Aoraki/ Mount Cook Village

LONG-TERM COMMUNITY PLAN

1 JULY 2009 – 30 JUNE 2019

Prepared for the Aoraki/Mount Cook community

2009

Print ISBN: 978-0-478-14700-1

Web ISBN: 978-0-478-14701-8

CD-ROM ISBN: 978-0-478-14699-8

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1 Introduction

The Aoraki/Mount Cook Village is set within the Aoraki/Mount Cook National park (the park). All the infrastructural assets of the village are owned by the Crown who provides local body services to the village community through the Department of Conservation (the department). The costs of providing local body services are recovered from all village stakeholders, a group that comprises the department and all concessionaires with leases in the village. In addition to paying its apportioned share of the costs levied to stakeholders, the department also pays completely for some village services that are not levied (see section 1.6).

The department aims to manage the local body services at Aoraki/Mount Cook village on the principles of consultative inclusion, transparency, fairness, and value for money. This Long Term Community Plan (LTCP) is the first component of that process. It will set the direction and priorities for providing services to the Aoraki/Mount Cook community for the next 10 years, describing any significant works and expenditure that are anticipated or planned during this time.

This plan sets out the levels of service for each activity and describes the external influences that constrain these services provided to the community.

The levels of service that are set are reflected in the financial statements, which predict the budget required to deliver the services to that standard each year.

The department is bound by legislative requirements such as drinking water standards and resource consents, in many of the activities that it undertakes in managing village infrastructure, allowing no discretion to reduce levels of service or make other changes to reduce costs. The department has a different source of funds from territorial authorities. Councils are funded directly by ratepayers and can increase rates to raise more funds, whereas the department is funded indirectly by taxpayers through the government and an annual appropriation which is set by the annual government budget.

The department must raise funds for any development projects through the department's capital allocation processes, and the funding must be available within the department's normal funding streams. Any expenditure comes out of the department appropriation (annual budget), allocated annually by the government, and must meet the rules for government expenditure, including the Public Finance Act 2004. This gives the department less discretion than may be enjoyed by councils. Being a government department, the department is also subject to changes to government priorities and decisions.

Ongoing costs of operating most of the village infrastructure (capital charges and depreciation) are met by stakeholder levies (with a few exceptions funded by the department which are outlined in this plan).

The department has voluntarily opted to write this plan to:

- Set clear accountability, directions, and priorities for the management of the village infrastructure for the next 10 years, in consultation with stakeholders.

- Provide a sound base for monitoring and reporting back to the community and government on how well the agreed levels of service have been met.

Although this document has been produced by the department, it has been written for and in consultation with the community. Village stakeholders have a say in setting the levels of services and annual budgets through the consultation stage of the LTCP process.

This plan should be read in conjunction with the 2004 Aoraki/Mount Cook National Park Management Plan (NPMP), which describes the overarching management policies that govern the park and the village within it.

This plan, although it's called a Long Term Community Plan, is different from the Long Term Community Council Plans (LTCCP) written by territorial authorities. The department and the management of the park operate under different legislation from territorial authorities and, unlike territorial authorities, the department is not required by the Local Government Act to produce a LTCCP but have elected to do so for good practice reasons.

The department is mandated by the National Parks Act 1980 with the management of the park, including the village, and is required by legislation to be the landlord and decision-maker for the village, as well as the infrastructure manager. Unlike a council, there are no elected officials making these decisions; the decision-making authority over the park and the village reside with the Minister of Conservation and the Director-General of Conservation, and their delegated authorities. The department is also a stakeholder in that it benefits from the infrastructure and covers its share of the levied costs of those services.

The village has a different financial situation from most territorial authorities. There is a very small base of financial contributors at Aoraki/Mount Cook and high visitor numbers, resulting in significant infrastructure to be managed by the local body team and funded by stakeholders.

1.1 Vision for Aoraki/Mount Cook village

Aoraki/Mount Cook village will be become New Zealand's best-known visitor destination. It will exhibit an exemplary level of environmental quality and visitor experience. It will reflect a distinctive New Zealand natural and mountain character in relation to its site planning, design, and architecture.

1.2 History

The timeline below highlights some of the history of the Aoraki/Mount Cook village and immediate surrounds.

1884 The first Hermitage Hotel is built at White Horse Hill on the site of the present campground.

1885 Hooker and Mueller Valleys are gazetted as the Hooker Glacier Recreation Reserve.

1887 Tasman Valley above the Mueller Valley confluence is gazetted as the Tasman Recreation Reserve

1903 Hooker Glacier Recreation Reserve is dedicated as Aoraki Domain, and vested with the Minister of Tourism and Health Resorts.

1906 The first cars are at Aoraki/Mount Cook. Motor service begins a regular service to Aoraki/Mount Cook.

1912–13 The Hermitage building at White Horse Hill was damaged by flooding from the Mueller Glacier in 1912–13 and replaced with a new building at the site of the present Hermitage, near Governors Bush. This was the first building in the existing village.

1953 Tasman Park and Aorangi Domain are declared Mount Cook National Park, New Zealand's sixth.

1956–57 Base huts are built at Foliage Hill by the Canterbury Mountaineering Club (Wyn Irwin Hut) and the NZ Deerstalkers' Association (Thar Lodge).

1957–58 In September 1957, the second Hermitage is destroyed in a spectacular fire. A new hotel is operational by the end of May 1958, an amazing feat. A major flood event on Boxing Day 1957 produces flood and debris flows into the village from Glencoe Stream and Kitchener Creek (Figure 12). The Kitchener Creek rock protection dyke and the first Glencoe water intake are built. House One is built for the Chief Guide.

1960 Park Headquarters (Visitor Centre) building begins and opens in 1961. The 'DC3 strip' is reconstructed to become the airport. The first school opens in the village, using a building from Irishman Creek.

1961 The Hermitage is extended by 42 beds. Scheduled flights begin operating to Mount Cook using DC3 aircraft. Grid electricity is connected to the village.

1965 House 3 access road is built, first water mains installed, and ferro-cement water tanks at Glencoe Stream are installed.

1966 Alpine Instruction Limited begins a guiding and instruction service operating out of Ball Hut.

1968–69 A site at Birch Hill is gazetted for a village, and three houses for park ranger staff are built. A development plan is prepared by Ministry of Works Town and Country Planning Division. Reservations are expressed about the suitability of Birch Hill.

1969 Rangers in all national parks cease to be employed by boards and become part of the Public Service, within the Department of Lands and Survey. A decision is made to shift the village to Black Birch Fan due to the exposed nature of the site at Birch Hill and intrusion of houses into the national park landscape. A first stop bank is constructed at Black Birch Stream and the top sewage pond and the Ponds Access Road is built. Pilots Houses are built on Black Birch Fan.

1970 The first Visitor Centre car and bus parks are built. Kitchener Drive, Wakefield Drive, and Sebastopol Drive are built.

1972 The first staff houses appear on Black Birch Fan, relocated from Birch Hill, signalling a decade of intensive development of village infrastructure.

1973 A major addition to the Visitor Centre is built. Chalets are built.

1974 Chalet macerator pump and controls are added to the sewerage system.

1975 The new sealed highway (State Highway 80) from Pukaki is opened, greatly improving access. The second major addition to the Visitor Centre is built.

1976 An industrial (voluntary) fire brigade is established in the village. The second sewage pond is built; sewerage and water reticulation networks, and Ponds Access Road are extended. The first school is shifted from Irishmans Creek.

1977 Black Birch drinking water intake, water-pump station installed in Sebastopol Drive with two pumps and three 1 million-litre tanks added to the water system. Two kilometres of asbestos-cement pipe are added to the 'ring' water main in the lower village. The 40-room East Wing (now the Wakefield Wing) of the Hermitage is opened.

1979 A severe storm causes a civil defence emergency, damage to some buildings, and a rethink of safety standards. Housing mounds are built in the village and stream control installed at the Chalets. Work begins on building Terrace Road and Larch Grove Road.

1980–81 Storm water control is built – kerb and channel on existing roads, and sumps. Terrace Road, Larch Grove Road, Blackburn Place, Glencoe Access Road, Mueller Place, Kea Place, Sealy Place, Du Faur Place are built. A standby diesel generator is installed for the Black Birch water pumps.

1982 Paths are built throughout the village.

1984 The Hermitage celebrates its centenary. A flood-control wall is built at Governors Bush.

1985 Alpine Guides Limited opens a new shop/office in the village. Snow-plough blades are purchased to fit into the existing truck and loader.

1986 A YHA hostel is opened. World Heritage Status (the first in New Zealand) is bestowed on the park, together with Westland/Tai Poutini and Fiordland National Parks. A flood-control warning system is installed on Sebastopol Bridge over Black Birch Stream.

1987 The Department of Conservation replaces Lands and Survey as the department responsible for the park. The centenary of New Zealand's national parks is celebrated. A Hino 4WD fire truck is purchased. A new road in the lower village, Pilots Way, is built. A day shelter is built in the village for visitors to the park.

1989 The park, as part of the South West New Zealand (Te Wahipounamu) World Heritage Area, is recognised by UNESCO as one of the world's outstanding natural landscapes.

1990 Aoraki Conservation Board is established in place of the National Parks and Reserves Board. Tennis courts are built.

1995 Legislative change removes control of about 10 hectares of park land, mostly in the village, from Tourist Hotel Corporation jurisdiction.

1996 Scientific reports identify major potential natural hazards in the village, resulting in a halt to all new building while protection work is undertaken over the following two to three years.

1998 The Ngāi Tahu Claims Settlement Act 1998 is enacted by Parliament. The official name of the park and village is changed from Mount Cook to Aoraki/Mount Cook. The Aoraki/Mount Cook tōpuni confirms and places an 'overlay' of Ngāi Tahu values over Aoraki/Mount Cook (the mountain), the Mount Cook Range, and the Hooker Valley.

1999 The long-awaited community centre for village residents is subsequently opened. There is a major upgrade of the water supply system. A new tank (the balance tank) is added to the water supply system at Glencoe Stream, and new control system, fire main, and reticulation/sprinkler pipes are installed. Glencoe Tanks Access Road, Black Birch Access Road, and Hermitage Tanks Access Roads are built.

2000 Major geotechnical protection works in the village are completed, paving the way for building development to resume.

2001 The Hermitage is extended with a new wing of 60 rooms (Aoraki Wing). The airport terminal is reconstructed following a fire in 2000.

2003 The first new independent business in the village since the 1996 freeze on development, The Old Mountaineers' café/bar, is opened in the village on the old helipad next to the visitor centre.

2005 Emergency services (ambulance, fire, search and rescue, civil defence) are shifted out of the park headquarters into a purpose built Emergency Services Building, sited by the department workshops. A concession is granted for a new accommodation lodge in the village, Aoraki/Mount Cook Alpine Lodge, which opens later in the year.

2007 The Hermitage undergoes further development with the opening of the Sir Edmund Hillary Centre, comprising a café/bar and museum complex, 3D-movie theatre, and planetarium. The school building is extended.

2008 Work starts on redevelopment of the Visitor Centre and car park, and it opens later in the year. Whitehorse Hill Campground undergoes major redevelopment with a new public shelter, toilets, hugely increased parking, and camping areas. The campground is connected to the village water and sewerage systems. The Hooker Valley Road is tar-sealed. The water system in the village is upgraded to a UV-treated system and the pumping sheds and systems undergo major upgrade.

2009 The sewage oxidation ponds are substantially upgraded and the reticulation network inspected and repaired. The first Long Term Community Plan for Aoraki/Mount Cook village is written.

1.3 Ngāi Tahu

Ngāi Tahu are the people who hold the rangatiratanga (chieftainship) and mana (authority) within the takiwā (area) of Ngāi Tahu whānui, which includes the park. The Crown has formally acknowledged this rangatiratanga through the Te Rūnanga o Ngāi Tahu Act 1996, and the apology recorded in the Ngāi Tahu Claims Settlement Act 1998.

Ngāi Tahu is governed by a 'tribal council', Te Rūnanga o Ngāi Tahu, which is made up of 18 Papatipu Rūnanga holding the rights and responsibilities to defined areas of land and waters within the takiwā of Ngāi Tahu. These rights are founded on traditional occupations, and whakapapa from ancient times to the present day.

Te Rūnanga o Ngāi Tahu, based in Christchurch, is the collective tribal voice, a function that in relation to most matters is exercised through Papatipu Rūnanga. The Papatipu Rūnanga with particular interest in day-to-day management of the park are Te Rūnanga o Arowhenua and Te Rūnanga o Waihao, centred at Temuka and Waihao in Canterbury respectively, and Te Rūnanga o Moeraki centred at Moeraki in Otago. These organisations represent the tākata whenua for the park.

1.4 Legal and policy setting

Overview

Aoraki/Mount Cook village is set within the Aoraki/Mount Cook National Park (the park).

The park is managed for the Crown, on behalf of the New Zealand public, by the department, under the Conservation Act 1987 which sets up the department, and gives it the authority to administer several other pieces of legislation, including the National Parks Act 1980 and the Reserves Act 1977.

The Minister of Conservation and Director-General of Conservation have the right to recover from concessionaires the cost of providing community service benefits or facilities[1]. All concession documents contain clauses in the conditions of the contract requiring the concessionaire to pay levies or contributions for the provision of local body services, as required by the Minister of Conservation. This requirement is enforced through the individual concession contracts rather than through policies or plans.

A territorial authority such as a district or city council, has a range of 'soft' activities, including regulatory, recreation, and community well-being, as well as the 'hard' activities of water, sewage, rubbish, and roads. However, the services provided to stakeholders and the community by the department are limited to the provision of the essential services required for the village to exist in an environmentally sustainable manner.

The Aoraki/Mount Cook village is within the Mackenzie District, and a General Rate and Uniform Annual Charge is charged by the Mackenzie District Council to lease holders within the village.

[1] Section 17ZH of the Conservation Act (included under the National Parks Act 1980 in Section 49 of that Act). Refer to page 108 of this document for further detail.

Relevant legislation, polices and plans

The Aoraki/Mount Cook village is managed by the department under a hierarchy of legislation and policies:

- The National Parks Act 1980 is the statute (legislation) around the management of national parks. The General Policy for National Parks (2005) sets out policies under the legislation that detail how national parks are to be managed on a national basis, to ensure nationally consistent interpretation and application of the legislation through all 14 national parks.
- At the regional level, each conservancy office of the department is required by the Conservation Act 1987 to prepare a Conservation Management Strategy (CMS) for approval and adoption by the New Zealand Conservation Authority, an independently appointed national body.
- Each CMS document details the natural, historic, and recreational values within each conservancy, and details the management objectives and policies for administering all public conservation lands including national parks. Including national parks in the CMS process allows for their consistent management in the context of the surrounding areas.
- Finally, each national park has a management plan which details the specific management objectives and policies for the management of that park.

None of these documents may contradict the policies of a higher level document; for example a National Park Management Plan may not contradict a national policy from the general policy, or contradict the National Parks Act.

The department is required to comply with the Resource Management Act 1991 and holds a range of resource consents authorising various aspects of local body operations granted by the Canterbury Regional Council (Environment Canterbury). These are described in more detail under each local body activity.

This Long Term Community Plan cannot derogate or contradict the legislation or policy framework that governs the management of the national park.

Appendix A contains more detailed information and links to the relevant documents on the internet.

Financial legislation

The department is funded through an appropriation from the government which is approved annually by Cabinet in the budget. All use of government money is governed by the Public Finance Act 2004 (PFA).

No expenses or capital expenditure may be incurred by the government unless it's in accordance with an appropriation or other statutory authority. Appropriations are limitations of amount, scope and period, and these limits are legally binding. The department is bound by the annual approval of appropriation, and must spend it within the year that it's budgeted.

All expenses and capital expenditure may only be incurred in accordance with these specifications, except in the limited circumstances where the PFA permits some variation to appropriations.

Operating expenditure for the Aoraki/Mount Cook Local Body is recovered quarterly in arrears from financial stakeholders, with reconciliation at the end of each year. Capital works are funded through the department's appropriation, and are subject to the department's appropriation levels and budget constraints, which results in both multi-year capital planning and annual business planning. Once capitalised, the capital costs of assets are recovered from financial stakeholders through capital charges and depreciation on the asset.

Government departments are prohibited from borrowing money. The PFA states that the Crown must not borrow except under statute (Section 46) and the Act provides this authority solely to the Minister of Finance (Section 47 and 48). The Minister may not delegate this power in the same way that other powers are delegated under the State Sector Act (Section 48).

All capital expenditure indicated in this document is subject to the constraints of the annual appropriation and departmental capital-expenditure processes and cannot be guaranteed.

Village amenities area

The Aoraki/Mount Cook village is a gazetted amenities area under Section 15 of the National Parks Act 1980:

Section 15(2) of the National Parks Act 1980 states: '*While any such area is set apart, the development and operation of recreational and public amenities and related services appropriate for the public use and enjoyment of the park may be authorised in accordance with this Act and the management plan.'*

These 'amenities' include services to the public such as accommodation, food, visitor centres, park management, and related services such as accommodating the essential staff who are needed to run these businesses and manage the park.

The village management objectives in the NPMP describe the way in which the village is to be managed (Section 5.2 of that Plan). The management plan objectives require that the village is managed in such a way that it does not detract from the park's World Heritage Area status; and visitors are to be encouraged not to see the village as a destination in itself but as a gateway to the park.

The boundaries of the village amenities area, and hence village development, are set by the gazetted area.

A Development Issues and Options Report for the village was commissioned by the department in 1997. Recommendations from this report have been incorporated within the NPMP, in part by managing three distinct zones within the village; a Commercial Zone providing for commercial activities, including visitor accommodation; a Semi-Independent Zone to provide for visitor accommodation and day shelter facilities; and the Residential Zone, for residential accommodation for staff living in the village. These are described more fully in Section 5 of the NPMP.

Figure 1 shows the village boundary and the designated zones within the village.

Requirements for commercial development

All business activities taking place within the park, including the establishment of any premises or dwellings within the village, require an authorisation in the form of a concession (Sections 49 and 50, National Parks Act 1980 and Part IIIB Conservation Act 1987). The Hermitage operates under a long term lease granted before the current Part IIIB provisions. The terms and conditions of that lease mean that there are some differences in the way that the lease is managed to some of the newer, Part IIIB, concessions in the village.

Sections 9 and 10 of the General Policy for National Parks set out the policies for concessions and establishment of buildings for visitor accommodation and other purposes.

Section 50 of the National Parks Act 1980 authorises the Minister of Conservation to '*establish, or authorise, or assist in the establishment by any body or person (whether incorporated or not), of camping grounds, huts, hostels, accommodation houses, hotels and other buildings, or facilities in any park*.' (Section 50(1)a National Parks Act 1980).

The NPMP sets out the detailed policies for new commercial development and new applications to continue existing commercial operations in the village in Sections 4.3 – Concessions; 5 – Village Management Objectives; and 6 – Village Management Policies.

Section 5 of the management plan sets out the structure and layout of the village into Commercial, Semi-Independent, and Residential Zones. These are shown in Figure 1 of this document.

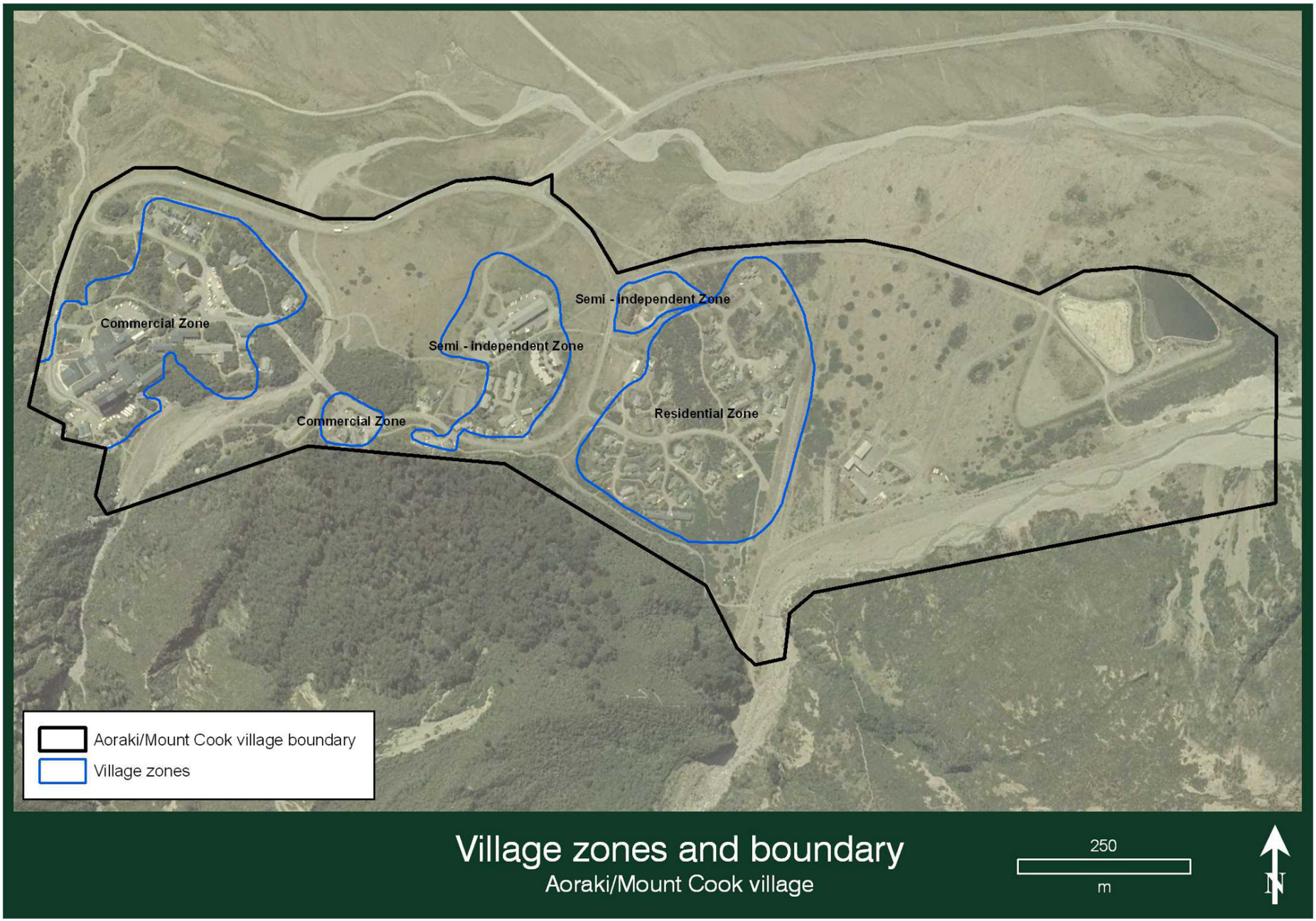


Figure 1 – Aoraki/Mount Cook village showing the boundary of the amenities area and village zones

Operating a business at Aoraki/Mount Cook

The Aoraki/Mount Cook village is a unique environment in which to start or operate a business. Being in a national park, all commercial activities are required to be authorised by concessions, so any prospective business owner rapidly becomes acquainted with the department and the concessions system.

Because the village's local body infrastructure and services are operated by the department on behalf of the Crown, all concessionaires are required to financially contribute to the running of the village through community service levies. This LTCP sets out what those community services are and the levels of service provided, and gives the department's best evaluation of what the costs and future development in local body infrastructure will be for the next 10 years.

The commercial reality of operating a tourism-based business in the Aoraki/Mount Cook village is that the village is seasonal in its annual pattern of visitor numbers. The majority of visitors (approximately 260,000 per year) visit the park between the months of November and April. The village is at the end of a one- way road with no other major visitor destinations unconnected to the Aoraki/Mount Cook National Park. Heli-skiing, ski-touring, and glacier skiing in the park attract a few visitors for snow-based recreation in the winter, but in low numbers compared to the visitor numbers at other winter destinations with downhill ski areas such as Methven, Wanaka, and Queenstown.

Costs of operating can be higher at Aoraki/Mount Cook than in other locations that would, at first glance, seem to be comparable. The village is set in an active geological environment and is subject to extreme weather, all of which may accelerate wear and tear on buildings and infrastructure. The department has had to install geotechnical protection works to protect the village from flooding, rock debris, and avalanche risk from the stream catchments and slopes above.

Legally, the land in the Aoraki/Mount Cook village is part of the national park. This imposes a level of regulation over what activities may be permitted in the village (see this section, 'Requirements for commercial development', and 'Requirements for private accommodation' for more information). Residential dwellings can only be built for people who are required to be resident in the village for the management of concession businesses or the management of the park. Consequently, there is no private rental accommodation closer than Twizel for staff, and business owners must gain concessions to build any accommodation they require in the village to operate their business. This is an additional cost on the operation of businesses at Aoraki/Mount Cook.

