include:

- Tree removal moratorium should be in place until Orakei Basin Management Plan is complete.
- Boundary encroachment, private vegetation clearance in public land, indistinct boundaries – people care but need educating.
- There are a number of stormwater discharges around the basin that are causing erosion of the basin bank edge, damage to paths and nuisance conditions.

- Large scale clearance reduces the potential for a green corridor and habitat potential, increases potential for weed invasion. However, this needs to be balance with providing users to enjoy the views of the basin (especially during special events).
- Provide a rail crossing at Purewa Rd end to provide access to Purewa Creek, recognise and improve the swimming potential of this location.
- Provide a safe diving structure for kids to jump off so they do not try and cross the rail lines.
- Address weeds on other side of rail embankment.
- Improve the swimming potential for the basin.
- Post completion meetings are not held with community stakeholder groups.
- The car park and boat ramp (motorized) also needs to be assessed for safer access and long term erosion control. Currently there is no discrete public access through the public car park.

The following table has been developed from these discussions and seeks to identify some of the actions that should be taken to address identified issues. The table could best be used to inform the basis of an 'action plan' to be developed by the Orakei Basin advisory group. The formation of an advisory group and an action plan is outlined within the draft Orakei Basin management plan. The purpose of the advisory group will be to give effect to the management plans policies and objectives.

Please note this is not a final exhaustive list and will be built upon by the Orakei Basin Advisory Group. The list itself does not bind the Council to implement suggested actions where these are currently unbudgeted and funding for such works will need to be approved before these actions can be progressed.

Priority	Recommended action	Responsibility	Indicative cost	Funding options
1	Continue with planned and funded projects (including Orakei Walkway S1 & 2; Orakei Gates Replacement; ERBNA etc) as these will continue to improve the value and profile of Orakei Basin as a regional asset. This will in turn assist in delivering the following actions.	Auckland City officers	Funded	–
1	Complete Orakei Basin Management Plan	Auckland City officers	Funded	–
1	Prepare an Orakei Basin Action Plan as part of the Orakei Basin Management Plan, which records and prioritises works, is reviewed annually, records what has been achieved, re-set priorities for the coming year in response to available budgets and resources etc.	AC/LB/OBAG	\$5000	
1	Establish an Orakei Basin Advisory Group and a Friends of the Orakei Basin Group. The advisory group will be responsible for functions outlined in the Orakei Basin Management Plan and will operate in accordance with Terms of reference developed by the Local Board and Council. The “friends of” group will be responsible for carrying out voluntary activities approved by the advisory group.	AC/LB/OBAG	Support costs only	LB/AC
1	Continue working with the current working group (Orakei Basin Protection Group/Society, MOU Parties, and Community Board Chairs) until the Advisory Board is established. Seek working group input into assessing key issues, costs to rectify, prioritising key works, so budgets can be sought. This should also involve assessing the success of completed projects.	Auckland City officers	–	–
2	Prepare an annual State of the Orakei Basin report. The report will provide an annual environmental snapshot of the basin and its surrounding open spaces for use as a tool in identifying actions needing to be undertaken and annual progress towards achieving these.	AC/LB/OBAG	\$10,000	AC policy
1	Upgrade existing tracks around the Orakei Basin with priority being given to a) the track from the community buildings at Orakei Basin West Reserve to Orakei Road b) parts of concrete path at Orakei Basin East Reserve that have become uneven c) the MacPherson Street Reserve track d) the access path down from the bottom of Upland Road e) the steps to the Auckland Water Ski Club building from Lucerne Road.	Auckland Council officers	To be determined	Renewals, annual plan

AC – Auckland Council LB – Local Board OBAG – Orakei Basin Advisory Group

Priority	Recommended action	Responsibility	Indicative cost	Funding options
2	Assess the state of the access road from Orakei Road to the basin to determine requirement for either two lanes or formal passing bays, look to possibly retain edges to increase carriage way width and facilitate planting and reduce need for edge spraying.	Auckland Council officers	–	AC operational
2	Scope and assess options for erosion control along the main car park off Orakei Road and water's edge and safe public access through or around the car park.	Auckland City officers	To be determined	AC operational
2	Delete bank edge spraying along Upland Road from the maintenance contract, and add to the Auckland City Council "No Spray" list. Assess long term management options and costs for bank control along Upland Road (i.e. re-grassing / planting with stabilisation and mowing strip etc).	Auckland City officers	–	–
2	Add the Ski Club steps drainage and planting to the Renewal Programme and set as a high priority to address bank erosion. Develop solutions and costs for drainage and remedial planting.	Auckland City officers	To be determined	Renewals, annual plan
2	Add Troy Churton track to the Renewal Programme and set as a high priority to address bank erosion. Develop solutions for track repair; erosion control and remedial planting.	Auckland City officers	To be determined	Renewals
3	Discuss planting and long term weed control along the rail embankment with Council officers and OnTrack. Develop planting plan and costs.	Auckland City officers	To be determined	AC operational
2	Review policy of leaving logs on site, discuss situation in the privet removal areas with Te Ngahere, and obtain costs for appropriate level of removal.	Auckland City officers	To be determined	AC operational
1	Develop a comprehensive weed and pest management and revegetation plan, which includes ongoing monitoring to assess the success of the plan. The plan needs to utilise existing information such as the Meadowbank Reserve Management Report and Weed Control and Native Revegetation Plan for Orakei Basin (Hobson Ward). The pest control element should include baseline surveys of both pests and birds.	AC/LB/OBAG	\$10,000	AC policy
1	Areas of active erosion and potential erosion should be accurately identified and recorded on a plan. These should be assessed and classified in accordance with a set risk rating, and mitigation/management measures identified.	Auckland Council officers	To be determined	AC operational

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Priority	Recommended action	Responsibility	Indicative cost	Funding options
2	Assess the condition of the basin bank in terms of stability, condition, coverage, and viewing potential, assess and incorporate this information when considering tracks, erosion control, weed control, and revegetation.	Auckland Council officers	To be determined	AC operational
3	Identify stormwater outlets and channels, record on plan (update Auckland City GIS with asset information), assess where these are causing erosion, flooding, damage to existing assets (i.e. paths), recommend mitigation/management measures.	Auckland Council officers	To be determined	AC operational
3	Identify reserve boundary encroachments by private property and vegetation clearance by private property owners, and develop strategy for addressing these.	Auckland Council officers	To be determined	AC operational
2	Monitor sediment levels in the basin to provide baseline data to inform decisions on dredging, in terms of the management plan's objective of maintaining the basin for recreational use. Ongoing monitoring will also assist in assessing the success of the vegetation plan and erosion protection measures.	Auckland Council officers	To be determined	AC operational
2	Review and update signage around the basin, ensure "dog on leash" is clear. The signage strategy should also reflect differing levels of suitability for contact recreation.	Auckland Council officers	To be determined	Renewals
3	Regular clean up of rubbish in basin and creek could be undertaken when basin emptied. Volunteer event supported by council.	OBAG/AC/LB	To be determined	AC operational
5	Education of residents to reduce erosion and impacts on water quality and encourage residents to establish riparian vegetation and protect shags.	OBAG/AC/LB	–	–
5	Investigate with OnTrack weed management and revegetation of both sides of the rail embankment.	Auckland Council officers	–	–
5	Assess access to basin's waters from Ngapuhi Rd and other locations.	Auckland Council officers	–	–
5	Use sediment monitoring results to review basin flushing regime to ensure recreation values maintained.	Auckland Council officers	–	–

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