

B Northern Swale - retained as an open mown grassy space with groups of trees. Some existing poplars retained. Scarp area developed as a dry open rocky bank, with some kanuka, kowhais and small leaved native shrubs, supporting lizards and providing rich invertebrate habitat. Large area of sedge cover at head of lagoon to filter overflow flow. Trail angles down across scarp and side of swale. It becomes a raised boardwalk over the wetter ground close to the lagoon. A secondary path is constructed providing the link with Wairau Road and providing an alternative higher route for times of high water level, when the main trail may be inundated. Ground level has been raised on east side of reserve adjacent to flood-prone properties, to provide flood protection. Existing sewer pipe will need to be accommodated into the new landscape.

C Head of Lagoon - developed as an extensive open sedge and rush wetland. Boardwalk trail passes across the wetland with a comprehensive interpretation area on a viewing platform which offers views across the lagoon. Flight of steps connects to higher alternative trail.

D Northeast Corner of Reserve - re-shaped to create a relatively high bank wrapping around the north end of the lagoon area. This is set at elevation 278m asl, to provide protection from flooding for adjacent properties and an alternative route for the trail in times of high water level, when the main trail may be inundated. This route could also be vehicle accessible for maintenance.

Sedge wetland extends into basin in this area but as ground rises cover changes to mown grass with spaced trees for amenity (may be exotic). Cover changes to short tussock grassland on the raised point bar terrace area to the south.

E Elevated Point Bar Terrace - cleared of broom and an open short tussock grassland and cushionfield community established, with high habitat value for invertebrates. Native shrubs such as oleana, broom and matagouri are part of the vegetation community. An interpretation area would be provided. The alternative trail traverses the area, and other gravel paths allow access through the area, connecting the main paths.

A Lagoon Avenue Entrance - specific detailed design is required here to create an inviting and informative entrance with appropriate signage, interpretation area, and 'signature' landscape elements. The landscape setting is open kanuka woodland with short tussock groundcover. Broadleaf species blending into podocarp forest species is suggested down the gully. Existing drainage ditch re-shaped to a swale and planted out. New trail curves around through the gully and out across the scarp. Viewshaft of mountains to the east maintained across the terrace. It is suggested similar landscape enhancement is applied to the adjoining part of Riverside 6 reserve, to 'connect' it to the lagoon reserve and facilitate the continuation of the trail.

LEGEND - built elements:

- main pathway (trail)
- raised board walk sections over wet ground
- alternative path through when water levels higher
- other pathways
- entrances requiring specific design
- viewshaft to mountains
- viewshaft to Clutha River
- interpretation panels
- existing sewer pipe

O Western Margin - denser flax, toe toe, sedge, shrub and tree planting is considered desirable, with no foot access. It is envisaged as a quieter wildlife 'refuge' area, which neighbouring elevated residences will enjoy as their view. As the reserve boundary is in or very close to the water, achievement of this planting will rely largely on private planting, the lagoon margin would effectively be part of the neighbours' gardens and need not be fenced.

N Drainage Easement - dense planting of sedges, tussocks and low shrubs is suggested to replace the long rank grass. The drain outlet is envisaged as a more natural 'spring' enhanced by planting. Public access through this steep narrow easement is not envisaged. The adjoining landowners of the sections to the north would be encouraged to retain the existing view of the lagoon from Lagoon Avenue, as these are the only external public views.

P The Lagoon - the intention is to restore the lagoon to its most likely pre-European character - a sedge-rush wetland with fluctuating water levels - and to develop a rich habitat for avifauna and invertebrates. Its natural form (shape, water depths, islands/ peninsulas) would be retained. This will involve removal of most of the willows over time. The weeping willows would be retained as features. Many Lombardy poplars would also be retained, as they are an important visual cue for the lagoon's presence and a key landscape element of Albert Town.

Q The Island - which is actually a peninsula in periods of low water levels - would be retained and developed as a wildlife habitat with no public access. Existing poplars would be selectively removed to open up views of the scarp - a major landscape element - from the trail. Dense native shrub and sedge wetland planting is proposed. Native podocarp species could be planted to complement or eventually replace the poplars (kahikatea, matai, totara).

F Water Level Recorder - there is opportunity to install a device that expresses graphically or artistically the hydrological regime of the lagoon and its relationship with river and lake levels. A short path ending in a jetty provides access to this device from the main trail.

G Southeast Terrace - the lower terrace area close to the lagoon is an area of mown grass and spaced trees, similar to the northeast corner of the reserve. The alternative path splits away from the main trail here or, alternatively, joins it again.

Connors Lot - the acquisition of Connors lot for the reserve is very important, enabling completion of the natural hydrological/ecological system through to the Clutha River, and providing logical access and a more direct link with Fishermans Access and the river. Specific detailed design is required here to create an inviting entrance with appropriate signage, an 'interpretation' area, and 'signature' landscape elements. The existing ditch is converted to a more natural swale.

M Fishermans Access - developed as an extension of the wetland, with sedge and rush planting along the wet overland flow path and creation of a more natural 'spring' at the existing pipe outlet. This would be a special feature where the trail joins with the Albert Town River Walkway. Shrub planting is proposed to screen the retaining wall boundary to the north. Some removal/limbing up of trees is proposed to open up a visual link between the river and Alison Avenue.

L South Scarp - this section of the reserve is developed as a short tussock grassland and shrubland on the steep scarp, with a few kowhai trees. A secondary path is constructed through the area, with a seating bay enjoying views out to the mountains.

H Lagoon Outlet - an earthen weir of natural form dams the lagoon at its lower end. This would be impermeable to elevation 275.5m, estimated as the level required to maintain the lagoon as a water body. The top part of the weir rising to around 276m elevation is permeable, allowing slow percolation of water as it rises, flowing into the large swale area downstream of the lagoon. The main trail passes across the top of the weir, where extra Lombardy poplars have been planted.

I Southern Margin - a narrow grassy tree-lined strip winds around the southern end of the lagoon leading to a grassy glade with a pleasant view up the lagoon with an existing weeping willow as a feature. The edge of the lagoon is walled and stepped here allowing access right to the water's edge. There is no further access around the southwest side of the lagoon.

J South Drainage Channel - the narrower lower end of the reserve is re-shaped to convert the existing drainage ditches into more natural broad swales, planted out with sedges and red tussock. The swales drain into the existing ditch which passes under Alison Avenue. Some of the existing willows are retained. The trail passes across the swale (as boardwalk) and passes through Connors lot towards Alison Avenue. Ground levels are raised as much as practically possible around the boundary of the adjacent property to reduce flooding (naturalising an existing bund within the property).

LEGEND - vegetation cover:

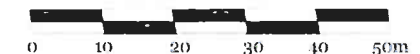
- sedge and rush wetland
- flax
- red tussock
- short tussock grassland, cushion/mat plants and dryland shrubs
- mown grass
- cabbage tree
- small leaved divaricating shrubs eg matagouri, coprosma, olearia, wineberry
- mixed broadleaf shrubs and small trees eg broadleaf, pittosporum, ribbonwood, hebe
- kanuka
- kowhai
- podocarp dominant tree planting
- specimen broadleaf trees
- existing tree



PRELIMINARY RESTORATION AND ENHANCEMENT PLAN



MARCH 2007



SCALE 1:1000