This requirement for dwellings to be connected to the businesses in the village means that the numbers of stakeholders who contribute to the infrastructure costs is much lower than comparable locations which are outside national parks and which have much larger numbers of ratepayers.

The department is also affected by these constraints. It's required to provide and maintain housing for staff, and contributes to the costs of local body services using the same apportionment mechanism applied to other stakeholders (see section 1.6 of this document for more information).

Requirements for private accommodation

The legislation and policy around the provision of private residential accommodation in parks is set out in Sections 49 and 50 of the National Parks Act 1980, Section 8 of the General Policy for National Parks, and the NPMP.

All residential dwellings in the Aoraki/Mount Cook village are required by legislation and policy to be provided only for those people who are required to live there either for park management purposes or to run a concession business in the park. This makes Aoraki/Mount Cook a special community in New Zealand, along with Whakapapa village in the Tongariro National Park.

Other communities adjacent to national parks throughout the country, such as Arthur's Pass village, have been developed on land zoned out of the national park.

Section 50(1) of the National Parks Act states that accommodation may be built in a national park for people engaged in the '*administration, control, or management of the park or the protection of forests in or adjacent to the park*.'

It also states that the Minister may '*grant concessions over or in respect of land within the park as sites for dwellings for persons or bodies (whether incorporated or not) carrying on any activity within the park*.' All accommodation within a park must also be '*in accordance with the management plan for that Park*'. The General Policy for National Parks (Section 9(d)) requires that '*…it cannot reasonably be located outside the National Park*', and ' *…the applicant cannot reasonably use or share an existing facility*.'

All applications for concession leases in the Aoraki/Mount Cook village for private residential accommodation must therefore satisfy these requirements – that the accommodation of persons is necessary to be in the village and the needs cannot satisfactorily be met by accommodation being provided outside the park.

The NPMP, in Sections 5 and 6, outlines the detailed objectives and policies for the management of the Aoraki/Mount Cook village. Links to these sections of the plan on the department's website are included in Appendix A.

1.5 Scope of this plan

The Long Term Community Plan sets out the management and intentions for the infrastructure of the Aoraki/Mount Cook village. This infrastructure is primarily focussed around the core village, in the amenities area of the national park.

However, there are other concessionaires and department facilities which, although situated outside of the amenities area, utilise some of the local body services. This involvement needs also to be recognised and taken into account when allocating local body cost recovery levies.

The concessions and facilities outside of the core village, and the local body services that they consume, are as follows:

- White Horse Hill campground (the department) – connected to water and sewage; uses the rubbish collection and fire brigade.
- Unwin Lodge, SH80 (New Zealand Alpine Club) – no connections, is not protected by geotechnical works; uses the rubbish collection and fire brigade.
- Thar Lodge, White Horse Hill (New Zealand Deerstalkers Association) – connected to water supply but not sewage; uses the rubbish collection and fire brigade.
- Wyn Irwin Hut, White Horse Hill (Canterbury Mountaineering Club) – connected to water supply but not sewage; uses the rubbish collection and fire brigade.
- Aoraki/Mount Cook Airport (Aoraki/Mount Cook Alpine Village Limited) – no connections, is not protected by geotechnical works; uses the rubbish collection and fire brigade.

1.6 The department's contribution

The Department of Conservation, on behalf of the Crown and taxpayers, as the manager of the national park, pays for the infrastructure in the wider park. This is not levied to stakeholders.

Village infrastructure costs are split between national park and local body programmes, including capital costs (capital charge, akin to interest; and depreciation), and operational costs (such as staff wages and maintenance costs).

The department has reviewed all village assets as part of the development of this Plan and as a result has moved several of the assets into the asset pool of the national park. These assets and their operation and maintenance (to the level of service of the wider park) are fully funded by the department in the same way as other wider park assets outside the village, such as mountain huts, tracks, and the Hooker Valley Road.

Village assets in the village have been split into two categories, depending on their primary purpose:

- Department local body assets, which provide visitors with a service via a concessionaire or other entity in the village.
- Department visitor assets, which visitors need to access and enjoy the national park.

The department recently paid the residue debt associated with the geotechnical protection works for the village that was previously being repaid through a levy on concessionaires' turnover.

Village infrastructure that is now included in the park visitor assets and is fully funded by the department, including operational costs, has a total net book value as at 30 June 2009 of $2.3 million. Section 12 of this document has more details about the national park assets in the village and their value.

Local body assets that have their asset-related costs fully covered by the department are itemised in the Aoraki Local Body Asset Schedule on page 118, and have a total net book value as at 30 June 2009 of $3.248 million.

2 Local body policies

Business operators and residents require infrastructure for essential services to be cost-effective and sustainable. The presence of the village within the park means that the infrastructure must be consistent with national park values.

To avoid uncontrolled developments with many independent systems for sewage and water, the infrastructure is planned and managed on behalf of the stakeholders and the public by the department in its local body role as part of the management of the wider park.

The assets and infrastructure that underpin the services provided to the Aoraki/Mount Cook community are owned by the Crown and managed by the department, which provides staff to fulfil the local body function of operating and maintaining the infrastructure.

The Conservation and National Parks Acts authorise the collection of a community service contribution to recover the costs of providing services and facilities to concessionaires. This contribution covers the costs of the capital charge and depreciation on assets, and the cost of the operational day-to-day work that is needed to keep all of the services running. It's is paid by all concessionaires and the department as joint financial stakeholders in the village.

Objectives and policies for the management of the Aoraki/Mount Cook village within the park are described in sections 5 and 6 of the NPMP. Overarching policies for the management of local body services within the Aoraki/Mount Cook National Park are set out in the NPMP in Section 6.2.9 Services, which sets out the policy for utility services within the village as:

'6.2.9(a) To ensure the provision to a high standard of those utility services that in other communities would be the primary responsibility of the local authority.'

'6.2.9(b) To place all utility services underground, where possible.'

The Methods section of the NPMP state that '*2. The Asset Management Plan Aoraki/Mount Cook village once approved will be used to manage those assets in the future*.' This Long Term Community Plan will supplement the Asset Management Plan, and contain the overarching plan for the management, operation, and replacement of local body utility infrastructure. This plan is intended to be supplemented with annual plans detailing the work planned for each financial year (July to June).

3 Community outcomes

Public meetings were held with the Aoraki/Mount Cook community to identify what is important to the community. The ideas raised during meetings were analysed and distilled into five community outcomes, which are noted below.

- A village that is healthy, self-contained, environmentally-friendly, and sustainable.
- A place to live because people love the mountains and value the unique privilege of living and working or running a successful business in the Aoraki/Mount Cook National Park.
- A place to live that is safe, family-friendly, inclusive of all visitors and residents, with recreational opportunities for people of all ages, and strong connections to wider, social, educational, and cultural communities.
- An environment where businesses can prosper and succeed.
- Clean, safe drinking water; culturally and environmentally appropriate disposal of sewage and rubbish; and roads and footpaths that are in good condition while recognising there is a balance to be reached between setting an appropriate level of service, regulatory requirements, and affordability to stakeholders.

These outcomes represent the ideals of the Aoraki/Mount Cook community for how they want their community to develop over the next 10 years.

The department's level of direct involvement and sphere of influence in these community outcomes applies only to the provision of the hard infrastructure services as outlined in the last outcome above, and the consideration of applications for new concessions in the village, where these apply to or influence the community outcomes.

The department can't make these community outcomes come to fruition, but can help to facilitate the community desire to make them happen, while recognising the additional constraints imposed by being in a national park. The national park values and requirements must be met. This will restrict the community to the expression of outcomes in a way that is appropriate to being in a national park.

These outcomes should be taken in conjunction with those for the wider Mackenzie District, as set by the Mackenzie District Council.

The community outcomes for the Mackenzie District are:

- An attractive and highly valued natural environment.
- A thriving economy.
- A democracy which upholds the rights of the individual.
- A fit and healthy community.
- Safe, effective, and sustainable infrastructure.
- A supportive and contributing community.

4 Aoraki/Mount Cook village today

Many of the people who live at Aoraki/Mount Cook are active, outdoor-type people who value the natural environment and the park as a place for recreation.

The Mount Cook Residents Association is an incorporated society formed in 1985. The Association owns the community hall (situated next to the school in the residential zone), and can apply for funding from sources such as pub charities, licensing trusts, and government.

This body has the necessary independence to lobby for the good of the Aoraki/Mount Cook community. The community would like to have better representation on the Mackenzie District Council.

The local school is tightly integrated into the Aoraki/Mount Cook community. Residents would like to integrate the school further into the community, with suggestions such as creating additional outdoor learning and recreation areas, and a community garden at or near the school that the children could be involved with. The school has a pool which is used by the community: they would like to see this covered and heated to extend its use. Residents would also like to see an improved playground facility available for children.

There is a community 'book exchange' housed at the school. This is simply a bookshelf where people can leave books and pick up new ones, rather than being a formal library arrangement. The nearest libraries are at Twizel and Tekapo.

A snapshot of Aoraki/Mount Cook – trends and observations from the 2006 Census

Census data from the 2006 Census of the New Zealand population showed a population of 210 people who describe themselves as "usually resident" at Aoraki/Mount Cook. This figure is trending downwards over the 10 years to 2006 with counts of 279 in 1996 and 234 in 2001.

The geographic area of the census data is likely to be wider than the village and immediate surrounds but the number of people resident in the general area, but outside the village, would be low. In addition to this, the sample size is very low.

Gender split in 2006 was exactly equal, a very small change from a slight male bias in previous census counts. Aoraki/Mount Cook has an interesting age distribution with a bulge in the 20–39 age group demographics compared to the Canterbury region. This is unsurprising given the nature of Aoraki/Mount Cook and the strict criteria for living in the village – business owners or employees in very specific industries that tend to employ large numbers of young people.

The population of Aoraki/Mount Cook is ethnically diverse. It has:

- A lower proportion of residents identifying with European ethnic groups than the rest of Canterbury (but comparable with the country as a whole).

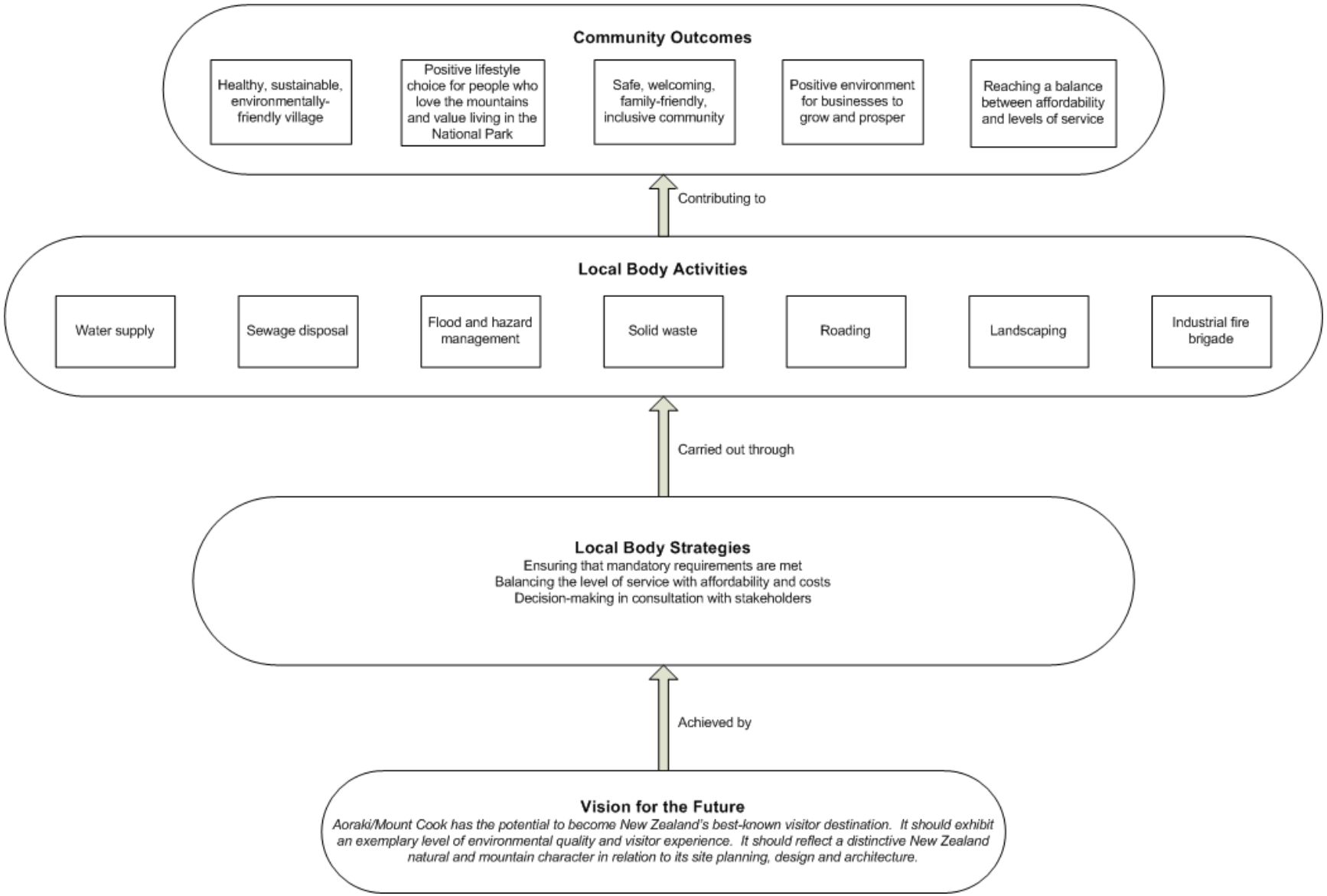
- A similar number of people identifying as Māori as the rest of Canterbury, which is lower than the national figure.
- A low number of people of Pacific Island ethnicity, and higher numbers of people of Asian ethnic groups than the national or Canterbury average, reflecting the nature of the tourism-based economy at Aoraki/Mount Cook, which has traditionally had high visitor numbers from Asian countries.

Religious affiliation of Aoraki/Mount Cook residents shows a different distribution from Canterbury as a whole. Higher numbers did not identify with any religion, the number of people identifying as Christian was much lower, and the number of people identifying with some other religions or "not elsewhere included" was higher than the Canterbury average. Overall, slightly more than half (59%) of the normally resident population identified with a religion.

Aoraki/Mount Cook residents are generally well-qualified, with a higher proportion holding some form of qualification other than a school qualification than the general population of Canterbury. However, given the much younger population, higher levels of qualifications would be expected compared to a population with high numbers of older residents for whom education beyond leaving school was much less common. The percentage of people with "other" qualifications is likely to reflect the spread of occupations represented in the district, with farmers, tradespeople, and mountain/outdoor guides being well-represented.

Aoraki/Mount Cook residents are predominantly on wages or salary, reflecting the make up of the community with few businesses and comparatively more employees. The median income for the district is $29,500, higher than the Canterbury median of $23,500, reflecting the higher proportion of employed people in the community.

5 Long Term Community Plan diagram



6 Community vision for tomorrow

By 2019, Aoraki/Mount Cook will be a thriving, desirable village which has a strong community spirit and good social and business relationships among all stakeholders and residents.

The infrastructure that underpins the village will be in good condition and well maintained. It will conform to all regulatory standards, and match current best practice for essential services provided to a community of the size of Aoraki/Mount Cook village. By 2019, the sewerage, solid-waste disposal, and water systems will have undergone recent significant upgrade and renewal, all roads will have been resealed, and street lighting will have been upgraded to modern technology which provides good lighting that minimises upward light spill and electricity consumption.

The village will be thriving with visitors from New Zealand and around the world coming to visit and enjoy the park. The community will have successfully fundraised and gained the necessary concessions for community facilities that meet the community's needs and make Aoraki/Mount Cook an even better place to live. More business opportunities will exist in the village.

The community will be healthy, happy, and have a stable core of residents who appreciate what living at Aoraki/Mount Cook village has to offer.

7 Overview of significant activities

There are eight key services provided for the Aoraki/Mount Cook village by the department through its local body function, funded by stakeholder contributions, and/or funded by the Crown through the department's management of the national park.

These services are:

- Water supply (drinking water and fire fighting).
- Sewage reticulation and treatment.
- Flood, debris flow, and avalanche protection.
- Solid-waste and recycling collection and disposal.
- Roads, lighting, storm water, and snow clearing.
- Landscaping and pathways.
- Industrial fire brigade.
- Civil defence and natural hazard management. (This is primarily a Mackenzie District Council responsibility but the department has some obligations as a provider and manager of infrastructure).

This section provides background on the management of all activities provided by the department. Details of each key activity are described in section 8 of this document.

7.1 Maintenance and operating

The local body function provided by the department covers the following areas:

- Management and administration, including maintenance, contract and project planning.
- Regulatory compliance.
- Water supply.
- Sewage disposal.
- Flood and debris flow monitoring.
- Avalanche monitoring.
- Rubbish disposal.
- Snow clearing.
- Road maintenance.
- Landscaping.
- Plant and machinery maintenance.
- Building maintenance.

Maintenance and operational work is planned annually, based on the following principles:

- Mandatory requirements from legislation must be met, e.g. the New Zealand Drinking Water Standards, Resource Consent conditions, New Zealand Fire Service requirements and standards.
- Infrastructure to be maintained in good working condition that will enable the levels of service to be met.
- Infrastructure must not run down to a condition where expensive repairs are required.

The diagram overleaf shows the decision-making process to be followed in the event of the levels of service not being met or upgrade to assets being required.

Additional information about maintenance and operating will be included with the different local body activities in the following sections where relevant.

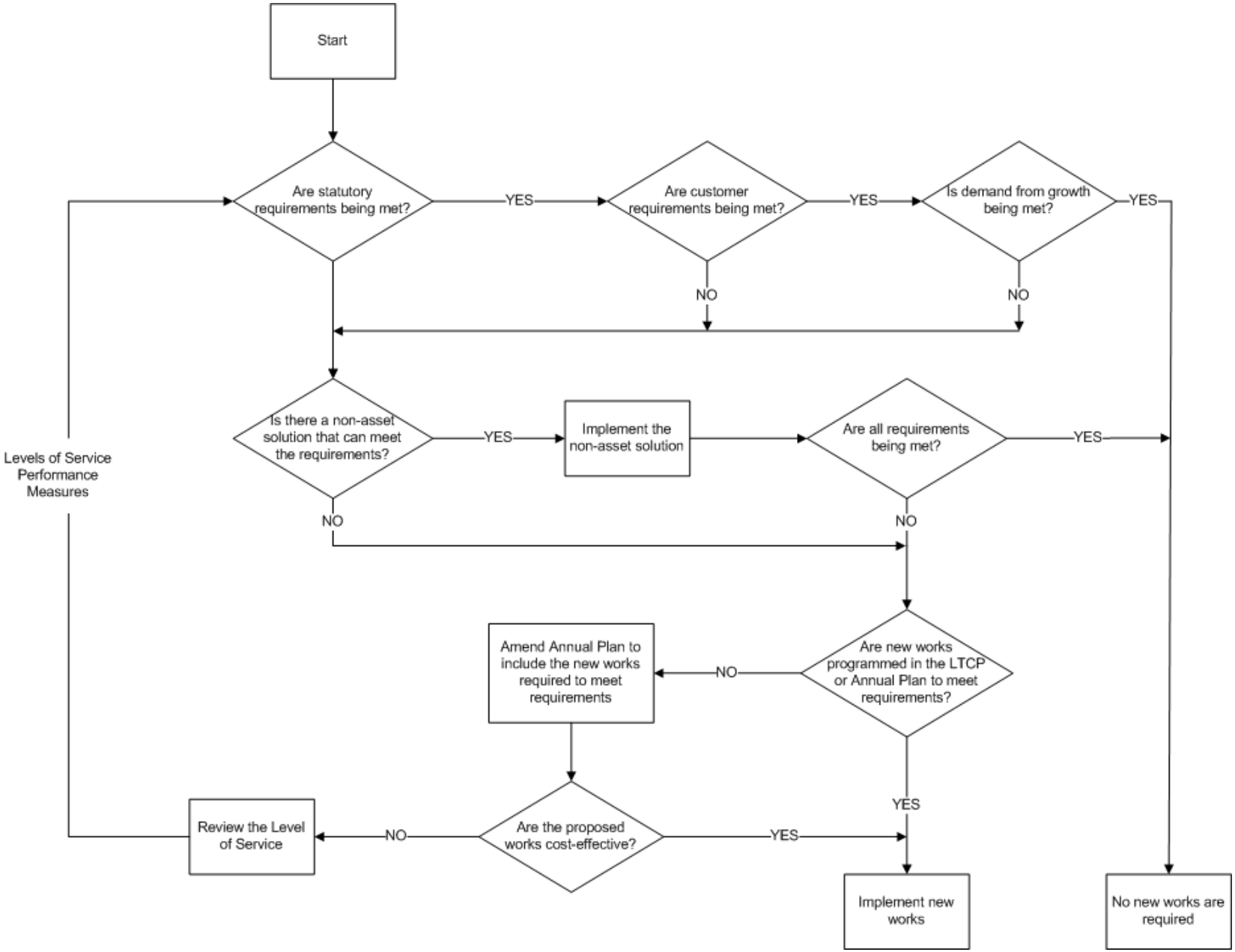


Figure 2 – Decision-making process for planning new works

7.2 Planning and reporting

Every year the department will plan the work for the following year. The performance of the local body during the previous year will be reported against the performance standards under each level of service.

7.3 Levels of service

Throughout the Plan we talk about 'levels of service'. This is the standard to which local body services will be provided to the Aoraki/Mount Cook community and stakeholders by the department through its local body function.

We have described levels of service in this document that attempt to balance the need for reliability of infrastructure and failure risk minimisation against the cost of significant upgrade and replacements.

In some activities, the department is required to maintain a certain level of service by legislation or by external authorities. Examples of these include meeting the New Zealand drinking water standards, meeting conditions of resource consents, and managing the industrial fire brigade equipment to New Zealand Fire Service operational standards.

Setting required levels of service brings costs when the condition or capacity of infrastructure means they can't be met. This document sets out levels of service for each activity with a forecast of maintenance and operating costs into the future to maintain that level of service, based on the best information available at the time of writing.

In some instances, the community may be comfortable with a lower level of service and higher risk of failure of infrastructure. Sometimes when finances are tight, communities can be tempted to delay maintenance or upgrade of infrastructure. This can lead to significantly increased costs when work is done if the delays mean that maintenance turns into significant repairs. The Aoraki/Mount Cook community is in this situation now with some roading infrastructure: stakeholder feedback resulted in some maintenance being deferred and more significant work is now required to get it to standard.

Aoraki/Mount Cook is a highly active environment and is at a higher level of risk of catastrophic failure than most communities. Higher progressive rates of deterioration due to the severity of storm events, flooding and snow damage are a reality in the management of the village infrastructure. The levels of service described in this plan can't be guaranteed in the event of damage to infrastructure from earthquake, debris flow, avalanche or flood.

7.4 New works and upgrades

These local body projects are planned for the next 10 years:

- Repair and reseal of minor village roads (Kitchener Drive, Wakefield Drive, Sebastopol Drive, Blackburn Place, Mueller Place, Kea Place, and Du Faur Place).
- Upgrade of the water treatment plant to increase capacity.
- Refurbishment or replacement of the ferro-cement water tanks at Glencoe Stream.
- New fire engine and breathing apparatus.
- Full survey of the water reticulation line using closed circuit TV and GPS.
- Installation of new, environmentally friendly street lighting.
- Introduction of a self-contained Refuse Transfer Station.
- Repair and reseal of Terrace Road, Bowen Drive, and Larch Grove Road (known as the village loop road). This project is being fully funded by the department from its park management budgets.

8 Significant activities

8.1 Water supply and reticulation

What we do

The department manages a reticulated water supply for the Aoraki/Mount Cook village. Water use is measured by metering from the source to end-users as required by resource consents.

Water is provided to two standards:

- Domestic use (potable water and hydrant supply)
- Commercial use (potable water, hydrant supply and sprinkler supply).

Water is taken from an intake in Black Birch Stream, treated through an ultraviolet-light treatment plant, and reticulated throughout the village through water mains and to a fire hydrant supply.

Untreated water from Glencoe Stream is stored in tanks (owned by the Hermitage) for fire-fighting supply to the upper village (the commercial area), where buildings are fitted with sprinkler systems.

Overflow from these tanks can be diverted into the potable water supply system upstream of the treatment plant, as required to boost the input from Black Birch Stream.

Figure 3 – Fire-fighting tanks (top), header tank, balance tanks and treatment plant (bottom), Glencoe Stream.

Why we do it

People need a clean, safe source of water for drinking and domestic use.

Aoraki/Mount Cook village is an isolated community with occasional further isolation in winter due to snow and ice blocking roads. The village contains significant visitor accommodation including multi-storey buildings. A reliable source of water for fire fighting is essential to the safety of visitors and residents.

Water could have been obtained by individual residents and businesses via private intakes from the Black Birch and Glencoe Streams. The absence of a reticulated water system would result in a proliferation of water intakes in the streams, unsightly holding tanks, and no controls or treatment of the water, with a resulting risk to public health. These risks are mitigated by the provision of a reticulated water supply that meets the New Zealand drinking water standards.

Managing the impacts of the activity

Taking sufficient water from a stream to provide a reticulated drinking and fire-fighting water supply could affect that stream and the downstream environments that rely on water from that waterway.

The local body team will take all possible measures to mitigate environmental effects upon Black Birch Stream, Glencoe Stream, and Kitchener Creek of the infrastructure, taking of water, and return of water to these streams by complying with resource consent conditions.

The department holds resource consents from Environment Canterbury as follows:

CRC054838 To take and use water: expires 27 February 2044.

Authorises the taking of water from Black Birch Stream, Glencoe Stream, and Kitchener Creek.

CRC054839 To undertake works in the bed and banks of a river: expires 27 February 2044.

Authorises use and maintenance of intake structures and pipes in Black Birch Stream, Glencoe Stream, and Kitchener Creek.

CRC 054830 To discharge water to water: expires 27 February 2044.

Authorises the discharge of overflows and diversion from intakes when water sediment levels trigger automatic closure of intakes, into Black Birch Stream, Gumboot Pond, and Glencoe Stream.

The department is required to comply with resource consent conditions for the water intakes which limit the amount of water that can be taken. This is measured by water-flow meters on the Black Birch and Glencoe Stream intakes

The local body team will also be ensuring that all water connections are metered, so use of water can be managed and measured, and the presence of any major leaks in the reticulation network quickly identified and fixed.

Figure 4 – Black Birch Stream

Levels of service

The level of service provided to the Aoraki/Mount Cook community by the department is dictated by the New Zealand Drinking Water Standards (currently NZDWS 2008). Potable water supply is provided to 51 domestic and 10 commercial properties as well as nine other buildings[2]. A fire-fighting sprinkler water supply is supplied to the Hermitage, Glencoe Lodge, the Chalets, the YHA, and department's Visitor Centre. The department will supply water to the village to the service standards outlined below:

Function	Level of service	Performance standards	How we will measure this
Reliability of water infrastructure for potable water.	To provide adequate flow and pressure.	Provide potable water at flow rates of not less than 10 metres and not more than 70 metres.	Monitoring of flow rate into and through the reticulation system.
	Ensure reliability of water system.	➢ Maximum outage length: 4 hours. ➢ Maximum outage: 1/year/consumer. ➢ Response time: 30 minutes.	Monitoring and recording of all outages.
Reliability of water infrastructure for fire-fighting supply.	To provide adequate flow and pressure.	Sprinkler supplies for commercial connections meet the New Zealand Code of Practice for Fire Fighting supplies. Hydrant supplies throughout the village meet the New Zealand Code of Practice for Fire Fighting supplies.	Regular testing of sprinkler supplies and hydrants to New Zealand Fire Service operational standards.
	Ensure reliability of water system.	Water available on demand as required.	Monitoring and recording of all outages.

[2] Connections have been divided into Commercial, Residential and Other. Other buildings include administration buildings, workshops, the Emergency Services building, the day shelter, the school and the community hall.

Function	Level of service	Performance standards	How we will measure this
Safety of potable water quality.	Drinking water systems are safe, reliable, and clean, meeting New Zealand Drinking Water Standards.	Water meets the current New Zealand Drinking Water Standards (currently NZDWS 2008).	Water testing and monitoring as required by the current New Zealand drinking water standards.
Information about assets.	As-built plans are up to date and all infrastructure is mapped.	Water system information is maintained up to date and stored in the department's Geographic Information System (GIS). This will be completed by the end of June 2011.	Measurement of GIS information against actual assets.

Asset information

Summary

- Two water intakes (Black Birch Stream and Glencoe Stream) with turbidity and flow metering.
- Five storage tanks (total capacity: 3,030,000 litres untreated, 2,960,000 litres treated), plus 540,000 litres of untreated fire fighting capacity owned by Aoraki/Mount Cook Alpine Village Limited.
- Ultraviolet treatment plant capable of treating up to 11 litres per second.
- Three electric water pumps and a standby generator.
- 4.8 kilometres of pipes for treated water and 3.7 kilometres of pipes for untreated water.
- 32 fire hydrants.
- Water meters on all connections.
- Control, monitoring, and alarm systems on turbidity (cloudiness) meters and water-treatment plant.

Description of the water system

Two tanks for fire-fighting water supply at Glencoe Stream are owned by the Hermitage (Aoraki/Mount Cook Alpine Village Limited). All other infrastructure assets are owned by the Crown and managed by the department.

Water is taken from intakes at Black Birch and Glencoe Streams. Water inflows are measured for turbidity, and intakes are automatically closed when this is high to comply with the New Zealand Drinking Water Standards. Within the next six months, water flow meters will be installed on the intakes as required by the water take Resource Consents.

A further intake is present at Kitchener Creek but is not in use. The resource consent for the Kitchener Creek intake is limited to "emergency periods when water is not available to be taken from either Black Birch or Glencoe Streams".

Untreated water is stored in two 270,000-litre, fire-fighting tanks and a 30,000-litre header tank above the Hermitage at Glencoe Stream, and three 1 million litre tanks at Black Birch Stream, which are connected by a rising main to the main plant at Glencoe Stream. The rising main runs in a 'ring' configuration around the lower village and feeds hydrants along the main.

Water is automatically pumped from the storage tanks at Black Birch Stream through the rising main when water levels drop in the tanks at the treatment plant at Glencoe Stream, using three electric pumps with a backup diesel generator. The three pumps are load balanced and switch on automatically as required to cope with the pumping load. Control systems have been upgraded (November 2008) to soft start and stop the pump motors, which should prolong their life.

Overflow from the Glencoe fire-fighting tanks, when full, can be switched to flow into the header tank or back into Glencoe Stream.

Untreated water flows from the 30,000-litre header tank through an ultraviolet light-treatment plant. The treated water is stored in the 240,000-litre balance tank and from there flows into the reticulation system, including two 136,000-litre storage tanks near Glencoe Stream[3] that supply the lower village drinking and hydrant supplies, as well as sprinklers in the Glencoe Lodge and YHA.

These tanks also reduce the head differential between the Glencoe Stream Balance Tank and the lower village to reduce water pressure to a manageable level.

Connections are provided to the boundary of leasehold properties in the village.

The local body team manages approximately 4.8 kilometres of reticulation for potable supply and 3.7 kilometres of reticulation for untreated water (the rising main to treatment plant and fire hydrant supply), as well as 32 fire hydrants.

A new water main has been laid from the White Horse Hill campground. This is owned and managed by the department as a national park asset to the point where it connects to the main water reticulation system in the village near the chalets.

The key components of the water system are shown in Figures 5 and 6.

[3] At the time of writing, only one of the two lower Glencoe Stream storage tanks is connected to the system. The second tank is being investigated for refurbishment or replacement, whichever is the most cost effective.

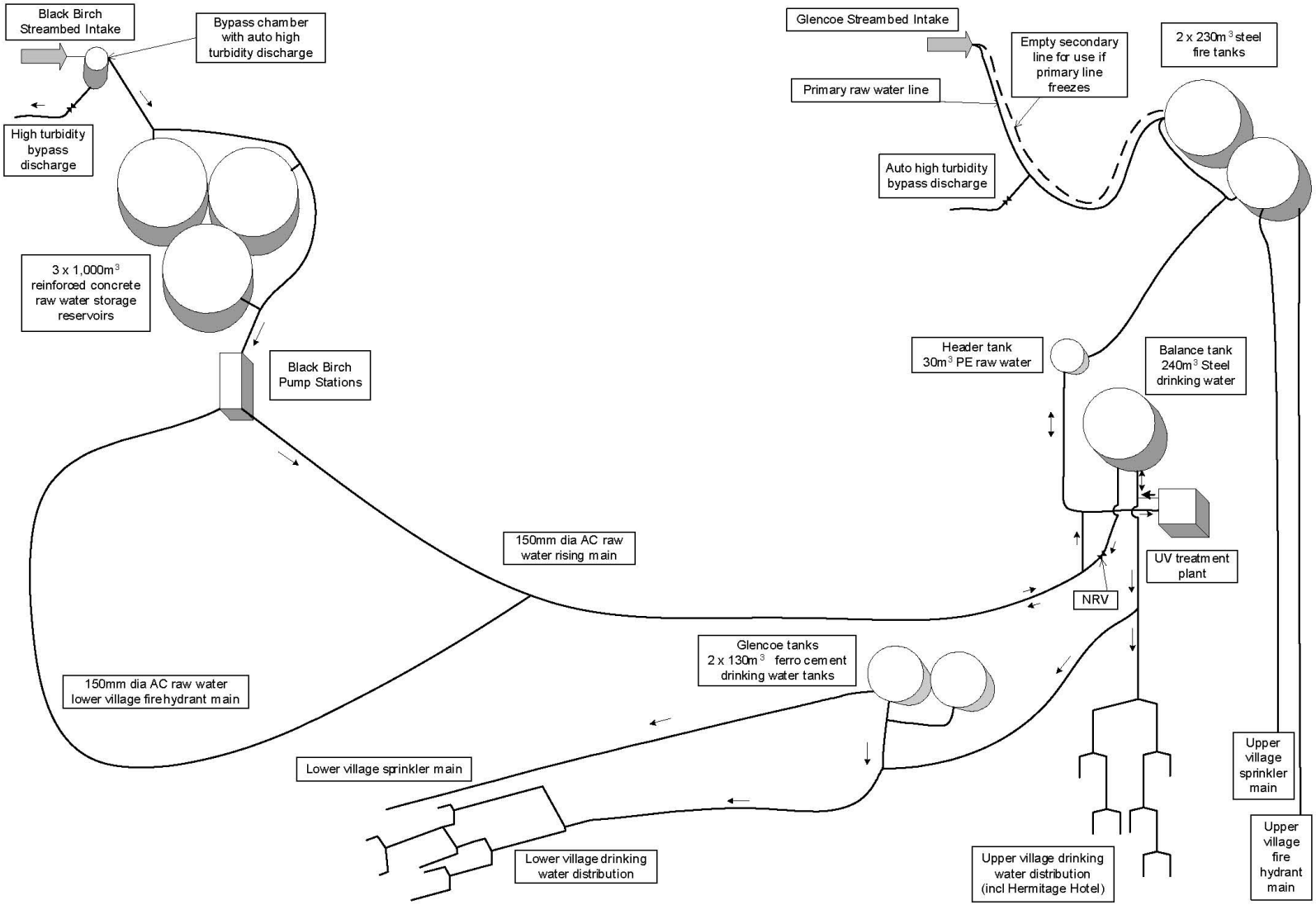


Figure 5 – Water treatment and reticulation system diagram

Image© Rob Dewhirst 2009

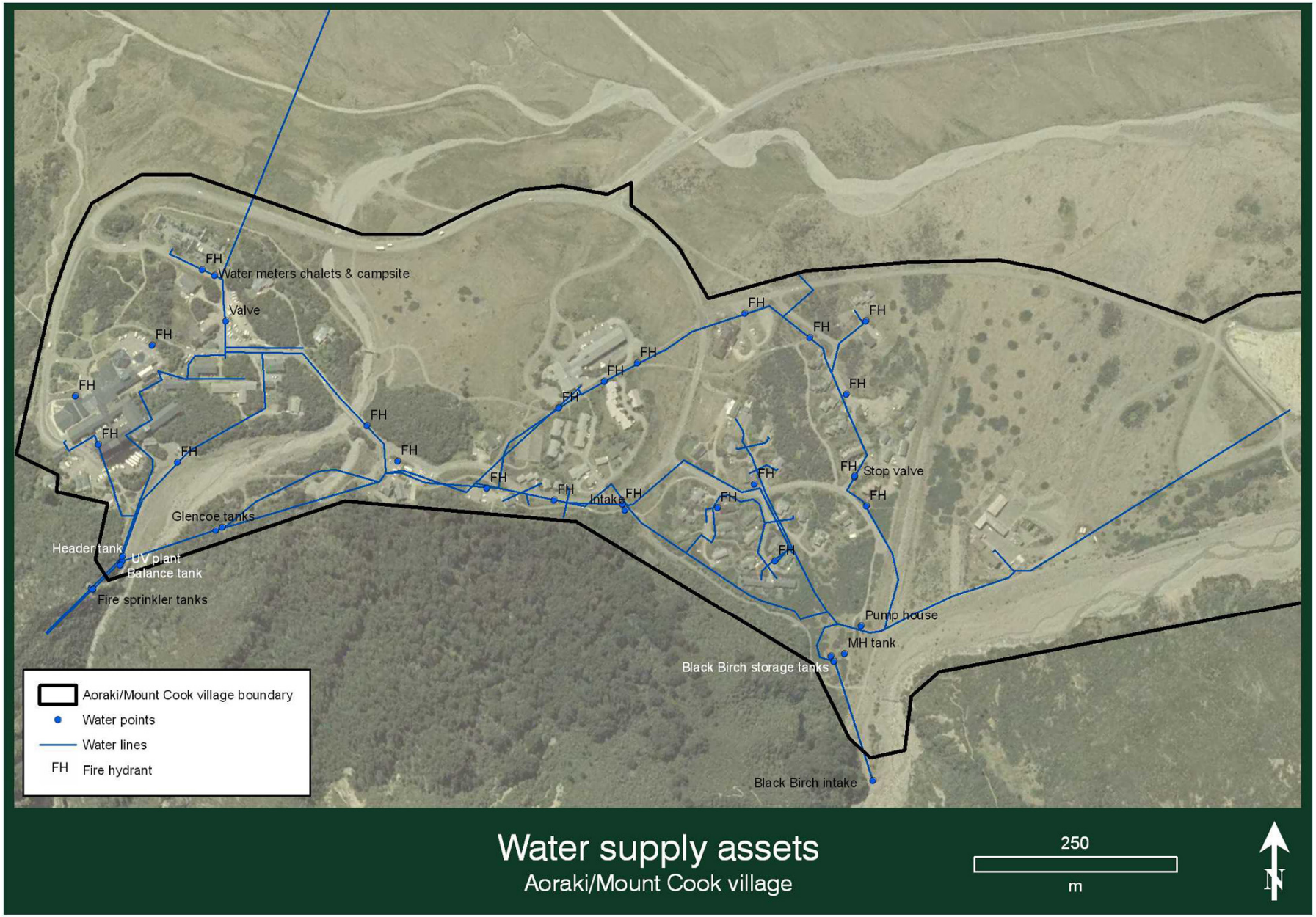


Figure 6 – Water treatment and reticulation system map

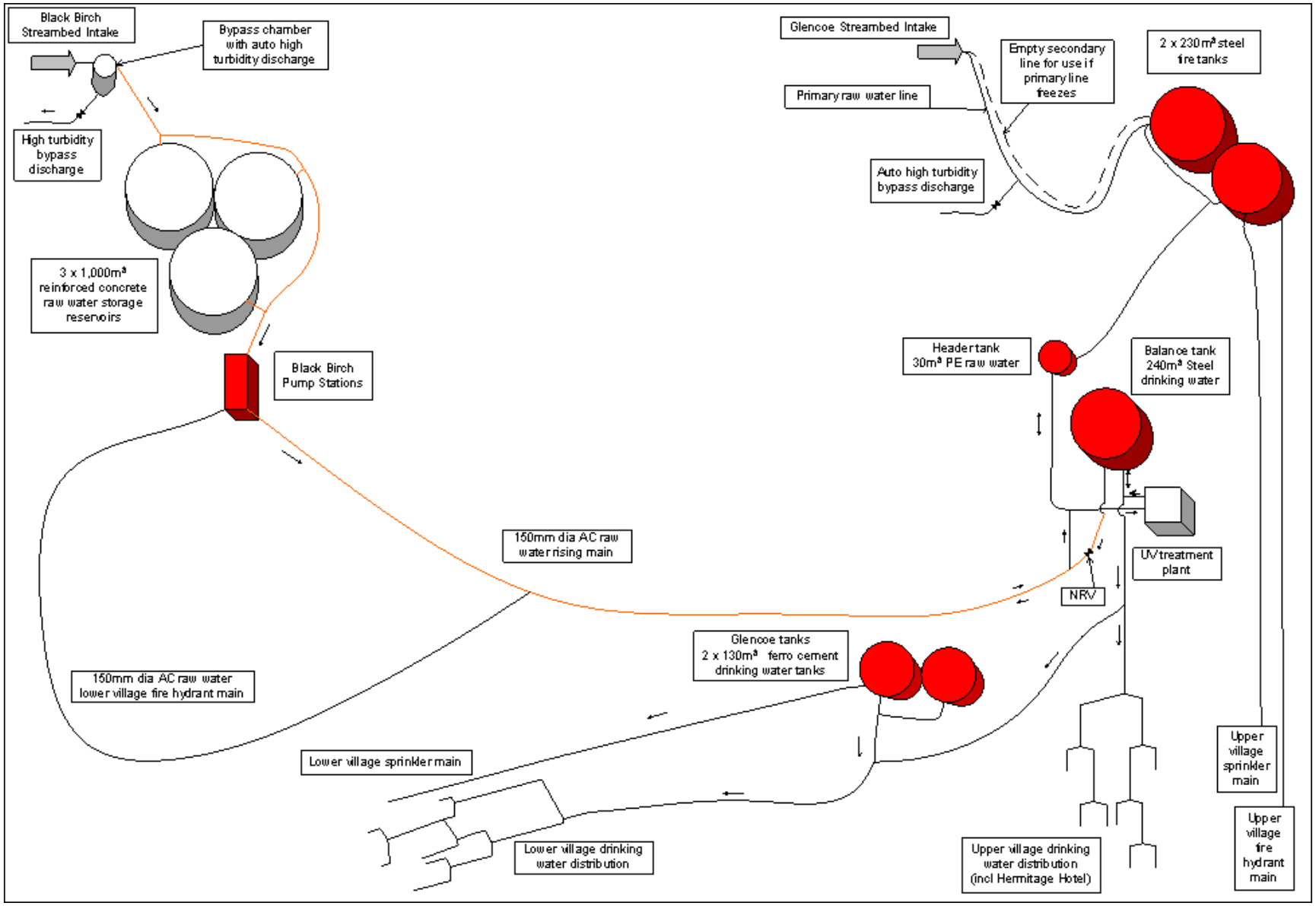


Figure 7 – Earthquake vulnerability in the water system

Coloured components are those at highest risk of earthquake damage. Image © Rob Dewhirst 2009

Significant risks and issues

The primary risks from water supply are to public health through the quality of water supplied and the reliability of supply; and to life and property through the reliability of supply for fire fighting.

Water quality is controlled at the intakes by measuring turbidity of the water. Intakes are automatically shut off when the incoming water is too cloudy, minimising risk to public health from protozoa entering the water system, and the reduced effectiveness of the UV treatment on turbid water.

With a prolonged flooding or rain event resulting in high turbidity at the intakes, there is a risk that the village could run low on treated water for drinking and for hydrant supply in the lower village. The last resort in this instance is to accept the risk from high turbidity water and let water with turbidity levels that are outside the Drinking Water Standard through the system. In practice, this situation rarely occurs, with waters clearing to acceptable levels rapidly following storm events. Flushing valves have recently been installed to enable the whole system to be back-flushed in the event that high-turbidity water enters the system during a storm event.

Fire-fighting water supply comes from both Glencoe and Black Birch streams. Sprinklers and hydrants in the upper village are supplied by the fire tanks at Glencoe Stream which are fed from the Glencoe intake. Hydrants and sprinklers in the lower village are supplied from Black Birch Stream through the rising ring main and from treated water from the Glencoe storage tank. Any overflow from these tanks can be fed into the header tank for treatment and goes into the general village fire-fighting and drinking-water supply.

In the event of a fire in the lower village reducing available water pressure in the fire main, water flow from the balance tank can be rapidly diverted back into the rising and fire main from Black Birch Stream through an automatic, non-return valve. This valve prevents the untreated water in the main entering the balance tank but can open to divert water flow from the balance tank to hydrants.

Mapping of the water mains and reticulation is ongoing. There is poor knowledge of the exact location and condition of some parts of the underground network. The department intends to GPS map and to inspect the pipe network with closed circuit TV by June 2011. There is some risk that pipes have deteriorated. Much of the network is now PVC pipe, which has a longer life than steel but is more difficult to locate. Any repairs to pipes that lie beneath roads should ideally be completed before roads are upgraded.

Some of the older pipes in the ring main are asbestos-cement, or AC pipe. The inclusion of asbestos in the pipe material can cause concern to people. The Department has checked with the Canterbury District Health Board's drinking water assessor who has confirmed that there are no risks to public health from the use of AC pipe in drinking water systems. This question was also considered by the World Health Organisation in its 1993 edition of the Guidelines for Drinking Water Quality, in which a conclusion was made that "There is therefore no consistent evidence that ingested asbestos is hazardous to health and thus it was considered that there was no need to establish a health-based guideline value for asbestos in drinking water."

There is some risk to the water system in the event of an earthquake. Tanks are at particular risk of damage which would leave the village without water until repairs can be made. All tanks are contained within existing flood protection structures, which should divert any spilled water safely.

Future demand

The 2000 Aoraki Mount Cook Village Asset Management Plan forecasts the peak demand to reach 11 litres per second by approximately 2017, based on an assumption of growth in demand of 6% per annum. Since 2000, there have been several new developments and some significant upgrades to existing businesses in the village, which were not included in the forecast model and are likely to have increased water use beyond the predicted growth rate of 6% per annum.

It's likely that there will continue to be expansion of facilities and development, both commercial and residential, in the village over the next 10 years. Aoraki/Mount Cook village is one of the iconic visitor sites in New Zealand, and it would be unrealistic to expect that the level of development in the village will remain static over this period.

In the event of new development in the village significantly increasing the demand for potable water and fire-fighting capacity beyond the existing level of growth, an earlier upgrade of treatment is likely to be required.

What we're planning to do

The department expects to upgrade the capacity of the UV water-treatment infrastructure within the next 10 years to cope with expected growth of water demand.

The existing plant, operating at the top of its range, could treat up to 11 litres per second. At the time of writing the village is using 7–9 litres per second at peak times (shown in Figure 8), and it's predicted that the 11 litre-per-second threshold will be reached during the next 10 years.

This current level of peak use of 7–9 litres per second indicates a higher rate of growth than predicted in the Asset Management Plan. The best prediction is that additional capacity will be required to be available between 2013 and 2015. This would require the water treatment capacity to be upgraded in the 2011–2012 period.

Infrastructure is already in place in the water treatment plant at Glencoe Stream in the form of valving for a second UV-treatment unit to be added in parallel with the existing UV unit. This was flagged in the 2000 Asset Management Plan as Stage 2 of the water-treatment plant.

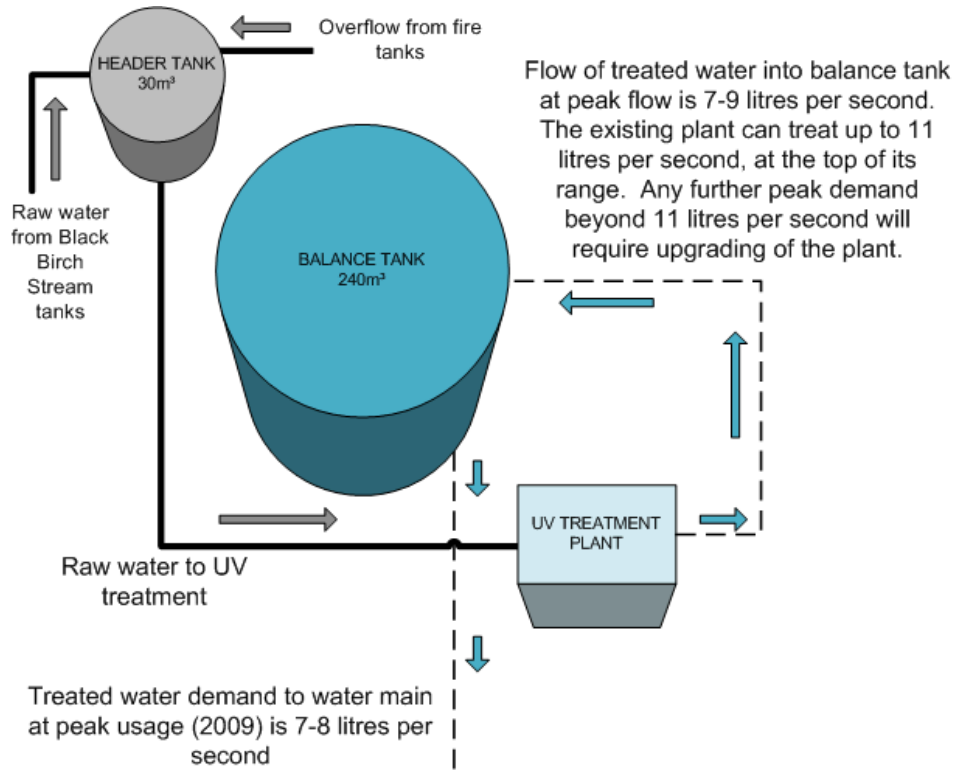


Figure 8 – Water system head works showing existing treatment capacity.

The department has obtained a concept plan and indicative costs to increase the capacity of the ultraviolet water-treatment plant from consultant engineer Rob Dewhirst, who has been extensively involved with the design and upgrade of the Aoraki/Mount Cook water system in the past. The concept being considered is as follows:

- A second UV unit will be installed in the existing UV treatment plant to increase the UV treatment capacity, with three potential configuration solutions considered.
- The preferred solution is to add a second UV unit into the existing plant, and an inline pump. One or both UV units would be operating depending on demand, with the pump used to pump water through both units for maximum flow.
- The indicative cost of this proposed upgrade is $75,000.
- Building a new treatment plant was not considered due to the cost. Filtration pre-treatment was also not considered as it appears the turbidity water quality requirement for UV can be met at the present time. If this were required, the upgrade cost would be higher.

Additional storage capacity for water for the lower village already exists with two 136,000-litre ferro-cement tanks. One is connected to the system for treated water storage for the lower village and to reduce the head pressure of the water. The other is presently not connected and both are structurally sound but require resurfacing. These are programmed for upgrade or replacement in 2009, and will both be connected to the reticulation system, giving the lower village a further 136,000-litre storage capacity.

The local body team intend to survey the condition of the water pipes using closed-circuit TV and make any required repairs in the next year. The pipes run beneath Bowen Drive which is due for a major upgrade as part of the

loop road upgrade planned for 2009/2010, so it would be prudent to make any required repairs before the road upgrade is completed. This may require some additional funding for any necessary remedial works.

The local body team will capture as-built information on the water reticulation network in the department's Geographical Information System (GIS).

Maintenance and operating

The system must be maintained and operated by local body staff to ensure that the agreed levels of service and legal requirements will be met.

The department has obligations as a Drinking Water Supplier under the Health (Drinking Water) Amendment Act 2007 No. 92. The water supply system needs to be managed by staff who have the necessary knowledge, training, and skills to ensure compliance with the Act.

The local body team includes staff who hold, or are in training towards, the National Certificate in Waste Water and Water Reticulation (level 3), and who are also members of the Water Operators Group. There is a requirement for staff to attend seminars and conferences to keep their qualifications valid. This requirement for staff to hold a qualification, professional membership, and attendance of necessary professional events is a further cost on the operation of the water system.

There is not a large candidate pool of people available in New Zealand with this qualification who could step in to work at Aoraki/Mount Cook village to operate the water system. The department therefore expects that any new staff coming into the water or wastewater operation positions will need to be trained. This is an operational cost of running the water system.

Operation of the water treatment and supply system is governed by the New Zealand drinking water standards. These standards contain instructions for regular testing of water, and maintenance intervals for key equipment (such as turbidity meters and the UV-treatment plant). Water samples are tested every two weeks by an accredited laboratory for *Escherichia coli* (*E. coli*) contamination (an indicator of faecal contamination).

The system must also be monitored and any issues attended to promptly. Maintenance must be carried out as required to ensure that the system remains in good working order and no issues are left which will deteriorate, resulting in either risks to public health or unnecessary expense in future repairs.

How it will be funded

The water supply and reticulation expenditure for the village will be recovered by user pays funding principles. Water meters will be used to measure the usage by the concessionaires and the departments' properties in the village.

The allocation of these expenses to be recovered will be determined by water-meter usage each quarter as a percentage of the total water-meter usage of the village. The share of expenses to be recovered will be invoiced quarterly.

Financial statements

Aoraki-Mt Cook Local Body
STATEMENT OF FINANCIAL PERFORMANCE
10 Year Annual Forecast to June 2019

WATER SUPPLY AND RETICULATION

	Forecast 2009/10	Forecast 2010/11	Forecast 2011/12	Forecast 2012/13	Forecast 2013/14	Forecast 2014/15	Forecast 2015/16	Forecast 2016/17	Forecast 2017/18	Forecast 2018/19
	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s
WATER SUPPLY AND RETICULATION										
Expenditure										
Personnel	39	40	41	42	43	44	45	47	48	49
Overheads	36	37	38	39	41	42	43	44	46	47
Operating	41	42	43	44	46	47	49	50	52	54
Depreciation	48	48	49	49	49	48	48	48	48	48
Finance	11	10	12	12	11	10	9	9	8	7
Total Expenditure	**$175**	**$177**	**$184**	**$186**	**$189**	**$191**	**$195**	**$198**	**$202**	**$206**

WATER ASSETS SUMMARY

	Year Capitalised	Expected Life	Cost Value	Accum. Depn	Annual Depn	NBV Jun-09
			$ 000s	$ 000s	$ 000s	$ 000s
LB Assets - Depreciation Levied			2,698	1,120	48	1,537
LB Assets - Depreciation Paid by DOC			283	47	5	231
Forecast Future Acquisitions						
Water Treatment Plant - Stage 2	2011/12	20	75		4	

Refer also to Section 12 for "Assumption and Notes" to financial information

8.2 Sewage reticulation and treatment

What we do

The village is provided with a reticulated wastewater service by the department. The reticulation network collects wastewater from 51 domestic and 10 commercial properties as well as nine other buildings, through three kilometres of sewer main pipes that feed directly by gravity into two treatment ponds on Black Birch Fan.

Figure 9 – Sewage treatment ponds, Black Birch Fan.

Why we do it

Sewage outflows from development within the park must be disposed of in an appropriate manner, for cultural, aesthetic, and public-health reasons. Sewage treatment and disposal must be appropriate for the size and scale of the village, balanced with the need to treat effluent to a standard appropriate in a national park.

Aoraki/Mount Cook National Park is of high significance to Ngāi Tahu with a tōpuni over Aoraki/Mount Cook. Although the tōpuni does not cover the village, Ngāi Tahu considers waters that flow from Aoraki to be tapu/sacred. The department must therefore take all practicable steps to minimise the chance of waste entering waterways.

The department must comply with the Resource Management Act 1991 requirement that resource consents are held for the activity of waste disposal. Consent has been obtained from Environment Canterbury for the disposal of treated human waste.

Managing the impacts of the activity

Treatment and disposal of sewage has high potential to impact upon the environment and public health if not done properly. The local body team must ensure that sewage from the village is disposed of in a way that will meet resource consent requirements and is culturally appropriate.

There is a balance to be met between the level of treatment given and environmental protection and the cost of infrastructure and operation of the system. Communities around the country have had to dig deep over recent years to cover the costs of upgrading ageing sewage-treatment systems to meet resource consent conditions.

It's important that the system at Aoraki/Mount Cook is sophisticated enough to comply with resource consents and to protect the environment, but not over-engineered such that stakeholders pay for a standard of treatment that is over and above what is required.

The department holds a resource consent from Environment Canterbury as follows:

CRC054829 To discharge effluent onto land: expires 24 August 2042.

Authorises the discharge to land up of to 610 cubic metres per day of treated domestic sewage effluent.

The system at the Aoraki/Mount Cook village is appropriate to the size and scale of the community and the landscape and the national park values that it protects from the effects of sewage disposal.

The oxidation ponds have just been upgraded and refurbished, with pond two yet to be commissioned. The village now has a system that meets current best practice for sewage treatment of this scale, and will allow the conditions of the resource consent to be met.

The resource consent requires that the department measure all inflows to the system and outflows to land. This is done through flow meters on the intake of pond one and the outlet of pond two.

Levels of service

The minimum level of service is imposed upon the village and department by the requirements of the Resource Management Act 1991 and the resource consent which is held.

The department will provide sewage treatment and disposal services to the village to the service standards outlined below:

Function	Level of service	Performance standards	How we will measure this
Reticulation system (reticulated system).	Sewage is conveyed away from each property.	Maximum outage length: 48hrs. Maximum outage: 1/yr/consumer. Response time: 18 hours.	Monitoring and recording of all outages.
Treatment and disposal (reticulated system).	Sewage is treated and disposed of in a manner that meets all resource consent conditions in a culturally sensitive manner.	All conditions of resource consent CRC054829 are met.	Compliance with resource consent conditions will be monitored by Environment Canterbury and internally by the local body team.
Information about assets.	As-built plans are up to date, and all infrastructure is mapped.	Water system information is maintained up to date and stored in the department's Geographic Information System (GIS). This will be completed by 30 June 2011.	Measurement of GIS information against actual assets.

Asset information

Summary

- Two ponds for treatment of sewage to resource consent conditions, including measurement of flow in and out of the ponds.
- 3,000 metres of reticulation pipes from sewer connections to ponds.
- Maceration pump, and control, monitoring and alarm systems at the Chalets.

Description of assets

Most businesses and residential dwellings are connected to the village reticulation and treatment system. Sewage is collected from connections at each building, and conveyed through a three kilometre reticulation network of 100mm asbestos-cement pipe and 100mm earthenware pipe to the oxidation ponds for treatment. Sewage from the Chalets is pumped to the main line via a maceration pump.

The sewer reticulation network has recently been pressure cleaned and resurveyed using closed-circuit TV, and most of the network is in good condition. Some necessary repairs have been made near the visitor centre and the last 200 metres to the ponds beneath Kitchener Drive by slip-lining the pipes. Work done on pond upgrades and pipe repairs is now shown in the financial statements in this LTCP.

One department residential property off Bowen Drive is on a standalone septic tank system due to its location being too low for gravity feed. Management of this system is the responsibility of the department and is not included in the local body function or levied to stakeholders.

The sewage ponds have been substantially upgraded over the last two years at a cost of $1.134 million in order to meet the standards required in the resource consent issued by Environment Canterbury. This work has just been completed and the second pond is still to be fully commissioned. Pond One settles and oxidises the waste, using aerators to help with oxidation. Pond Two contains a rock filtration system and native wetland plants to further treat effluent before discharge.

Some department facilities for visitors outside the village amenity area (Visitor Assets) are connected to the sewerage reticulation and treatment system, or make use of the oxidation ponds for disposal of waste. These are the public toilets in the day shelter in the village, and the campground and shelter at White Horse Hill (including a facility for climbers to empty 'poo pots') which are both connected into the sewerage pipe network. The pipeline from White Horse Hill (not shown in Figure 10) is managed by the department until it connects to the main sewer network.

The pond complex includes a facility for emptying and cleaning toilet drums, which are flown out from the high mountain huts in the Park. The department pays into the local body funding pool to cover the costs of all visitor assets using the waste-water treatment system.

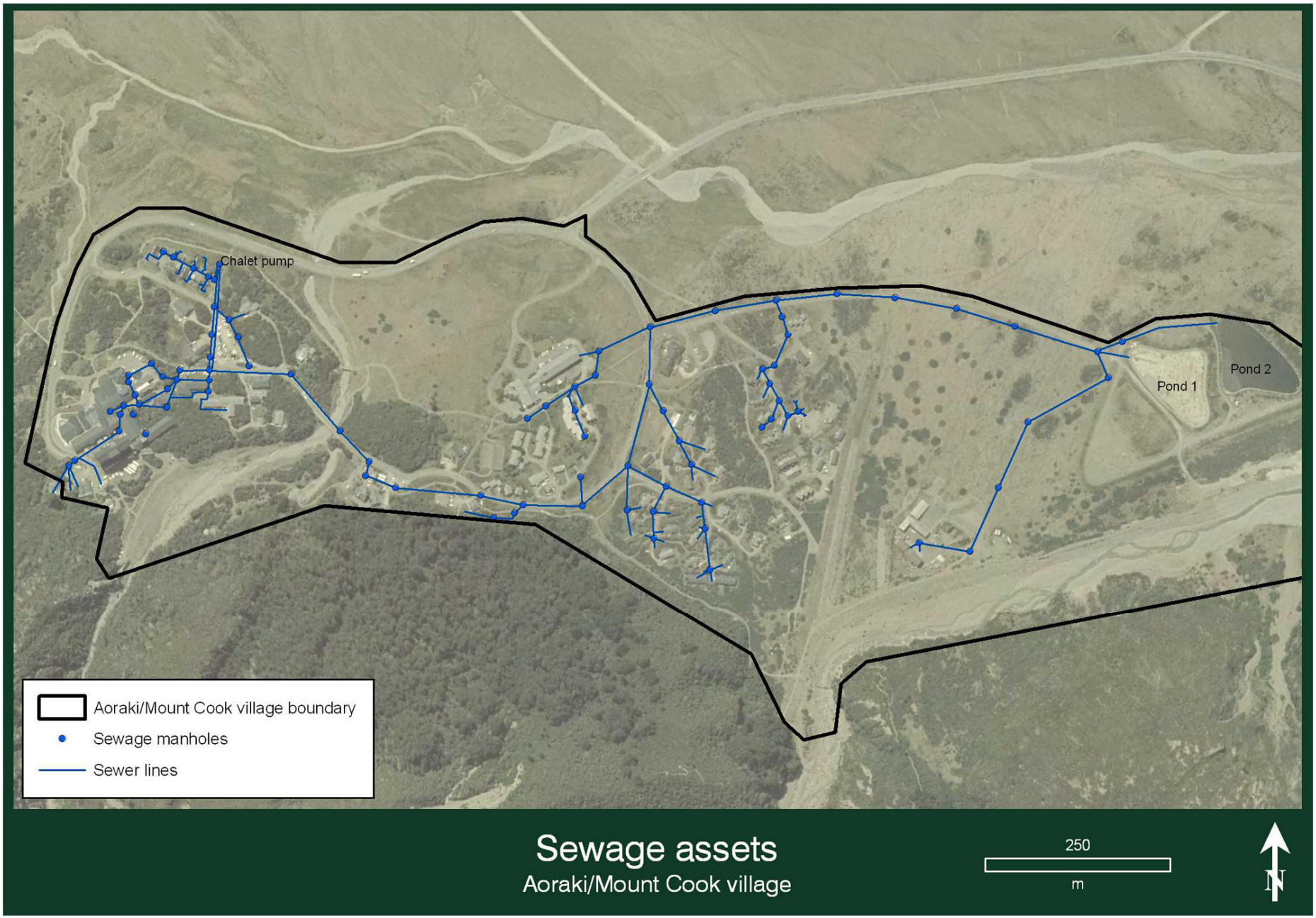


Figure 10 – The sewerage system

Significant risks and issues

The treatment pond upgrade has just been completed but has not yet been commissioned and tested. Pond two is currently empty and will remain so until pond one fills and settled effluent begins to flow into the second pond for treatment.

Future demand

The treatment plant is now upgraded to a national best practice standard. The capacity of the treatment plant is expected to last beyond the term of this plan without further upgrade being required.

What we're planning to do

The new sewage treatment system will be fully commissioned as the ponds naturally fill up. No further major work or upgrade to the sewage system is anticipated over the period of this LTCP.

Maintenance and operating

The sewage disposal system must be maintained and operated by suitably qualified local body staff to ensure that the agreed levels of service are met.

The local body team contains staff who hold, or are in training towards, the National Certificate in Waste Water and Water Reticulation (level 3), and who are also members of the Waste Water Operators Group. There is a requirement for staff to attend seminars and conferences to keep qualifications valid. This requirement for staff to hold a qualification, professional membership and attendance of necessary professional events is a further operational cost on the operation of the water system. The department has an expectation that, although all attempts will be made to recruit qualified personnel, any new staff members coming into this role will require to be trained, and this is a budgeted operational cost of operating the sewerage system.

Key components, such as pumps and flow into and out of the ponds, are monitored at all times by a centralised control system. This system will alert local body staff in the event of an issue, e.g. a blockage of the Chalet pump.

How it will be funded

The sewerage reticulation and treatment expenditure for the village will be recovered by user pays funding principles. Water meters will be used to measure the usage by the concessionaires and the department's properties in the village.

The allocation of these expenses to be recovered will be determined by water meter usage each quarter as a percentage of the total water meter usage of the village. The share of expenses to be recovered will be invoiced quarterly.

Aoraki-Mt Cook Local Body
STATEMENT OF FINANCIAL PERFORMANCE
10 Year Annual Forecast to June 2019

SEWAGE RETICULATION AND TREATMENT

	Forecast 2009/10	Forecast 2010/11	Forecast 2011/12	Forecast 2012/13	Forecast 2013/14	Forecast 2014/15	Forecast 2015/16	Forecast 2016/17	Forecast 2017/18	Forecast 2018/19
	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s
SEWAGE RETICULATION AND TREATMENT										
Expenditure										
Personnel	12	12	12	13	13	13	14	14	15	15
Overheads	9	9	9	9	10	10	10	11	11	11
Operating	7	7	7	8	8	8	8	9	9	9
Depreciation	40	40	40	40	40	39	39	39	39	39
Finance	43	42	41	40	39	37	36	35	34	33
Total Expenditure	**$110**	**$110**	**$110**	**$109**	**$109**	**$108**	**$108**	**$108**	**$108**	**$108**

SEWAGE ASSETS SUMMARY

	Year Capitalised	Expected Life	Cost Value	Accum. Depn	Annual Depn	NBV Jun-09
			$ 000s	$ 000s	$ 000s	$ 000s
LB Assets - Depreciation Levied			2,246	552	38	1,606
LB Assets - Depreciation Paid by DOC						
Forecast Future Acquisitions						
Stage 2 - Oxidation Ponds	30/06/09	40	536		13	
Village Sewage Piping Part Upgrade	2009/10	40	74		2	

Refer also to Section 12 for "Assumption and Notes" to financial information

8.3 Flood, debris flow, and avalanche protection

What we do

Aoraki/Mount Cook village is situated in a geologically active area, and is at significant risk from flooding and debris flow hazard from Black Birch Stream, Glencoe Stream, and Kitchener Creek, as well as avalanches from slopes above the village. Various structures have been put in place over a number of years to protect the village from flooding, debris flows, and avalanches.

The flood and debris protection works have been installed in Black Birch Stream, Glencoe Stream, and Kitchener Creek, and include both structures and monitoring systems.

The local body team organises the management and monitoring of the flood and debris protection works and is responsible for ensuring that the procedures designed by consulting engineers for the management of this hazard are followed.

Figure 11 – Glencoe Stream flood protection – rock stop banks and concrete training wall (left).

Why we do it

The department, as the land manager of the park on behalf of the Crown, has statutory obligations around managing natural hazards. The following section outlines the background and history behind the natural hazards and existing mitigation measures to protect the Aoraki/Mount Cook village.

Early history of the park

Aoraki/Mount Cook National Park was established in 1953 with the first National Parks Act. Before this there had been a number of reserves under specific gazettal notices dating from the late 1800s. The current Hermitage site, eventually to evolve into Aoraki/Mount Cook village, was always an integral part of these processes and became a part of the park in 1953.

The first Hermitage was constructed in 1884 at White Horse Hill and was destroyed by flooding in 1914. In the same year the second Hermitage was opened on the present site, which is a terrace obviously picked to avoid the known flood hazard. Construction had commenced in 1911. This Hermitage was destroyed by fire in 1957. The third and current Hermitage was built on the same site, and was operational by May 1958. Up till this time the village comprised the Hermitage itself and ancillary buildings for staff accommodation.

During the 1950s and 1960s, there was additional building activity by the Department of Lands and Survey, i.e. housing for ranger staff and a Park Headquarters. There were also the beginnings of other resident concessionaire activities, i.e. ski planes and the airline. The 1970s saw the introduction of a resident guiding company, youth hostel, school, shop, and post office. Black Birch Fan was developed for staff accommodation, both houses and blocks of single units. In the mid-1970s, an additional wing (the Wakefield wing) was constructed at the Hermitage. A new youth hostel and public shelter were built in the mid-1980s.

Statutory requirements

The National Parks Act 1980 introduced the concept of amenities areas. The village has been managed as an amenity area since then and was finally gazetted as such in 1999.

Through the 1960s and 70s, when development was occurring, the Crown was exempt from many local authority statutory requirements especially in regard to building permits. The only requirement was that the local authority be notified. Within the park the private sector was not exempt from these requirements.

Flood hazards identified

The first major test was in 1985 when the Mackenzie District Council, in conjunction with the Waitaki Catchment Commission, declined a building permit to the Youth Hostel Association until additional river protection work in Black Birch Stream was completed. This additional stop bank was financed by the Crown, and benefited several agencies buildings on Black Birch Fan. The new youth hostel was completed in 1987.

The Building Act 1991 ended the Crown's exemption from statutory building requirements.

A complex situation arose in 1995 when the Mount Cook Residents Association applied for a building consent from the Mackenzie District

Council to construct a community hall on Black Birch Fan adjacent to the Mount Cook School. The Council declined to issue the consent except under Section 36/2 of the Building Act 1991 because of the perceived risk of flooding or debris flow from Black Birch Stream. In the case of such an event, under Section 36/2 all liability would fall on the landowner, which in this case was the Crown (being a national park).

The department had no intention of accepting liability. There had been major events in Black Birch Stream in December 1979 and January 1994. On both occasions the lower village residents were evacuated as the structural mitigation only just contained the water flow.

With the declining of the building consent for the community hall, there was an immediate focus on potential risk throughout the village. For the first time, Glencoe Stream was identified as a potential hazard to the Hermitage complex. Kitchener Creek, immediately north of the village, previously had potential to spill over towards the Hermitage (Figure 12 – the Boxing Day flood of 1957). The catchment also had a history of being a major avalanche path.

Village upgrading

At the same time, the department had begun a major process of upgrading a very 'tired' village to again become a showpiece as a national park entrance and tourist destination. This process was originally driven by the then Minister of Conservation and the Aoraki Conservation Board. This was a consultative process involving the department, Mackenzie District Council, village stakeholders, non-resident concessionaires, Mount Cook Residents Association, Ngāi Tahu, the Royal New Zealand Forest and Bird Protection Society, and Federated Mountain Clubs. There was also a core steering group.

Hazard assessment

The process outlined above was well and truly diverted while the implications of Mackenzie District Council refusing to issue building consents, except under Section 36/2 of the Building Act 1991, were dealt with. What followed in 1995 was the completion of a major report: 'Natural Hazard Assessment for Mount Cook/Aoraki Village and Environs' by MJ McSaveney, TRH Davies & JD Gough, published by the Institute of Geological & Nuclear Sciences Limited (a Crown Research Institute).

They came up with a number of recommendations, a main one being that they felt unqualified to report on the hazard potential of Glencoe Stream, and indicated that overseas expertise in the alpine environment should be obtained.

A Canadian consortium, EBA were contracted to provide a hazard assessment and concept plans specifically for the Glencoe catchment. Meanwhile Royds Consulting (later to become Montgomery Watson) produced Geotechnical Report No. 2, Mount Cook village, 1996. This was a supplementary study to the IGNS 1995 report, and its purpose was to carry out preliminary design, estimate quantities and costs, and assign priorities to the work elements. The priority was Black Birch Fan to resolve the issue of the Mackenzie District Council withholding a building consent for the community hall.

EBA's proposals included a training wall and major stop bank on the northern side of Glencoe Stream to protect the Hermitage complex, a stop bank on the southern side of Glencoe Stream to protect the village centre, and a stop bank below Bowen Bush to protect Glencoe Lodge. The proposed structural mitigation also meant major alterations, and re-routing of services such as water supply and electrical cables.

Montgomery Watson was used by the department to complete all the plans and specifications, obtain resource consents from Canterbury Regional Council, and run the tender process for the contract. Works Civil Construction (now Works Infrastructure) accepted the tender and commenced work on site in April 1999.

Following major consultation and negotiation, the project was funded by the owners of the Hermitage complex, the major village concessionaire. This involved a trade-off with the Crown, and a subsequent agreement to enable the Hermitage owners to progress with a major development proposal within a planning envelope.

The geotechnical work was completed in May 2000 at a cost of $2 million, including the costs of earlier reports and engineering consultancy. Contributions were made by stakeholders towards paying off the interest and principal costs of the loan for the geotechnical works with approximately $720,000 being paid off the principal of the loan.

The geotechnical works were purchased from the owners of the Hermitage by the Crown in 2007, and are now managed by the department. At the time of purchase, the residual value of the assets was $1.1 million. Since purchase by the Crown, the department has paid the full costs of the capital charge and depreciation on the assets in recognition of the past contributions made by village stakeholders.

Figure 13 shows the areas within the village that are designated as flood zones with the existing flood protection works. These are the floodways and pooling areas that are designed into the geotechnical flood protection works (shown in Figure 14).

Figure 12 – Aoraki/Mount Cook village following the Boxing Day 1957 flood

Managing the impacts of the activity

The main impacts of the protection works are from the building of dykes and disturbance of natural processes in river and stream beds.

The department holds resource consent from Environment Canterbury as follows:

CRC981164 To place and reconstruct dykes in Black Birch and Glencoe Streams; to remove a footbridge over Glencoe Stream; and to excavate sand, gravel, and other natural material from the beds of Black Birch Stream, Glencoe Stream, and Kitchener Creek, at or about map references H36:7634-1437, H36:7589-1514 and H36:7595-1548: expires 25 February 2033.

Conditions of the resource consent ensure that the activity is done in a sustainable manner. Impacts on village residents from noise of rock dredging and construction are managed by time limits on these activities, which are permitted between the hours of 7 am and 8 pm only.

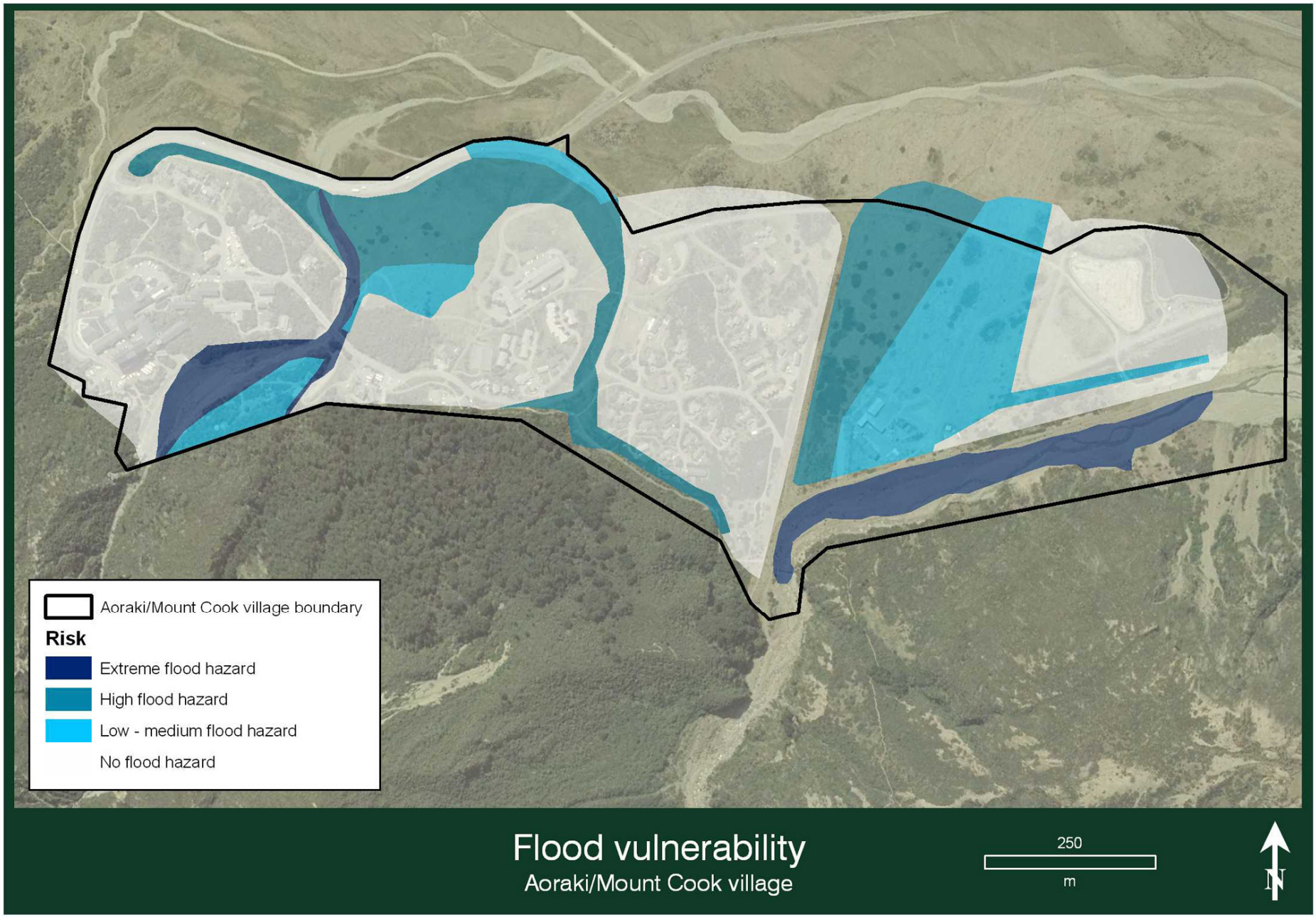


Figure 13 – Village flood zones, showing the designed flood and debris flow routes and runoff/pooling areas

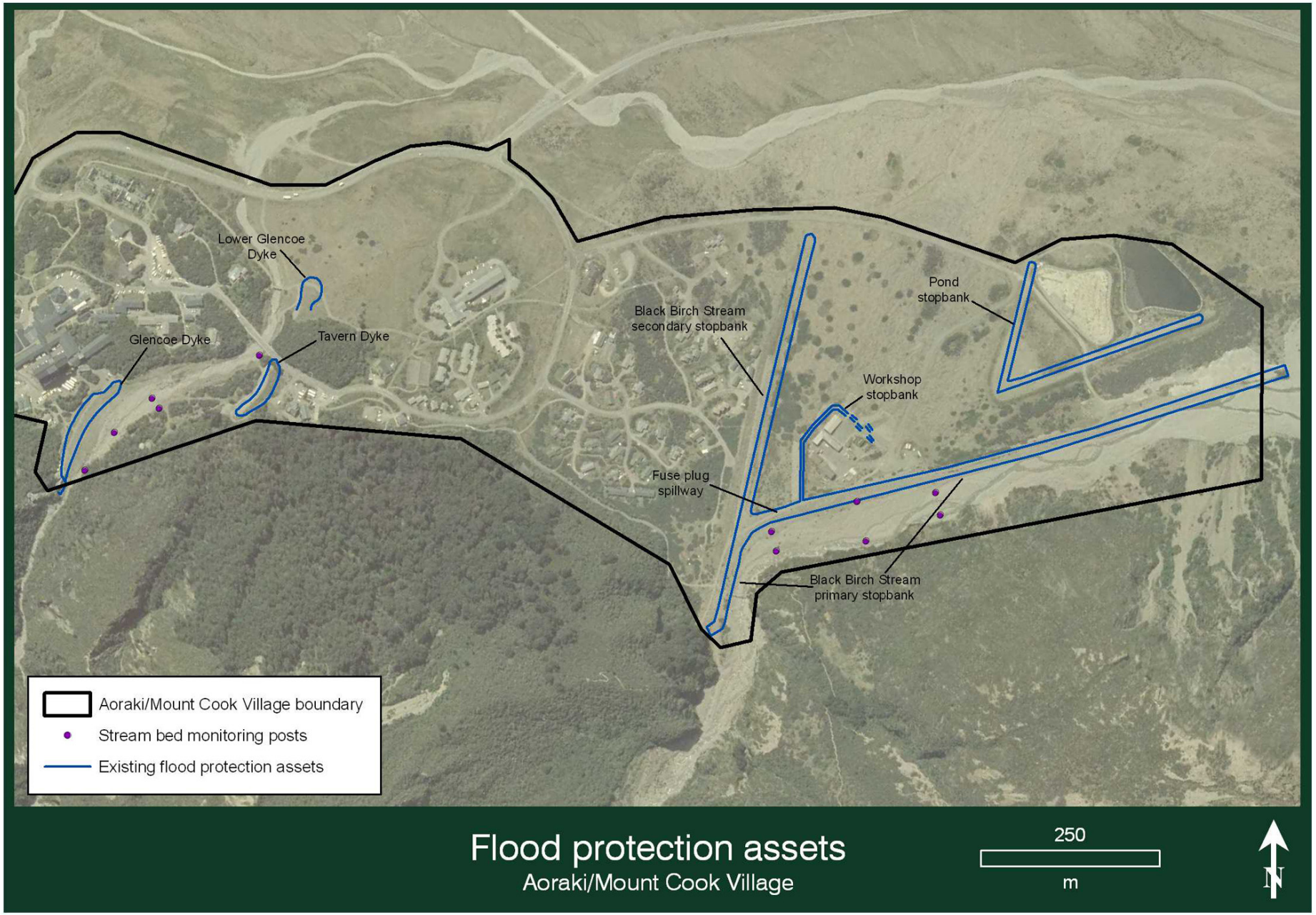


Figure 14 – Flood-protection structures

Levels of service

The department, through the local body, will manage the risk of flooding and debris flows to the service standards outlined below. The current level of service (which is the intended level of service) provided by the assets relates to the current environment. The Aoraki/Mount Cook region is dynamic geomorphically, and changes in climate or catchment conditions could change the level of service provided.

Function	Level of service	Performance standards	How we will measure this
Protection of the village from flood and debris-flow events.	To prevent at least a 1:200-year flood and debris-flow event in the Glencoe catchment from causing damage in the village.	Maintenance and monitoring of geotechnical protection works and geological hazards will be carried out as per the Standard Operating Procedure for Aoraki/Mount Cook Village Flood and Debris Flow Protection Works. All waterway and floodway management will be in accordance with the recommendation of the hazard assessment and geotechnical reports.	Events at these levels do not cause any damage in the village and are contained by Flood and Debris Flow protection works. Note: Events larger than these levels may cause damage despite the protection work.
	To prevent at least a 1:100-year flood event and a 1:50 year debris-flow event in the Black Birch catchment from causing damage in the village.		
	To prevent at least a 1:100-year flood and debris-flow event in the Kitchener, Hermitage Creek and/or Governors Bush catchments from causing damage in the village.		

Function	Level of service	Performance standards	How we will measure this
Protection of the village from avalanches.	To provide protection from avalanches from the Kitchener and Black Birch avalanche paths for avalanches up to 1:300-year events.	An avalanche monitoring and assessment SOP (along the lines of the flood-monitoring SOP) is developed by 1 June 2010. An assessment of the likely effectiveness of the Kitchener protection works is to occur by 1 November 2009 and implementation of its recommendations started by 1 June 2010. Monitoring and recording of avalanche events in these two paths for all events greater than size three will occur.	Events at these levels are contained by geotechnical protection works and do not cause any damage in the village.

Asset information

Summary

- Concrete training wall at Glencoe Stream to protect the Hermitage and water tank and treatment infrastructure.
- Concrete training wall behind the old Alpine Guides base, to protect the buildings on the true right of Glencoe Stream around the petrol pumps, old shop, and Alpine Guides base.
- Rock stop banks and dykes in Glencoe Stream, Black Birch Stream, and Kitchener Creek to protect the village from flood, rock debris and avalanche flows.
- Fuse-plug spillway and secondary rock protection dykes below the village to contain any spilled flows.

Description of assets

Flood and debris protection works in the Black Birch stream comprise a primary stop bank following the Black Birch Stream, and secondary stop banks to the southeast of the lower village, and around the department's workshop. Further stop banks around the oxidation ponds are designed to protect the ponds in the event of the primary stop bank being breached.

The primary stop bank at Black Birch Stream has a weak spot where it intersects the secondary stop bank. This is designed as a 'fuse plug' spillway where water will be diverted into the secondary channel if there is a risk that the primary stop bank could be breached.

Flood and debris protection works in the Glencoe Stream comprise of a concrete training wall (visible to the left of the water tanks in Figure 3), and rock wall dykes extending down each side of the stream way to the road bridge in Bowen Drive (visible in the foreground of Figure 3). There is a lower dyke on the true right of the stream below Bowens Bush which prevents water and debris flows from getting to the Hermitage Glencoe Wing. The Glencoe dyke system is designed to constrain flows to the stream bed until below Bowen's Bush where the water is intended to flow out the waterway towards Lower Terrace Road and to pool on the lower areas around Lower Terrace Road and the Glencoe Access Road.

A concrete training wall was built in 1984 at Governors Bush, behind the old Alpine Guides base, to protect that building and the petrol pumps.

Rock protection dykes were built in Kitchener Creek in 1957 following the Boxing Day storm (shown in Figure 12), which caused flows to be diverted towards the Hermitage. These were described by MWH consultants when assessed in 2003 to be two to three `indistinct' stop banks several hundred metres in length and parallel to the main stream channel.

Significant risks and issues

An avalanche hazard exists on the Kitchener Fan. The existing stop bank has had several size 4 avalanche events overtop it in the last 30 years. Avalanche debris from size 5 avalanche events have potential to affect the Hermitage, Chalets, Visitor Centre, and Old Mountaineers' Café/Bar.

Hazard from avalanche also exists in the Black Birch catchment. It's expected that the existing flood and debris protection works should contain avalanche flows from Black Birch Stream.

Future demand

The village and protection works have been planned with designated flood pathways and floodwater and debris pooling areas. These must be retained for this purpose in a natural undeveloped state. Any significant change to the layout of the village could potentially require changes to the flood-protection works.

No such change to the village layout is planned or anticipated in the next 10 years.

What we're planning to do

We're planning further investigation of the avalanche hazard from Kitchener Creek. This is described under Levels of Service.

If a major upgrade or repair of any of the protection works is required, the department will seek funding from government.

Maintenance and operating

Maintenance and inspection requirements for the geotechnical protection works are set out by the Standard Operating System (SOP) for the scheme. This is written for the department by MWH New Zealand, and these requirements are carried out by local body staff and/or consulting geologists or engineers as specified by the SOP.

Every six months the system is checked for visible damage and the level of streambed debris build-up is checked. Every five years, the scheme should be inspected by engineers and geologists, and the procedures reviewed. A helicopter survey of the upper catchments, including an experienced engineering geologist, is required every five years to assess, film, and map the debris load which could potentially come down as a debris flow.

Other maintenance and operating is reactive, depending on storm or earthquake events. The six-month monitoring process must be completed within one week of a flood in excess of a five-year return period. A review of the scheme is also recommended following any significant flood, debris flow or earthquake in which overtopping or extensive damage occurs to any of the primary structures.

Build-up of debris in the beds of the Black Birch and Glencoe Streams is removed as required to maintain the capacity of the streambeds to contain additional debris and flood flows in a flood event.

How it will be funded

The flood, debris flow, and avalanche protection expenditure for the village will be recovered by general recovery funding principles. The capital value (QV valuations) of the concessionaires and the departments' properties will be used to determine the allocation of expenses recovered.

The allocation of these expenses to be recovered will be determined by the capital value of the properties as a percentage of the total capital value of the occupied properties in the village. The expenses to be recovered will be invoiced quarterly.

Aoraki-Mt Cook Local Body
STATEMENT OF FINANCIAL PERFORMANCE
10 Year Annual Forecast to June 2019

FLOOD, DEBRIS FLOW AND AVALANCHE PROTECTION

	Forecast 2009/10	Forecast 2010/11	Forecast 2011/12	Forecast 2012/13	Forecast 2013/14	Forecast 2014/15	Forecast 2015/16	Forecast 2016/17	Forecast 2017/18	Forecast 2018/19
	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s
FLOOD, DEBRIS FLOW AND AVALANCHE PROTECTION										
Expenditure										
Personnel	1	1	1	2	2	2	2	2	2	2
Overheads	8	9	9	9	9	9	10	10	10	10
Operating	17	18	18	18	19	19	20	20	21	21
Depreciation	1	1	1	1	1	1	1	1	1	1
Finance	0	0	0	0	0	0	0	0	0	0
Total Expenditure	**$28**	**$29**	**$29**	**$30**	**$30**	**$31**	**$32**	**$33**	**$33**	**$34**

FLOOD MONITORING ASSETS SUMMARY

	Year Capitalised	Expected Life	Cost Value	Accum. Depn	Annual Depn	NBV Jun-09
			$ 000s	$ 000s	$ 000s	$ 000s
LB Assets - Depreciation Levied			81	36	1	45
LB Assets - Depreciation Paid by DOC			2,961	175	30	2,762
Forecast Future Acquisitions						

Refer also to Section 12 for "Assumption and Notes" to financial information

8.4 Solid-waste disposal

What we do

The department provides a solid-waste removal service for the Aoraki/Mount Cook village. A significant upgrade of the solid-waste management system is planned for the 2009/10 financial year.

On completion of this project, the village will have a waste management system that will mesh with the region's future waste management streams. It will maximise the economy of scale possible in the village and be flexible in its use of available transport providers, making significant cost savings. Once fully operational, the new system will reduce transport costs, manpower requirements, and waste handling. It will also provide a saving in carbon emissions by maximising waste tonnage per kilometre travelled. This system upgrade will be a significant improvement in resource recovery from the existing waste stream.

Figure 15 – Existing solid-waste truck and workshop facility

Why we do it

Due to the statutory requirements of the Conservation and National Parks Acts and the operational requirements of managing and doing business in a national park, the department is mandated to provide an environmentally sustainable solid-waste disposal and recycling recovery system.

Solid waste has the potential to cause significant pollution and visual impact in the Park. The isolation of Aoraki/Mount Cook means that transporting waste has potential to generate high carbon emissions. The present system also requires significant manpower to sort the waste which will be reduced by the new system.

The proposed solid-waste collection and removal system will ensure that it is dealt with appropriately and in a sustainable manner. The Mackenzie District Council has a target of achieving zero residual waste by 2014. The Aoraki/Mount Cook village solid-waste system will go a long way towards the village meeting this target by enabling all recyclable and compostable waste to be removed from the waste stream going to landfill.

Managing the impacts of the activity

The largest impact of solid-waste removal is the level of transport required to move waste from the village to landfill or recycling facilities. Use of the proposed compactor system to compress waste, and ensuring that loads are full will reduce the amount of trips required for waste to landfill and the recycling plant. This will reduce carbon emissions.

The planned new system is current best practice for solid-waste disposal. There is potential to work together with other councils using this system to achieve efficiencies and cost savings for all involved. Neighbouring councils have been approached by the department and the Hermitage (as the largest concessionaire and contributor in the village) to see if they are interested in participating.

The contribution to the cost of the proposed solid-waste management service will be mandatory for all concessionaires in the village, to avoid impacts from the use of alternative systems. The proposed system is designed to mitigate and manage the effects of waste storage and transportation out of the village in the most environmentally friendly and cost-effective manner.

Allowing stakeholders to opt-out would undermine the integrity of the new system and increase the environmental footprint of solid-waste management in the village as a whole.

Levels of service

The department will supply waste disposal and removal to the service standards outlined below.

Function	Level of service	Performance standards	How we will measure this
All solid waste is removed from the village to the appropriate waste stream.	To provide a solid-waste disposal service for the village.	Waste is removed from the village to the appropriate waste stream.	Monitoring of waste system. Ensure that waste is directed to the correct destination.
Minimisation of solid waste to landfill.	Encourage recycling and reuse, and waste minimisation at source.	Amounts of solid waste to landfill as a proportion of total waste reduces over the 10-year period.	Monitoring of size and frequency of loads to landfill.
Hazardous waste.	No facilities will be provided for the disposal of solid waste.	Not applicable.	Not applicable.
Recycling and re-use.	To encourage recycling and reuse within the community by providing a way for the community to recycle and reuse.	Amounts of recyclable and compostable waste as a proportion of total waste increases over the 10 year period.	Measurement of recycling volumes. Monitoring of waste going into the landfill to ensure that does not include recyclable waste.
Illegal dumping.	To respond to complaints of illegal dumping, and ensuring it's removed.	Illegally dumped waste within the village is removed within one day.	Reports of illegal dumping will be kept.

Asset information

Summary

Current assets:

- Park and village solid-waste bins.
- Paper and cardboard press.
- Roller doors and part of workshop buildings.
- Rubbish truck (Ford N1017 9T).

Proposed assets (from 2009/10):

- Park and village solid-waste bins.
- 4 x twist lock compactable solid-waste containers.
- 2 x 50-degree low-loading trip trailers.
- 1 x 'Junior' residual waste compactor plus electronic pressure control system.
- 1 x weighbridge.
- Waste Transfer Station weatherproof building.
- Putrescible collection vehicle (purchased from Aoraki Mount Cook Village Limited – the Hermitage).
- 6 glass mini-skips (purchased from the Hermitage).

Description of assets

The existing local body assets for solid-waste disposal consist of a waste truck which is due for replacement, part of the workshop structure, a press for paper and cardboard, and bins for rubbish collection.

The truck, use of the workshop, and the existing paper press will no longer be required under the new system. The existing park and village bins will still be used.

The proposal will use a new purpose-built facility, located on Kitchener Drive (Figure 16), which will use a compactor-ram system to push waste into a purpose-built container, locked onto a tip trailer. Once the container reaches the maximum acceptable weight for road transport, it will be transported to the Redruth waste facility in Timaru by any available cartage contractor. The containers can take up to 38 cubic metres capacity or the maximum acceptable weight for road transport.

Recyclable waste (plastics, tin, and aluminium) will also be transported to Redruth by a similar system for automated sorting. Glass will be stored in existing mini-skips for transport out of the village as needed. Putrescible waste will be stored in mini-bins and transported to the Mackenzie District Council facility at Twizel using the Hermitage's compactor vehicle. Transport is anticipated to be needed every two weeks for waste and every three weeks for recycling. The new system will require fewer trips to be made per cubic metre of solid waste.

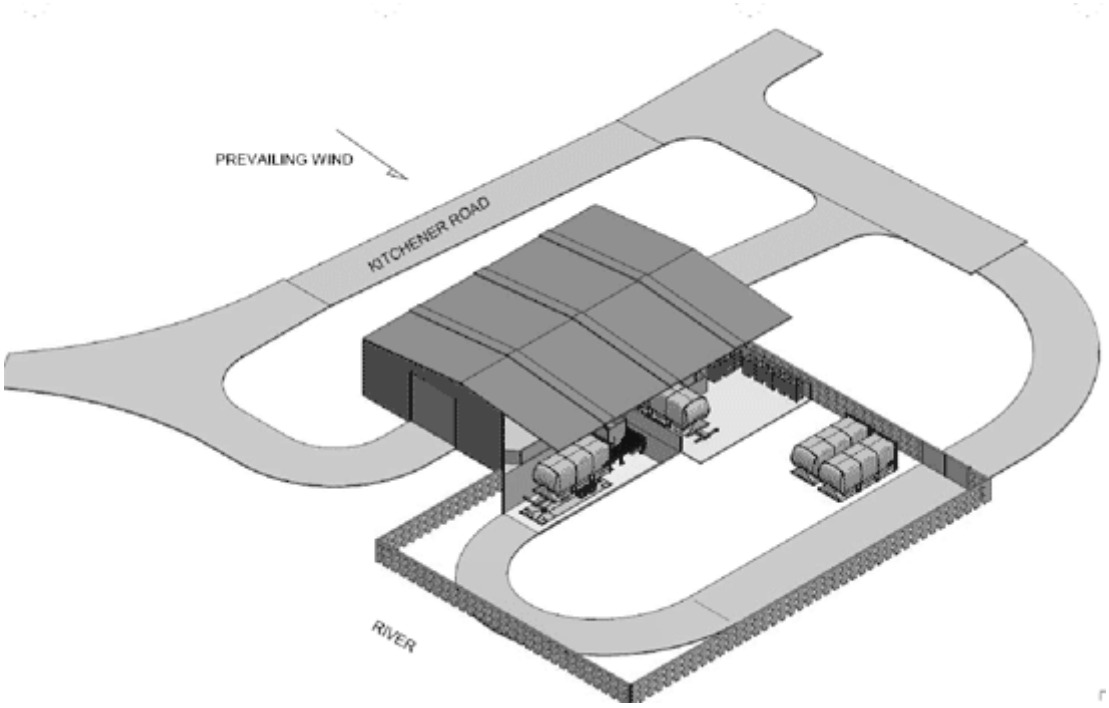


Figure 16 – The planned Resource Recovery Centre

Significant risks and issues

No risks or issues have been identified at this time.

Future demand

The system to be put in place in 2009/10 is expected to meet the foreseeable needs of the village for the term of this plan.

What we're planning to do

After the upgrade planned for 2009/10 is complete, no further significant investment is anticipated.

Maintenance and operating

No significant maintenance is anticipated in the next three years, as most of the plant associated with solid waste will be almost new. Existing equipment will be maintained as required until the new waste system is in operation. Operational activities will ensure that the agreed levels of service are met.

How it will be funded

The solid-waste disposal expenditure for the village will be recovered by user pays funding principles. The quantity of bins produced will be used to measure the usage by the concessionaires and the department's properties in the village.

The allocation of these expenses to be recovered will be determined by the quantity of bins each quarter as a percentage of the total quantity of bins used by the village. The share of expenses to be recovered will be invoiced quarterly.

Aoraki-Mt Cook Local Body
STATEMENT OF FINANCIAL PERFORMANCE
10 Year Annual Forecast to June 2019

SOLID-WASTE DISPOSAL

	Forecast 2009/10	Forecast 2010/11	Forecast 2011/12	Forecast 2012/13	Forecast 2013/14	Forecast 2014/15	Forecast 2015/16	Forecast 2016/17	Forecast 2017/18	Forecast 2018/19
	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s
SOLID-WASTE DISPOSAL										
Expenditure										
Personnel	31	32	33	34	34	35	36	37	38	40
Overheads	37	38	39	40	41	42	43	43	45	46
Operating	50	52	53	54	55	56	58	59	61	62
Depreciation	17	20	19	19	19	19	19	19	19	19
Finance	20	19	18	18	17	16	16	15	14	14
Total Expenditure	**$154**	**$160**	**$162**	**$164**	**$167**	**$169**	**$171**	**$174**	**$177**	**$180**

Note: It is fully expected that the new waste management system will generate both personnel and operating savings . However, this has not been reflected in the 10-year forecast until the scope of the capital project is fully finalised and the total extent of expected savings are known.

WASTE ASSETS SUMMARY

	Year Capitalised	Expected Life	Cost Value	Accum. Depn	Annual Depn	NBV Jun-09
			$ 000s	$ 000s	$ 000s	$ 000s
LB Assets - Depreciation Levied			205	168	8	29
LB Assets - Depreciation Paid by DOC						
Forecast Future Acquisitions						
New Refuse System	2009/10	30	530		18	

Refer also to Section 12 for "Assumption and Notes" to financial information

8.5 Roading

What we do

Development in the village has created a set of roads to provide access for residents and the public to businesses within the village and to the residential area. Roads are designed to maximise the use of residential sites, meet the needs of emergency services, facilitate snow clearing, avoid build-up of ice or scouring where possible, remain usable during storms with a 1 in 10-year flooding frequency, blend into the natural landscape, and be adequately lit where necessary.

Roads comprise several elements: the surface (tar seal or gravel), the foundation that provides a solid base to the road, and water control (storm water drains and sumps). This activity also includes signage, storm water management, and traffic control/calming.

Who pays for what?

The department's local body team manages and maintains all roads, footpaths, and street lighting in the Aoraki/Mount Cook village. Roading is funded through three different streams – department national park/visitor funding; department covering full costs of some local body roads; roads levied to stakeholders.

The department has decided that roads used by visitors to move around the village and to access the park will be managed as national park visitor assets.

Bowen Drive, Terrace Road, and Larch Grove Road (the 'loop road') are designated as national park rather than local body assets. Costs of the management of these roads are paid by the department as part of park management, and are not levied to stakeholders. Also, some minor local body roads, used primarily for the servicing of the water system, are not levied to stakeholders.

Figure 17 – Village loop road (Bowen Drive)

Why we do it

People need well-maintained roads to easily and safely get around the village. Roads are maintained to minimise hazards from the poor condition of road surfaces or unnecessary build-up of ice and snow in winter.

Hard surfaces such as roads need management of runoff in heavy rain. Sealed roads have storm water management in the form of kerb and channel, drains, and sumps.

Some roads within the village are used by both residents and visitors. In the past, all roads were managed and funded through the local body, but now funding of roads is split between local body and general department park management work.

Managing the impacts of the activity

Environmental impacts of roading activity in the village are minimal. Any new road in the residential area or for access to any new commercial operation will need to have its effects assessed and mitigation measures will need to be put in place first. This will be managed as part of the concession application process.

Financial impacts of roading work will be minimised where possible by working with the New Zealand Transport Authority, and planning roading works in the village and around the park to combine projects. This will save considerable money for village stakeholders by sharing some of the fixed costs such as equipment relocation fees (estimated to be in the order of $20,000–30,000) with other works carried out by both the department and the New Zealand Transport Authority.

The department holds a resource consent from Environment Canterbury for the discharge of storm water from the car parking area around the Visitor Centre (**consent CRC084612**: expires 8 July 2043).

Levels of service

There are three intended levels of service for roading in the Aoraki/Mount Cook village: *Primary access*, *Village access*, and *Utility access*. These levels of service are summarised as follows:

Service group	Traffic passage	Vehicle size	Traffic speed
Primary access	Two-way access for up to 3,000 vehicles per day meeting NZS 4404:1981 for all weather conditions. Access guaranteed only during daylight hours during snow. Snow clearing is done only in daylight hours (6am – 7pm).	All vehicles up to 50-seater buses.	Safe travel for all vehicles up to 50 km/hr subject to weather conditions.
Village access	Two-way access for up to 100 vehicles per day for all weather conditions. Access guaranteed only during daylight hours during snow. Snow clearing is done only in daylight hours (6am – 7pm).	All vehicles up to refuse truck size.	Safe travel for all vehicles at up to 50 km/hr subject to weather conditions.
Utility access	One-way access for fewer than 10 vehicles per day.	Four-wheel vehicles only.	Safe travel for all vehicles at up to 20 km/hr subject to weather conditions.

Service group	Parking	Signage	Snow clearing	Street lighting
Primary access	Adequate parking at the village which enables reasonable access to key visitor facilities.	Adequate parking at the village which enables reasonable access to key visitor facilities.	Snow clearing staff on 45-minute standby for snow clearing between the end of May to mid-September.	Roads will be lit to comply with AS/NZS1158. Any new lighting will be designed to minimise upward light spill.
Village access	No roadside parking provided.	Intersections controlled where roads meet primary access roads. Road names.	Snow-clearing staff on 45-minute standby for snow clearing between the end of May to mid-September.	Roads will be lit to comply with AS/NZS1158. Any new lighting will be designed to minimise upward light spill.
Utility access	No roadside parking provided.	No signage.	Marginal, or no access, during snow.	No lighting.

Roads in the village are managed to the following levels of service.

Road	Intended level of service	Comments / Issues
Terrace Road	Primary access	Included in planned loop road upgrade. Managed as part of national park management and funded by the department.
Lower Bowen Drive		
Upper Bowen Drive		
Larch Grove		
Sebastopol Drive	Primary access	Local body managed roads.
Glencoe Access road		
Kitchener Drive	Village access	
Blackburn Place		
Wakefield Drive		
Mueller Place		
Kea Place		
Sealy Place		
Du Faur Place		
Pilots Way *		
Black Birch Access Road *	Utility access	Local body managed roads.
House 3 Access Road *		
Ponds Access Road *		
Pump House Road *		
Glencoe Tanks Access Road *		
Hermitage Tanks Access Road *		

** Gravel road surface. All other roads are tar-sealed. Although Pilots Way is currently gravel, this will be considered for upgrade to meet the required level of service when the village roads are upgraded.*

Snow clearing

During the winter period the local body team is placed on 45-minute standby, ready to commence snow-clearing operations on the call of the team leader. This is to maintain access to businesses and it continues until a relief team can be organised or the level of snow is at a level that enables residents and visitors to move freely and safely around the village. Although the level of service states that snow is cleared only during daylight hours, in reality the snow-clearing teams often work during the hours of darkness. The requirement to give staff a break between shifts is a barrier to providing a 24-hour snow clearing operation without increasing costs.

The local body team are primarily involved with the management and maintenance of the roads in the village Access and Utility Access groups.

How will we measure these levels of service?

At present, inspection and maintenance is carried out by a member of the department's local body team. The department is undergoing consultation with the New Zealand Transport Authority (NZTA) to contract their services for all inspections of roading within the park, including the village. Once this takes effect, the department will action recommendations from NZTA to maintain roads to the agreed levels of service.

NZTA standards will be set once the levels have been agreed upon between the department and NZTA. The level of service in this document reflects the standards that the department wishes to achieve.

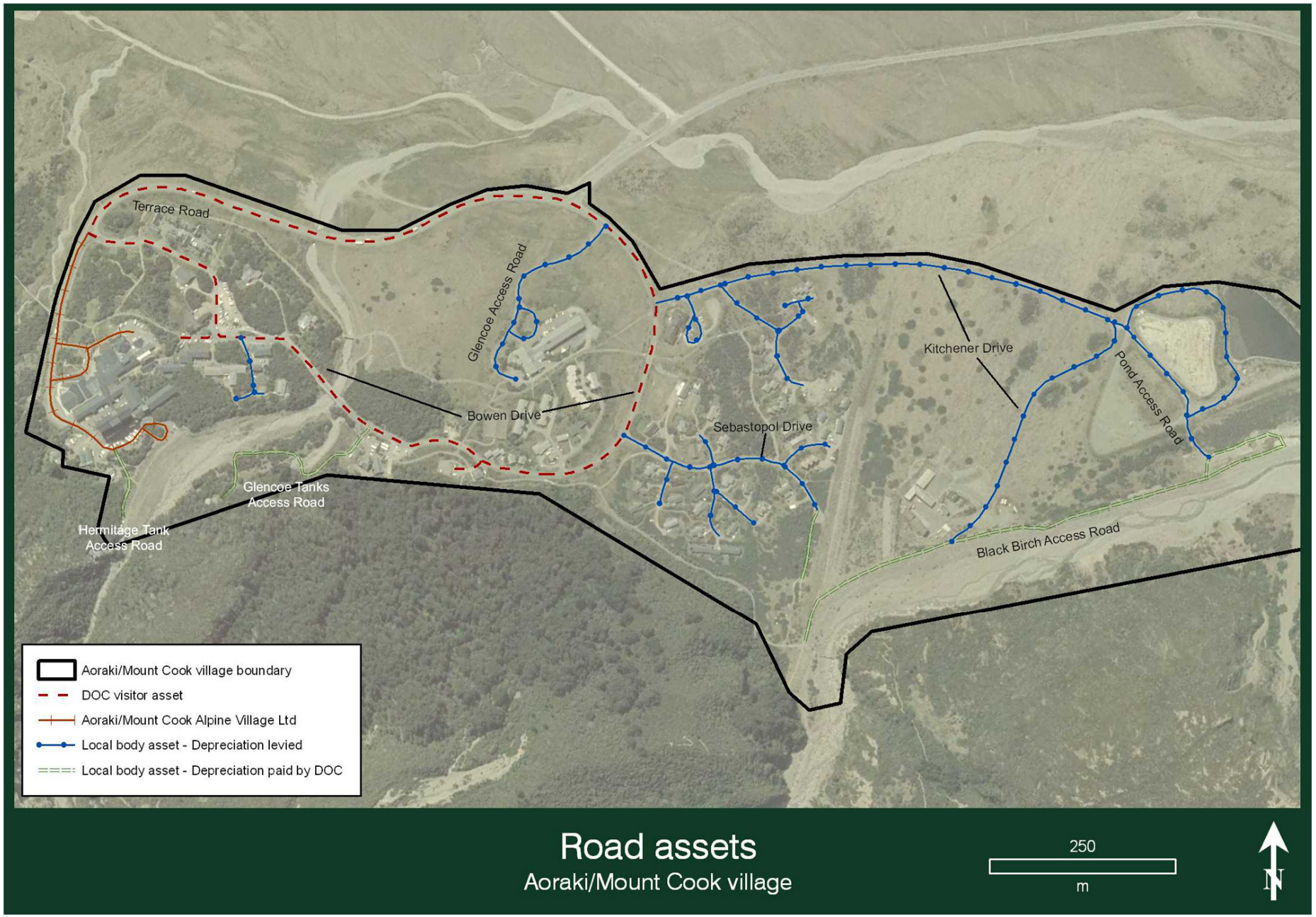


Figure 18 – Village roads

Asset information

Summary

- Road foundations, surfaces, kerb and channel, and sumps for storm water management.
- Snow-clearing blades for existing department park management machinery.

Description of assets

Department-funded roads

The village loop road and paths in the upper part of the village are managed by the department as part of the park, and are planned for resealing in 2009/10. This $1.06 million project, which is entirely funded by the department, will include resealing, repair to foundations where required, storm water protection by slope detail and kerb/edging repairs, lighting, road marking, signage, and repairs to adjacent paths where there have compromised drainage and require repair.

The cost of the upgrade and ongoing maintenance of the loop road is covered by the department as part of its management of the wider park. Improvements to the kerb and channel will mean that snow clearing is easier and more efficient, resulting in less staff hours being needed. All roads in the village are cleared of snow by the local body team as part of the core local body services.

Stakeholder-funded roads

The roads that are managed by the local body team and levied to all stakeholders are those in the residential area of the village which are used primarily by residents of Aoraki/Mount Cook village (Kitchener Drive, Wakefield Drive, Blackburn Place, Sebastopol Drive, Sealy Place, Mueller Place, Kea Place, and Du Faur Place).

The department pays the full depreciation costs for the roads that are used primarily for servicing utilities (Glencoe Tanks Access Road, Pump House Road, Hermitage Tanks Access Road, and Black Birch Access Road).

Kitchener and Sebastopol Drives were last sealed in 1970 and other roads in the residential area of the village were last sealed in 1981. These are all overdue for resealing again and are programmed for resealing at some point during the next 10 years. Some of the roads in the residential area are gravel surfaced. These roads are primarily used for access to the workshop and utilities as well as the driveway to Hermitage staff accommodation and House 3 near the Visitor Centre, and Pilots Way in the residential area. These will be resealed in the next 10 years.

All village roads are shown in Figure 18.

Normal roading engineering practice is to reseal roads two years after initial construction. During the period covered by this plan, the department intends to upgrade the loop road, upgrade the Tasman Valley Road, reseal the Hooker Valley Road and complete the two-year post upgrade resealing of the loop road. NZTA are likely to reseal State Highway 80 during the next 10 years.

The local body team is investigating cost and feasibility at the present time to see if the lower village residential zone roads can be sealed in conjunction with the upcoming loop road upgrade project. If this is not possible, it's likely that the department will combine the lower village roads in combination with one of the other upcoming road upgrade and maintenance projects described above, in order to share the costs of positioning the roading machinery.

Local body assets for snow-clearing work consist of two snow-clearing blades, owned as village infrastructure/local body assets, which attach to a truck and loader that are department park management assets. The truck and loader may need replacing during the term of this plan and, if this happens, the existing snow blades may not fit the new equipment.

If the existing blades do not fit the new equipment and replacement is required, the type of blade that will be purchased will have much finer control than the existing blade, enabling snow to be cleared more efficiently with less damage to underlying roading structures. In the event that a new plough blade is needed, this is estimated to cost in the order of $7,000–8,000.

Once the programmed upgrade works are completed, all roads will comply with New Zealand Transport Authority standards, and will be maintained to that standard.

Significant risks and issues

In the last two decades, stakeholder feedback has influenced the department into not spending money on roads, resulting in a gradual deterioration of village roads. Parts of the village road infrastructure (including the loop and residential area roads) are now in a condition where the surface is rapidly breaking up and urgent work is required before it becomes irrecoverable without major restoration work.

Maintenance has been carried out in an ad-hoc manner in the absence of a programmed inspection and maintenance schedule. Leaving essential maintenance such as resealing for too long can prove to be false economy as repairs are then required at greater cost than a simple reseal.

Future demand

Further roading is likely to be required as further developments are approved in the village. This will be managed on an 'as required' basis.

What we're planning to do

We plan to reseal the roads in the *village access* class in the next 10 years and complete maintenance that has been deferred over the last 10 to 20 years.

Once this is complete, the roads will last for many years under a programmed maintenance schedule. Road foundations have a 'standard life' of 75 years, and sealed surfaces have a 'standard life' of 17 years.

Street lighting will be upgraded over the next 10 years. Lighting must be designed to minimise upward spill and protect natural night skies. The department is trialling solar-powered, LED street lights to see if they are a suitable option for the village.

Maintenance and operating

Until roads are resealed, reactive maintenance will be carried out (filling potholes, winter inspections for snow damage, etc). The roads will all be upgraded at some stage during the next 10 years and resealed two years after upgrade.

Once this has been completed, the roads should be able to be maintained without significant work under a programmed inspection and maintenance schedule. Local body staff clear snow 'as required' for all roads in the village (both park assets and local body roads).

How it will be funded

The roading and street lighting expenditure for the village will be recovered by general recovery funding principles. The capital value (QV valuations) of the concessionaires and the departments properties will be used to determine the allocation of expenses recovered.

The allocation of these expenses to be recovered will be determined by the capital value of the properties as a percentage of the total capital value of the occupied properties in the village. The share of expenses to be recovered will be invoiced quarterly.

Aoraki-Mt Cook Local Body
STATEMENT OF FINANCIAL PERFORMANCE
10 Year Annual Forecast to June 2019

ROADING

	Forecast 2009/10	Forecast 2010/11	Forecast 2011/12	Forecast 2012/13	Forecast 2013/14	Forecast 2014/15	Forecast 2015/16	Forecast 2016/17	Forecast 2017/18	Forecast 2018/19
	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s
ROADING										
Expenditure										
Personnel	20	21	21	22	23	23	24	24	25	26
Overheads	18	19	19	20	20	21	21	22	22	23
Operating	20	20	21	21	22	22	23	24	24	25
Depreciation	13	13	13	13	13	13	15	15	15	15
Finance	0	0	0	0	0	0	8	8	7	7
Total Expenditure	**$71**	**$73**	**$74**	**$77**	**$78**	**$80**	**$91**	**$93**	**$94**	**$96**

ROAD ASSETS SUMMARY

	Year Capitalised	Expected Life	Cost Value	Accum. Depn	Annual Depn	NBV Jun-09
			$ 000s	$ 000s	$ 000s	$ 000s
LB Assets - Depreciation Levied			1,043	482	13	548
LB Assets - Depreciation Paid by DOC			37	7	1	30
Forecast Future Acquisitions						
New Snow Plough Blade	2012/13	20	8		0	
Reseal Local Body Roading	2015/16	75	200		3	
Non-Local Body Acquisitions (funded by the Department)						
Village Loop Road Reseal	2010/11	40	1,062		27	

Refer also to Section 12 for "Assumption and Notes" to financial information

8.6 Landscaping

What we do

The department local body team manages and maintains all landscaping and pathways in the Aoraki/Mount Cook village, to ensure that the village fits in with the wider park.

Landscaping services are provided for the common areas of the village that are not on concessionaire leases. These services include subdivision development and landscaping, lawn mowing and edging, growing and planting of appropriate native species, mounding, and maintenance and lighting of pathways.

Plants are sourced from local seed, propagated at the department nursery at Motukarara, and grown on at the Aoraki/Mount Cook village nursery before planting in the village.

Pathways have been established within the residential area of the village which connect to visitor access pathways in the other areas of the village which are managed as part of the park, along with the tennis courts.

Who pays for what?

The department has made a decision that all pathways that are used by visitors to move around the village and to access the park will be managed as visitor assets, and funded by the department from park management funds. Those pathways that are used primarily by the residents (and the occasional lost visitor) will be managed and funded from the local body budget that is levied to stakeholders.

Figure 19 – Department of Conservation local body nursery

Why we do it

The Aoraki/Mount Cook village needs to be appropriately landscaped and planted to reflect the setting of the village within the park.

The NPMP requires that the department '*…preserve the natural landscapes of the park as far as possible, including avoiding interference with natural processes.*' (section 4.1.2 Landscape Management) and '*To actively manage areas of open space and areas of building sites that are not built upon, including the use of ground-reshaping where necessary…*' This is done to minimise the effects of village development on park values, provide attractive environments around buildings and screen them to minimise the visual impact on the landscape.

Encouraging pedestrian access around the village fits in with the community outcome of a sustainable and healthy village.

Managing the impacts of the activity

Plants used in the village must be appropriate to the area, and grown from locally collected seed or other forms of propagation from local stock. Eco-sourcing all plants will ensure that plantings in the park are appropriate to the setting of the park and that no different genetic stock is introduced.

Extensive hard surfaces such as pathways and tennis courts increase the amount of storm water runoff that must be managed in heavy rain. Swales, mounds, and drainage are incorporated into landscape design where required.

All structures included in landscaping must be safe for the public and residents to use. The local body team will manage all structures to the same standards as other department structures.

Construction of hard landscaping features such as mounding, drains, and forming new pathway foundations can affect historic and cultural sites. The department will identify all known historic and cultural sites on a map, and a protocol will be established for dealing with any unknown historic or cultural sites discovered during any landscaping or building works.

Levels of service

The department will supply landscaping services to the service standards outlined below:

Function	Level of service	Performance standards	How we will measure this
Village pedestrian access.	Adequate pedestrian access around the village.	Provide footpaths through and from the residential area to link up with visitor pathways to the upper village. The standard will be the appropriate department visitor service (short-stop traveller) standard.	Measure track condition against the department's short-stop traveller standard.
Path lighting.	Main paths are lit at night with down-shining lights which reduce upward light spill.	The following pathways will be lit at night: ➢ Terrace path (lower village) ➢ YHA and Residential path ➢ The Mall ➢ Larch Grove path	Monitoring of lighting on identified paths.
Safety in winter.	Paths are designed and constructed to minimise pooling of water and ice build-up in winter.	No significant ice hazards on footpaths. Where hazard exists, grit will be provided to minimise risk.	Monitoring of ice hazard.
Lawn mowing.	Lawns maintained.	All local body assets outside lease areas are mown twice during the summer season (Labour weekend to Easter).	Monitoring of lawn mowing.

Function	Level of service	Performance standards	How we will measure this
General environment amenity values.	Paths and newly planted trees/shrubs are kept free of weeds. Developed areas are integrated into the landscape with landscaping and planting.	Less than 10% weed cover around plantings and on village pathways.	Regular monitoring of amenity values.
Structure Maintenance.	All structures are managed to the same standard as department visitor asset structures.	Structures are maintained to department standards.	Structures are monitored and maintained to safe condition.
Management of nursery.	Nursery and plant stock managed to provide plants for landscaping projects as required.	Plants required for landscape planting are available in suitable size and condition when needed.	Records kept of plant orders and fulfilment.
Seed collection.	Seed collected as requested by the department's Motukarara Nursery for propagation.	Seed is collected on request.	Records kept of seed requests and fulfilment.
Cultural and historic sites are protected.	All cultural and historic sites are identified on a map.	All known cultural and historic sites will be identified and mapped in the department's GIS system by 2011. Protocol for dealing with new sites will be developed by 2011.	Records kept of all cultural and historic sites (both known and new). All sites are mapped.

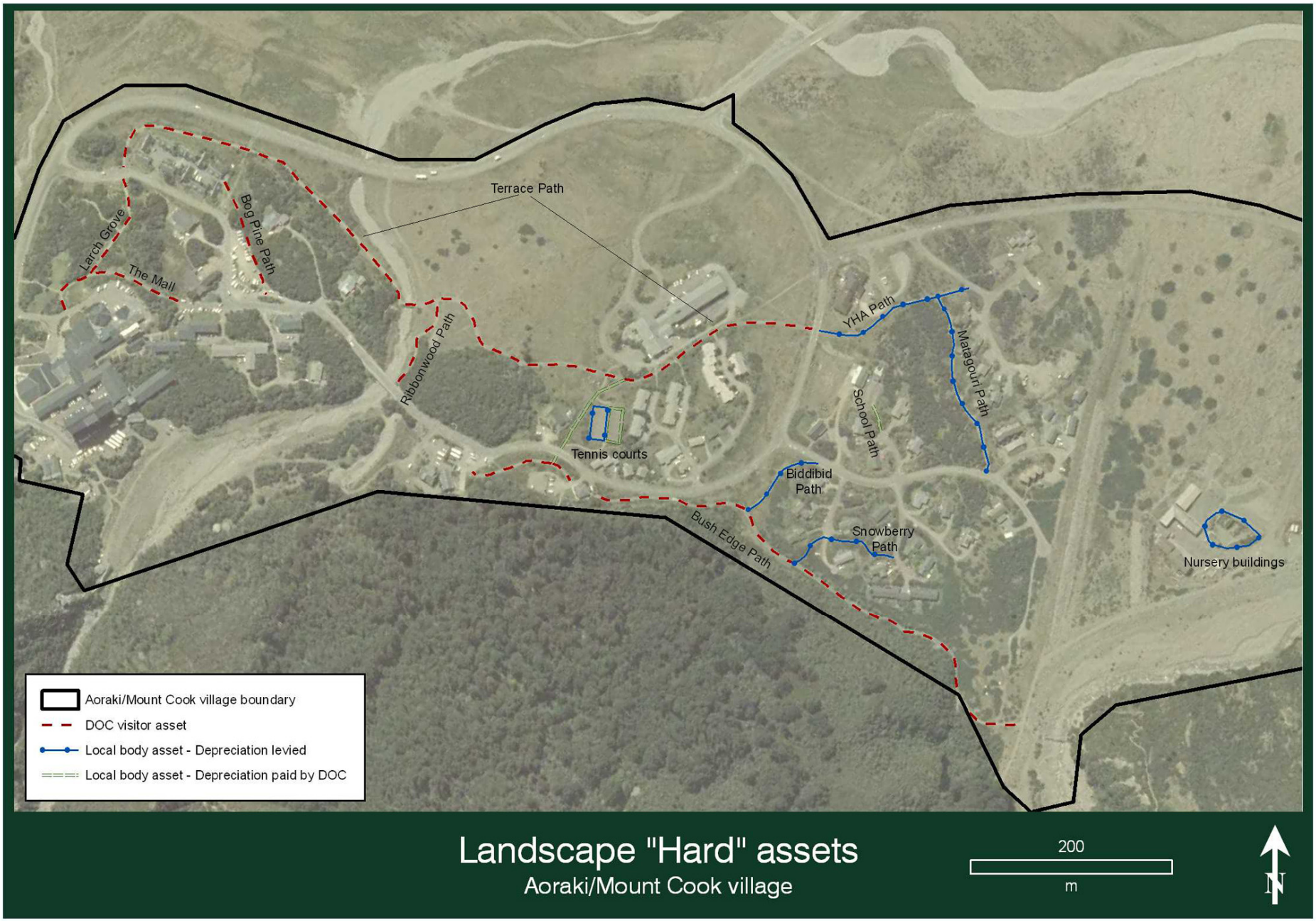


Figure 20 – Landscape hard assets

Asset information

Summary

- Sealed footpaths.
- Gravelled footpaths.
- Footpath lighting.
- Landscaping mounds.
- Nursery buildings.

Description of assets

The village contains several footpaths linking the residential, semi-independent, and commercial zones. Many of these are used by visitors to the park to get around the village and to get to the walking tracks in the park surrounding the village.

Others are in the residential area of the village and are used primarily by the village community. These paths are not intended for use by visitors, and most are in areas that are signposted as 'private residences' from the road.

Nursery buildings at the workshop include a shade house and a small shed for storage of equipment.

Significant risks and issues

No significant risks or issues have been identified.

Future demand

Any further development within the village (commercial development or additional subdivision) will require landscaping services.

It's intended that all local body pathways will conform to a similar standard throughout the village.

What we're planning to do

Landscaping staff will be involved in several projects planned over the next 10 years. These are:

- To standardise, upgrade, and extend the village footpath network.
- Establishment of Bowen Drive footpath from the Visitor Centre to the pedestrian crossing at the YHA.
- Work within the sewage pond upgrade establishing the wetlands in Pond Two.
- Working alongside local businesses (YHA, AGL) reshaping and landscaping leased areas.
- Planting out of Glencoe geotechnical flood-protection banks.
- Extension to the department local body plant nursery.

Maintenance and operating

Ongoing administration and maintenance of all village landscaping to meet the national park standards.

How it will be funded

The landscaping expenditure for the village will be recovered by general recovery funding principles. The capital value (QV valuations) of the concessionaires and the department's properties will be used to determine the allocation of expenses recovered.

The allocation of these expenses to be recovered will be determined by the capital value of the properties as a percentage of the total capital value of the occupied properties in the village. The share of expenses to be recovered will be invoiced quarterly.

Financial statements

Aoraki-Mt Cook Local Body
STATEMENT OF FINANCIAL PERFORMANCE
10 Year Annual Forecast to June 2019

LANDSCAPING

	Forecast 2009/10	Forecast 2010/11	Forecast 2011/12	Forecast 2012/13	Forecast 2013/14	Forecast 2014/15	Forecast 2015/16	Forecast 2016/17	Forecast 2017/18	Forecast 2018/19
	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s
LANDSCAPING										
Expenditure										
Personnel	53	54	56	57	59	60	62	64	65	67
Overheads	33	34	35	36	37	38	39	40	41	42
Operating	19	20	20	21	21	22	23	23	24	24
Depreciation	4	4	4	4	4	4	3	3	3	3
Finance	0	0	0	0	0	0	0	0	0	0
Total Expenditure	**$108**	**$111**	**$114**	**$117**	**$120**	**$123**	**$127**	**$130**	**$133**	**$137**

LANDSCAPING ASSETS SUMMARY

	Year Capitalised	Expected Life	Cost Value	Accum. Depn	Annual Depn	NBV Jun-09
			$ 000s	$ 000s	$ 000s	$ 000s
LB Assets - Depreciation Levied			201	123	4	74
LB Assets - Depreciation Paid by DOC			248	86	3	159

Forecast Future Acquisitions

Refer also to Section 12 for "Assumption and Notes" to financial information

8.7 Industrial fire brigade

What we do

The department provides the infrastructure for an industrial fire brigade service to Aoraki/Mount Cook village. The brigade is organised, managed and funded through local body funding, and is staffed by paid fire fighters from the department and volunteers from the other village stakeholders.

The brigade is equipped to deal with a range of incidents and has a limited amount of rescue equipment to deal with motor vehicle accidents. The brigade has a 4WD appliance with a 2,350-litre tank and a two-stage pump with a high-pressure hose reel.

The major fire risks (visitor accommodation and school) are protected by sprinklers, with the Hermitage and Glencoe Lodge connected to an alarm monitoring service. Water-main pressure is monitored and key personnel are alerted if a significant drop in pressure occurs, potentially caused by a sprinkler activating. The brigade is alerted primarily by a paging system and sirens.

The industrial fire brigade's current core area of operation is fires in all buildings within the village, facilities at Aoraki/Mount Cook Airport, Wyn Irwin Hut and Thar Lodge at White Horse Hill, and Unwin Lodge on SH80. It also responds as requested to motor vehicle accidents on park roads (Hooker Valley road, Tasman Valley road), and State Highway 80. The brigade may also be involved in fighting rural fires. Costs for any rural fire are recovered from the Rural Fire Authority.

Figure 21 – Industrial fire brigade appliance

Why we do it

The New Zealand Fire Service is the key agency for urban fire in New Zealand and manages fire safety, prevention, and response in urban fire districts. In areas where there is no urban fire district, responsibility for fire response and control falls under the Rural Fire Authority for the area, which in turn may decide to establish an industrial fire brigade. Industrial fire brigades are operated by an organisation. Typically, they have been established by companies where there is a level of risk to the safety of people or property, and the nearest New Zealand Fire Service response is too far away.

At Aoraki/Mount Cook, it was recognised that the level of risk from fire was higher than is typically managed through rural fire fighting, due to the presence of visitor accommodation, residential dwellings, and commercial buildings in the village. To manage this higher level of risk, the industrial fire brigade was established by an agreement between the Lands and Survey Department and the New Zealand Fire Service in 1977 to protect lives and property in the village.

This agreement, signed in 1977 and reviewed and updated in 2002, ensures that one organisation (the department) is responsible for the existence and funding of the brigade, which is managed through the local body function and manned by fire fighters from all financial stakeholders.

Since then a new Emergency Services Building has been built two kilometres from the centre of the village, which houses the Fire Service, St John Ambulance, and Search and Rescue. This building is owned by the department, and a rental is charged back to the local body budgets for the area of the building used by the industrial fire brigade.

Managing the impacts of the activity

There are no negative impacts of the operation of the industrial fire brigade. The brigade mitigates risks to life and property from fire in commercial and residential buildings in Aoraki/Mount Cook village.

Levels of service

As the industrial fire brigade is registered with the New Zealand Fire Service, the level of service expected of the Aoraki/Mount Cook Brigade by the New Zealand Fire Service is the same as that expected of any volunteer fire brigade. The department manage the industrial fire brigade to supply fire fighting and response services to the service standards outlined below:

Function	Level of service	Performance standards	How we will measure this
Condition of industrial fire brigade equipment.	Equipment and plant are maintained to an appropriate standard of readiness for use.	Complies with the New Zealand Fire Service Operational Management Manual and all relevant operational instructions, policies or guidelines.	Regular monitoring, inspection, and audit of brigade readiness as per the New Zealand Fire Service Operational Management Manual.
Fire fighters are sufficiently trained to respond to emergencies and are available.	Sixteen fire fighters are qualified and resident in the village. The department provides nine fire fighters including two officers.	Training standards are met. Appropriate numbers of operational personnel are in the brigade and trained to the New Zealand Fire Service standards.	Compliance with the New Zealand Fire Service standards.
Fire fighting readiness and response.	Brigade will turn out to all buildings within the village, facilities at Aoraki/Mount Cook Airport, Wyn Irwin Hut and Thar Lodge at White Horse Hill, and Unwin Lodge on SH80.	The brigade is ready at all times and responds to 100% of alarms as soon as possible after the alarm is raised. The brigade responds to all incidents as required by the New Zealand Fire Service.	Recording of all alarms and the time taken to respond.

Asset information

Summary

- Hino 4WD fire engine and equipment onboard (ladders, hoses, branches, portable pump, nozzles, tools).
- 6 sets of breathing apparatus, 17 tanks, and an air compressor.
- 16 uniforms.
- Monitored sprinkler and heat-sensor detection system
- Alarm system, sirens, and pagers.

Description of assets

The department provides assets to the industrial fire brigade. Key assets are the fire appliance (Hino FT 175LA 4WD fire engine) and the equipment carried on it: portable pump; hoses, branches and nozzles; six sets of breathing apparatus, air compressor and 17 air tanks; 16 uniforms; and radio and pager systems.

A new fire-monitoring system was installed in the Visitor Centre in 2008. This system is used to monitor the status of some of the sprinkler systems and heat-sensor systems in the village, sending an alarm to the New Zealand Fire Service as well as activating pagers in the event of a fire. The monitoring service on the fire system is provided by an external contractor (ADT Paging Systems). Sirens can also be switched off or run manually, by fire brigade personnel.

The New Zealand Fire Service audits the fire brigade periodically, and may recommend changes to be made to the operation of the brigade and its assets.

The major asset upgrades and replacements that are anticipated to be required over the next 10 years are:

- The fire appliance. This is a 1987 vehicle vintage and has a standard working life of 25 years, which, according to the 'standard life' model, will require replacing in 2012. The appliance has been well maintained and has not travelled many kilometres since being stationed at Aoraki/Mount Cook village. With care and maintenance, it may not require replacement in 2012, and could possibly outlast the 10-year period of this document, but there is an increasing risk of failure the longer the appliance is used. It must meet New Zealand Fire Service standards and is inspected for compliance regularly. However, changing standards may result in the appliance needing to be replaced during the next 10 years at an estimated cost of $350,000.
- The breathing apparatus (BA) sets were purchased in 1998 and are currently 11 years old. The breathing apparatus (mask, hoses, and regulator) has a standard life of five years. These became due for replacement in 2003–04. This has not taken place, and should begin during this 10-year period.
- The Fire Brigade owns 17 BA tanks (seven fibre and 10 steel). Steel tanks have an unspecified useful life provided they are maintained and pass their annual test. Fibre tanks have a life of 15 years. Three

of the fibre tanks will be due for replacement in 2011 and four will be due in 2017.

Significant risks and issues

Significant risks exist within the industrial fire brigade function of local body. The brigade is responsible for responding to property fires in the Aoraki/Mount Cook village. The nearest backup brigade is Twizel, 63 kilometres away. The Fire Service automatically calls out the Twizel brigade for any alarm in the Aoraki/Mount Cook area, but it will take that brigade some time to get there, especially in winter road conditions. If for any reason the Aoraki/Mount Cook brigade is unable to respond to a callout, there is a potentially high risk of loss of property or life.

Potential causes of risk may include failure of the appliance or pumps, the appliance being unable to access a fire due to snow or damage to roads, frozen water preventing sprinklers from working, frozen hydrants, or inoperative pumps on the appliance.

Fire fighters are at risk during the performance of their duties. All practicable measures must be taken to ensure the safety of fire fighters through the purchase, maintenance, and regular replacement of protective equipment, such as 'hot fire' fire-fighting protection (jacket, leggings, boots, helmet, and gloves). All fire fighters are trained to New Zealand Fire Service Standards and attend New Zealand Fire Service training courses.

Retaining the appliance past its nominal replacement date may increase the risk of failure of the appliance or pumps. This potential for increased risk is something that the community will need to carefully consider and balance against the cost of replacement. The New Zealand Fire Service Standards (New Zealand Fire Service Operational Management Manual) includes the monitoring of the condition of the fire appliance along with other equipment, and this should identify any issues that would indicate that replacement is required.

The properties protected by the industrial fire brigade include the Hermitage Hotel, containing 60 rooms in the Aoraki Wing, 62 in the Mount Cook and Wakefield Wings, two restaurants, a café, and the Sir Edmund Hillary Alpine Centre. The Aoraki Wing is six floors high, and the Wakefield Wing is four floors high. Both wings have only two stairwells, and fire fighting and evacuation could be serious. The brigade also covers the Aoraki/Mount Cook airport, which at the time the brigade was established, handled scheduled domestic flights.

Other commercial accommodation properties including the Glencoe Lodge, YHA, and Aoraki/Mount Cook School have sprinkler systems which will reduce the risk of a fire taking hold. The YHA and school are not connected to the monitoring system.

Future options for the industrial fire brigade

The cost of operating this service is approximately 16% of the annual total stakeholder levy. The department believes, after discussing the level of coverage with the NZ Fire Service, that the current level of equipment, fire-fighter training and competency levels is the minimum requirement for the risks in Aoraki/Mount Cook village. It's not possible to reduce the level of

service without compromising either the effectiveness of the service or the safety of fire fighters.

The reason for the existence of the industrial fire brigade is because of the level of concessionaire development in the village. Any future options are limited to who owns and operates it rather than the level of service it provides.

Preferred option – New Zealand Fire Service provides the fire fighting and fire prevention services in the Aoraki/Mount Cook area

This option requires the New Zealand Fire Service to create an Urban Fire District and take over the management of the industrial fire brigade. If the New Zealand Fire Service took over the Fire Brigade function in Aoraki/Mount Cook village, it would be up to the New Zealand Fire Service to establish the levels of service. However, these would most likely be very similar to the existing levels of service as the industrial fire brigade is required to operate to New Zealand Fire Service standards.

Any brigade stationed at Aoraki/Mount Cook village would also be part of the New Zealand Fire Service resources and may be called out of the village to back up other brigades when required.

There is a risk that, if the brigade became a volunteer brigade, over time its membership could suffer, depending on resident interest.

Transferring the responsibility for fire in the urban setting of the village to the New Zealand Fire Service would transfer the costs of operating the fire brigade onto the New Zealand Fire Service, which is funded through other means, including levies on insurance policies. This would reduce costs to stakeholders.

This is the department's preferred option for the future of the Aoraki/Mount Cook brigade, but is subject to the agreement of the New Zealand Fire Service.

Alternative option – Maintain the existing industrial fire brigade and levels of service

This option would retain the status quo as outlined in the previous pages. The department provides the equipment and support for the industrial fire brigade, which is paid for by stakeholder contributions.

Future demand

Further development within the village, particularly additional visitor accommodation, will increase the number of properties requiring protection from fire.

Further development may increase the risk of a fire occurring. Some types of development present a higher risk of fire than others. For example, a block of motels equipped with cooking facilities in all guest rooms may be at more risk of fire than a hotel or lodge with centralised or no cooking facilities for guests.

There are no anticipated changes required to the industrial fire brigade as a result of growth in the village at this stage.

What we're planning to do

Note: The following plans for the maintenance, operating, and funding of the brigade over the next ten years are based on the status quo.

Potentially, we need to replace the fire tender if its age or maintenance issues result in it falling below required standards. It's hoped however, that it will last the full period of this plan. The financial effect of having to replace it is shown in the financial tables.

There is a need to formalise the staffing of the brigade with all of the contributing stakeholders through a memorandum of understanding among the organisations involved. There is provision in the industrial fire brigade financial accounts for the payment of volunteers from outside the department (approximately one-third of the amount shown for personnel per annum). This has not been paid in the past, and the details of how this will be administered, including the policy and rules regarding payment of volunteers, will be confirmed by the department once memorandums of understanding with the various stakeholders are made.

Maintenance and operating

The industrial fire brigade truck and equipment are maintained and serviced to New Zealand Fire Service standards. These standards require regular inspection and servicing of equipment, and form the minimum maintenance requirement for the fire brigade equipment.

The brigade must hold regular training for fire fighters to ensure that the service level and fire brigade requirements for trained personnel can be met. Training using the fire equipment will result in some wear and tear and ongoing maintenance to maintain the brigade in a state of readiness at all times.

How it will be funded

The industrial fire brigade expenditure for the village will be recovered by general recovery funding principles. The capital value (QV valuations) of the concessionaires and the department's properties will be used to determine the allocation of expenses recovered.

The allocation of these expenses to be recovered will be determined by the capital value of the properties as a percentage of the total capital value of the occupied properties in the village. The share of expenses to be recovered will be invoiced quarterly.

Financial statements

Aoraki-Mt Cook Local Body
STATEMENT OF FINANCIAL PERFORMANCE
10 Year Annual Forecast to June 2019

INDUSTRIAL FIRE BRIGADE

Operating Expenditure	Forecast 2009/10	Forecast 2010/11	Forecast 2011/12	Forecast 2012/13	Forecast 2013/14	Forecast 2014/15	Forecast 2015/16	Forecast 2016/17	Forecast 2017/18	Forecast 2018/19
	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s
INDUSTRIAL FIRE BRIGADE										
Expenditure										
Personnel	43	44	45	46	47	49	50	52	53	55
Overheads	33	35	35	36	37	38	39	40	40	41
Operating	31	32	33	33	34	35	36	36	37	38
Depreciation	15	15	15	15	15	29	22	14	14	14
Finance	0	0	0	0	0	13	12	12	11	11
Total Expenditure	**$122**	**$125**	**$128**	**$131**	**$133**	**$163**	**$158**	**$153**	**$156**	**$159**

FIRE ASSETS SUMMARY

	Year Capitalised	Expected Life	Cost Value	Accum. Depn	Annual Depn	NBV Jun-09
			$ 000s	$ 000s	$ 000s	$ 000s
LB Assets - Depreciation Levied			305	196	15	94
LB Assets - Depreciation Paid by DOC			108	38	4	66
Forecast Future Acquisitions						
New Fire Appliance	2014/15	25	350		14	
Breathing Appartus	2014/15	20	5		0	

Refer also to Section 12 for "Assumption and Notes" to financial information

8.8 Civil defence and hazard management

What are the risks?

The Aoraki/Mount Cook village is in a geologically active area, built on a shingle fan. It's subject to a major flood-debris hazard that has been mitigated by geotechnical protection works. The village could also be affected by wildfire originating within the park.

An avalanche hazard exists from the Black Birch and Kitchener catchments. Existing geotechnical protection works to protect the village from debris and flood flows in the Black Birch catchment is expected to also contain avalanches up to a 1 in 300-year event. The avalanche hazard in Kitchener Creek and required work to protect the village is currently being assessed.

Aoraki/Mount Cook village is at risk of damage from a major earthquake on the Alpine Fault. Earthquakes could also cause secondary hazards of rockfall and avalanche from the slopes above the village. The village is situated 25 kilometres from the Alpine Fault, and geologists predict that there is a 1:50 (2%) chance of an earthquake occurring on the Alpine Fault at a magnitude of eight at any time.

Who does what?

Civil defence in the Aoraki/Mount Cook area is covered under the Mount Cook/Glentanner Civil Defence Plan published by the Mackenzie District Council (MDC). In the event of a civil emergency being declared, the village would come under the control of the Canterbury Civil Defence Emergency Management Group. This involves local authorities, emergency services, the department, major utility operators, and others working together to provide civil defence for the region under the Civil Defence Emergency Management Act 2002.

The Mackenzie District Council employs a part time Civil Defence Officer who coordinates a network of volunteers and Council staff to provide a civil defence infrastructure and support systems under the Civil Defence Emergency Management Act 2002.

Although the Canterbury Civil Defence Emergency Management Group would take control in the event of a civil defence emergency, the department has specific responsibilities arising from its local body infrastructure management role under the Civil Defence Emergency Management Act 2002.

Section 60 of that Act requires that 'lifeline utilities' must *'ensure that it's able to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency'*. 'Lifeline utilities' as defined by that Act include *'An entity that supplies or distributes water to the inhabitants of a city, district, or other place'; 'An entity that provides a waste water or sewerage network or that disposes of sewage or storm water';* and *'An entity that provides a road network (including state highways)'*.

The responsibilities of the department under section 60 of the Civil Defence Emergency Management Act 2002 as the provider of lifeline utilities are as follows:

> *Every lifeline utility must—*
>
> *(a) ensure that it is able to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency:*
>
> *(b) make available to the Director in writing, on request, its plan for functioning during and after an emergency:*
>
> *(c) participate in the development of the national civil defence emergency management strategy and civil defence emergency management plans:*
>
> *(d) provide, free of charge, any technical advice to any Civil Defence Emergency Management Group or the Director that may be reasonably required by that Group or the Director:*
>
> *(e) ensure that any information that is disclosed to the lifeline utility is used by the lifeline utility, or disclosed to another person, only for the purposes of this Act.*

Are we ready for natural hazards or a civil emergency?

The department is prepared to act in the response phase of an emergency in conjunction with other organisations. However, the requirements under Section 60 of the Civil Defence Act as a lifeline utility provider have not yet been met.

The department local body team will undertake planning and documentation to meet the Civil Defence Act requirements as a Lifeline Utility provider, and will complete a hazard response plan that includes recovery from an event which damages village infrastructure, by June 2011.

What will happen if infrastructure is damaged or destroyed?

If a major upgrade or repair of any of the protection works is required, the department will seek funding through government funding streams.

When there is a national disaster or civil emergency, the government may need to act quickly. Sometimes the government may want to use resources in a declared emergency for which there is no appropriation or other authority. In these cases, the government is able to incur expenses or capital expenditure without a prior appropriation.

9 Community and visitor facilities

The Aoraki/Mount Cook village is rated by the Mackenzie District Council through the Uniform Annual General Charge and General Rate. Both of these rates cover the provision of regulatory, community, social, and recreational facilities in the Mackenzie District. The closest of these facilities are in Twizel and Tekapo.

The services and facilities provided by the department are the 'hard services' and at the present time do not include any social, community, or recreational facilities. The department under its park management role provides extensive facilities for recreation to the residents of Aoraki/Mount Cook village who arguably have some of the best recreational opportunities of any community in the country. Short walks are provided in the village and immediate surrounds, and a short bike ride or drive provides access to the wider park, at access points at White Horse Hill and Blue Lakes car park.

What facilities are there?

There are several facilities in the Aoraki/Mount Cook village that are available for the use of residents and visitors alike. Some facilities are primarily for the use of residents, such as the school and the community hall.

Facilities in the village available to residents as well as visitors to Aoraki/Mount Cook include:

- Hermitage Hotel – restaurants, café, cinema, museum, and planetarium.
- The Old Mountaineers' Café/Bar – restaurant, café/bar, meeting or function room, internet access.
- Visitor Centre and garden.
- Public shelter, public toilet, and shower facilities.
- Tennis courts.
- Village pathways and loop road, car parking.
- Lawns and public space.
- Local walking tracks – Bowen Bush, Governors Bush, Red Tarns, Sealy Tarns, Kea Point, and Hooker Valley Tracks.

Other community facilities exist primarily for the use of residents:

- Aoraki/Mount Cook School and grounds.
- Community hall.

Who owns and manages what?

Facilities enjoyed by the community are owned and/or managed by a range of stakeholders:

- The Old Mountaineers' Café/Bar Limited – The Old Mountaineers' Café/Bar.
- Aoraki/Mount Cook Alpine Village Limited – The Hermitage.
- Department visitor facilities: upper village pathways and loop road, public shelter and toilets, car parks, lawns and public space, one tennis court, visitor centre and garden, local and wider park walking tracks.
- Department – village facilities on behalf of all village stakeholders: lower village paths (residential area), and one tennis court.
- Ministry of Education and Aoraki/Mount Cook School Board of Trustees – Aoraki/Mount Cook School.
- Mount Cook Residents Association – community hall.
- The community library is self-run by the community.

Additional community facilities

Aoraki/Mount Cook village residents would like to increase the facilities available to them in the village, and have suggested a range of facilities and opportunities that they would like to have.

The department, in either its local body or park management roles, has no obligation to provide social or general recreational facilities such as playgrounds, swimming pools, or gyms. It may, however, be able to provide support to the community and the Residents Association to help the community reach some of their goals around facilities where these are compatible with the constraints of being in a national park. Most suggested facilities come under the services that generally would be provided by the Mackenzie District Council and could be covered by the rates that are paid to the Council by stakeholders. Alternatively, they could be partially or fully funded by community groups through fundraising.

10 Administration, local body operations and governance

The cost to the department of running and administering the local body functions at Aoraki/Mount Cook village outlined in this plan is covered by the stakeholders in the community.

The local body funding pool is managed by the department as the land manager on behalf of all stakeholders. The department employs staff on behalf of the community to carry out the operational work that is needed for the local body infrastructure to function. This work includes management of existing assets and infrastructure, ongoing maintenance and operations, and planning/organising of any upgrade or replacement.

Currently, the department's Aoraki Area Office employs six staff (plus a 0.3 full-time-equivalent staff member during the November to May period) whose main role is in the management of local body functions. Staff are used for park management if there are no local body tasks to be done. The staff structure of the department's Aoraki Area Office as at 2009 is shown in Figure 22. The costs of those staff – such as office space, vehicle use, and housing – are apportioned between local body and park management, based on the proportion of their time spent on each function.

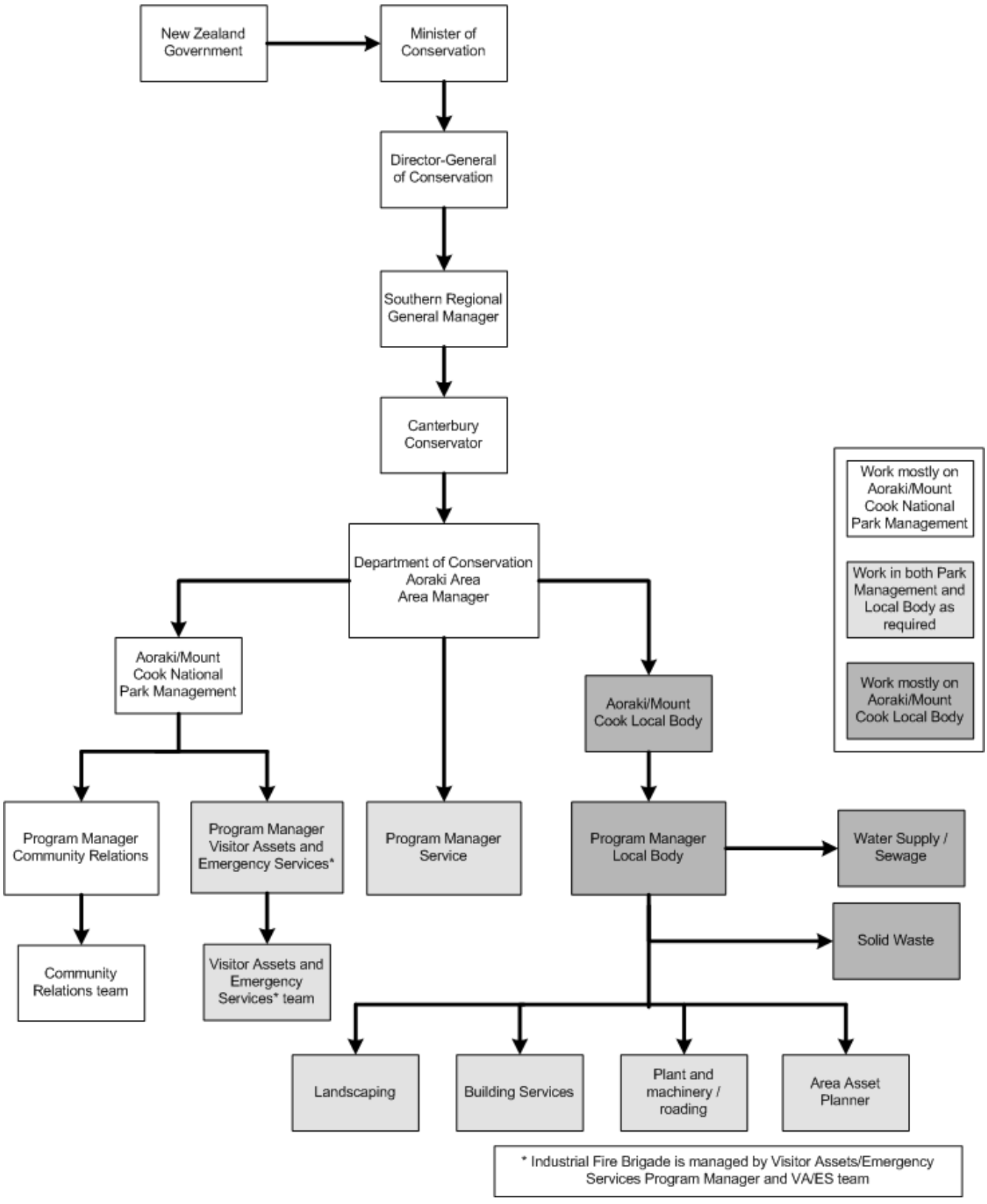


Figure 22 – Operational structure: Aoraki Area Office

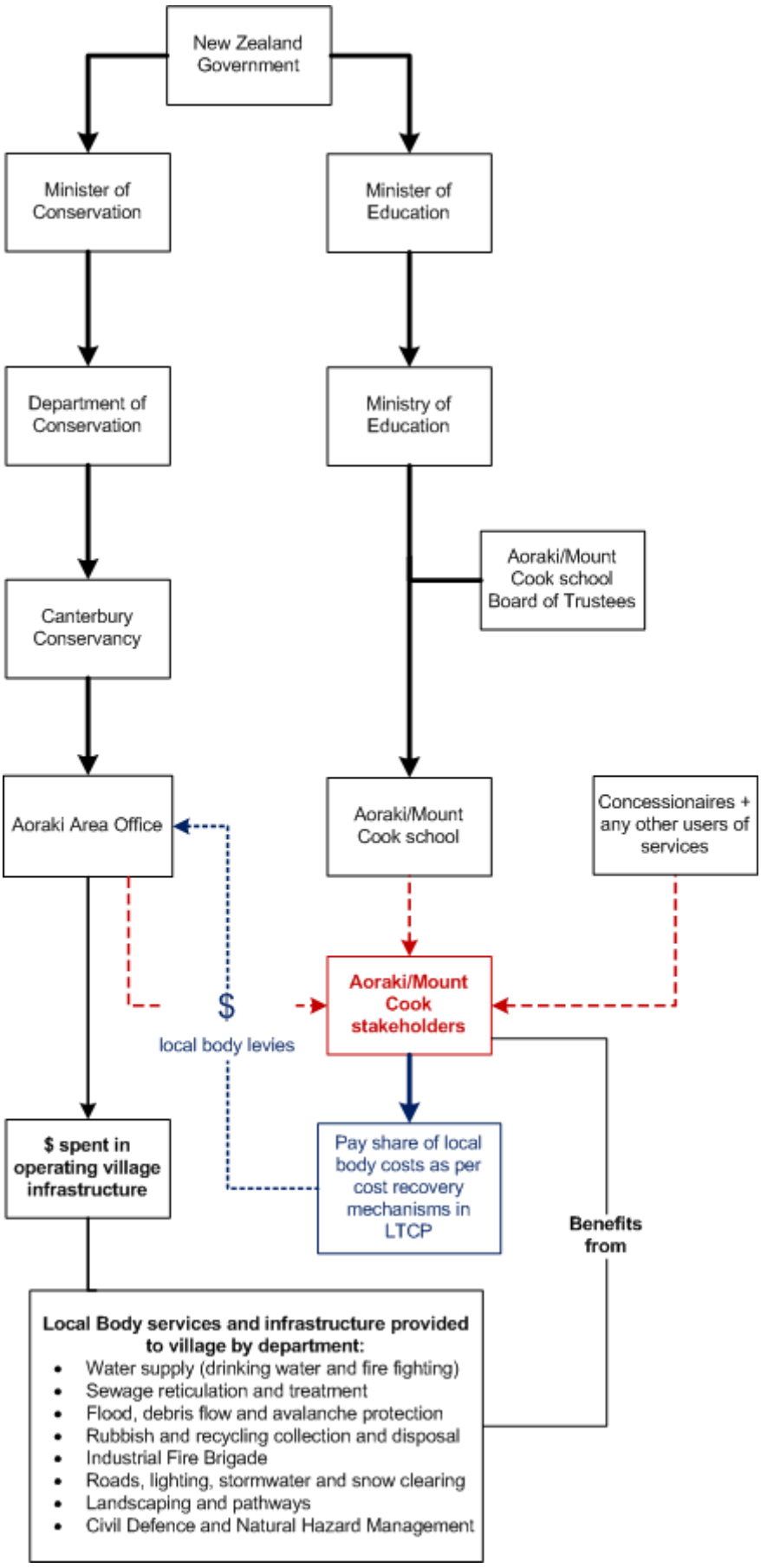


Figure 23 – Funding structure: Aoraki/Mount Cook local body

11 Paying for it all

This Long Term Community Plan details the planned services that will be provided to the community over the next 10 years, and forecasts the costs of providing those services. It will be reviewed every three years, with stakeholders being consulted and involved through normal stakeholder meetings.

All village financial stakeholders, including the department and concession holders, contribute to the costs of operating the local body village infrastructure. The department has contractual agreements with all concessionaires in the village through concession contracts that include the provision of `any community service, benefit or facility' (or words to that effect), and require that concessionaires will pay the department for the provision of these services, benefits, or facilities.

11.1 Covering the costs of core services

The services, benefits, and facilities that are currently provided by the department to concessionaires in the Aoraki/Mount Cook village are those activities that are described in this document – water, sewage, flood protection, rubbish disposal, roads, industrial fire brigade, and landscaping.

Stakeholders are charged for the services, benefits, or facilities that they use or consume. These are not optional within the village amenities area where they are provided to all concessionaires as a condition of concession contracts and the concessionaires cannot choose to opt-out.

Outside of the village, there are a few additional stakeholders who benefit from or consume some services, but not all. These stakeholders will be charged only for the services that they use: in all cases rubbish collection and disposal, and the industrial fire brigade, with some also being connected to the water supply system. The services used or consumed by each property are shown in Appendix C.

The accounts included in this document (see section 12 of this document and the financial statements included with each activity) present the department's best current estimate of what the local body costs levied to stakeholders will be over the next 10 years. All costs of operating the village infrastructure and many of the asset costs are levied to stakeholders, using the local body cost recovery allocation model described under each activity and detailed further in Appendix B. The method of allocation of costs to stakeholders for each type of local body service has been included under each activity chapter in the previous pages, under the heading `How it will be funded'.

All new capital acquisitions are paid for by the department, and are subject to the department's capital expenditure approval process and funding availability (see section 12 of this document for more information).

Section 17ZH of the Conservation Act describes the powers held by the Minister of Conservation, or Director-General of Conservation, to recover the costs of providing services, benefits, or facilities to concessionaires, and is shown overleaf.

17ZH Powers of Minister where services are provided by the Minister or the Director-General

Where any community service, benefit, or facility has been provided by the Minister or the Director-General, whether within or outside a conservation area, for the benefit of concessionaires either occupying any part of the conservation area or undertaking any activity within the area under any concession document—

(a) The Minister may, in accordance with this section and the relevant concession document, assess the amount of contribution to be paid to the Minister by the concessionaires towards the cost of providing and maintaining that service, benefit, or facility:

(b) The contribution assessed under paragraph (a) of this section in respect of the capital cost of providing any such service, benefit, or facility shall be apportioned by the Minister among those concessionaires in such manner as he or she thinks fit and shall be paid in one amount or over a period of years as the Minister may determine, and the Minister may in like manner apportion among those concessionaires an annual contribution to be paid by them to the Minister to meet the cost of maintaining any such service, benefit, or facility:

(c) The amount apportioned by the Minister to be paid by any concessionaire shall be due and payable to and recoverable by the Minister on the expiration of 3 months after the service of a demand made on the concessionaire by the Minister or the Director-General:

(d) If the amount so apportioned is not paid by the due date, interest shall be payable by the concessionaire from the due date until payment in full at such rate as is from time to time fixed by the Minister:

(e) Where any amount so apportioned is not paid in full by the due date, the concessionaire shall be deemed to have committed a breach of his or her or its concession:

(f) The Minister may exempt any concessionaire from payment of the whole or any part of any amount apportioned by the Minister or the Director-General under the foregoing provisions of this section, or may grant such relief to the concessionaire as he or she considers appropriate in the circumstances.

11.2 Funding community services

There are some community services suggested by the wider Aoraki/Mount Cook community that would improve living in Aoraki/Mount Cook village. These would contribute to the community outcomes of a healthy community, being family-friendly, making the village an attractive place to live, and are wider than the hard infrastructural services provided by the department.

Community services are the mandate of the Mackenzie District Council, and/or the community, rather than the department through its local body function. Some of these community goals may be achievable in the next 10-year period. However, some ideas could come at a reasonably high cost, with a very small community to pay for them.

As the Mackenzie District Council charges a General Rate and Uniform Annual Charge to Aoraki/Mount Cook village leaseholders, it's reasonable for stakeholders to expect that some assistance could be provided by the Council. The department's view is that it would be appropriate for the community to continue to raise this issue with the Mackenzie District Council through the Residents Association.

11.3 Alternative funding sources

Suggestions have been made to charge visitors to the village to help to cover the cost of running the village services that are used by all, through mechanisms such as entry fees or car parking charges. Other suggestions have been made to charge overseas visitors but not New Zealanders.

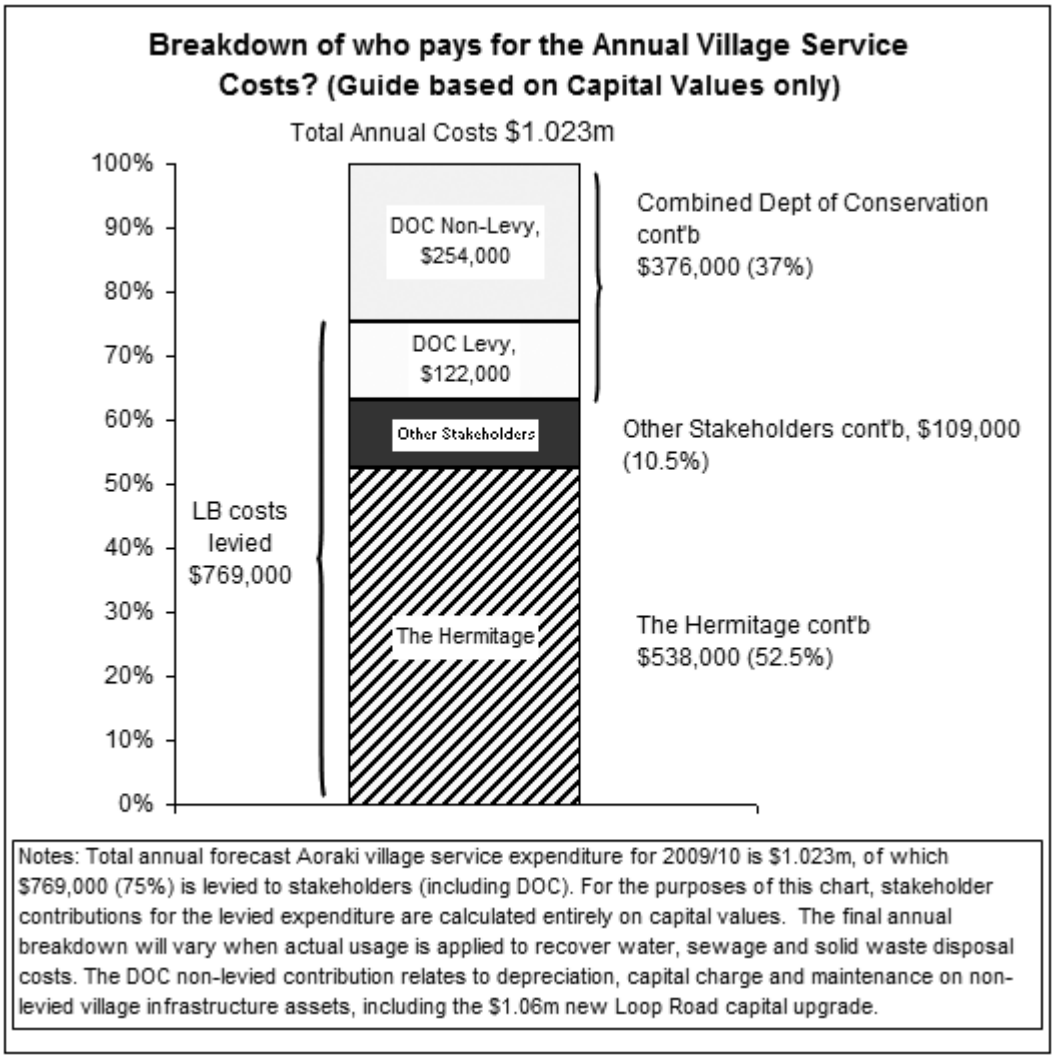
The General Policy for National Parks clearly states `*Public access to National Parks will be free of charge. Charges may be made for the use of accommodation, facilities, and services.*', and `*…the public shall have freedom of entry and access to the parks…*'. These legislation and policies would need to be changed by government, with the support of the New Zealand public, before the option of charging for entry could be considered.

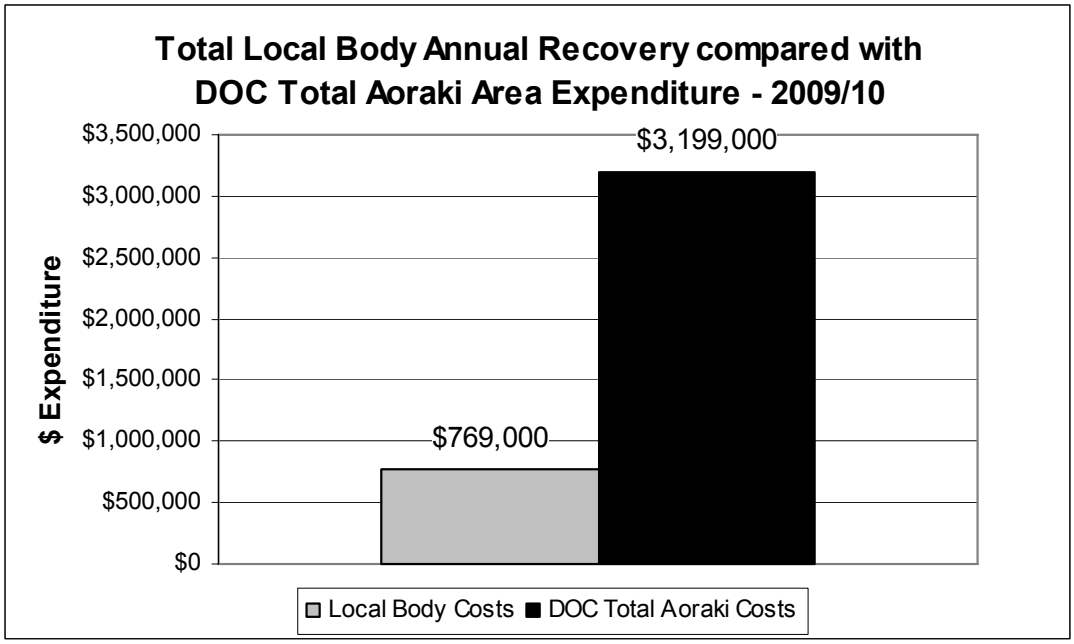
Charging the public for entry to a national park is not an option under current legislation. Any introduction of entry charges to National Parks would need to be applied nationally, not to only Aoraki/Mount Cook, and would require a change to the National Parks Act 1980. Advice to the department is that charging overseas visitors only and not domestic visitors as well would require a change to the National Parks Act 1980. Getting this legislative change to occur would be difficult as it would not be consistent with the Human Rights Act 1993.

It's likely that if any form of charging for entry was put in place that any revenue from charging would go into government revenue streams rather than be used to subsidise business in the village. Any fee collection system would have high collection and compliance charges associated with it which would result in a significant component of the cost going into running the system.

Requiring visitors to pay to park in the village, or to enter it, may result in undesirable outcomes, such as visitors parking in the residential area or in concession business car parks, or even in avoiding the village altogether.

12 Financial information





DEPARTMENT OF CONSERVATION
Aoraki-Mt Cook Local Body
STATEMENT OF FINANCIAL PERFORMANCE
10 Year Annual Forecast to June 2019

	Forecast 2009/10	Forecast 2010/11	Forecast 2011/12	Forecast 2012/13	Forecast 2013/14	Forecast 2014/15	Forecast 2015/16	Forecast 2016/17	Forecast 2017/18	Forecast 2018/19
	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s
Revenue										
Contributions: All Stakeholders	769	786	801	814	827	866	881	889	903	919
Total Revenue	$769	$786	$801	$814	$827	$866	$881	$889	$903	$919
Expenditure By Activity										
Water Supply and Reticulation	175	177	184	186	189	191	195	198	202	206
Sewage Reticulation and Treatment	110	110	110	109	109	108	108	108	108	108
Roading and Streetlighting	71	73	74	77	78	80	91	93	94	96
Landscaping	108	111	114	117	120	123	127	130	133	137
Industrial Fire Brigade	122	125	128	131	133	163	158	153	156	159
Solid Waste Disposal	154	160	162	164	167	169	171	174	177	180
Flood, Debris Flow and Avalanche	28	29	29	30	30	31	32	33	33	34
Total Expenditure	$769	$786	$801	$814	$827	$866	$881	$889	$903	$919
Net Operating Surplus/(Deficit)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

12.1 Assumptions and notes

The department has an annual expenditure budget of approximately $3.2 million for the Aoraki area for 2009/10, of which the Aoraki Local Body expenditure represents approximately 24% ($769,000 in 2009/10).

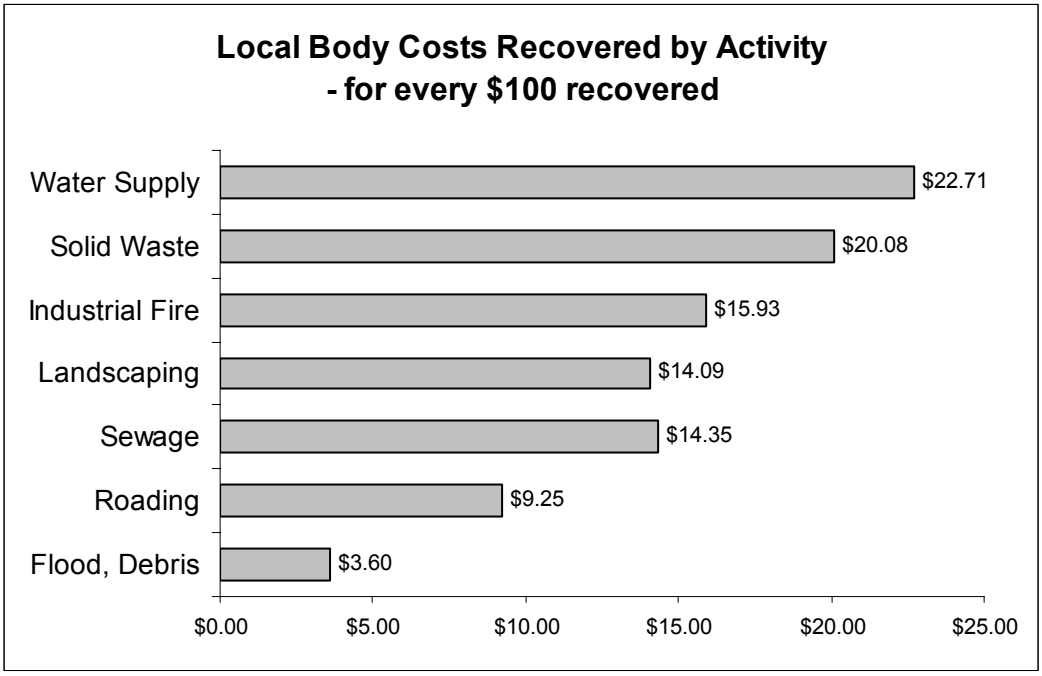
All expenditure associated with the production of this document is excluded from the annual levy to stakeholders. This includes costs for external consultants and both Regional and Conservancy-based staffing.

Revenue

Contributions from stakeholders

The forecast annual contributions from stakeholders are equivalent to the sum of forecast expenditure for that year. This assumes there is no carry forward surplus or shortfall adjustment from prior years.

Expenditure



Explanation of expenditure categories per the Statements of Financial Performance by service category:

Personnel

These are staffing costs that can be directly attributed to a particular project or service, including salaries, wages, recruitment, and any relevant allowances.

Operating

These are non-personnel costs that can be attributed to a particular project or service, including contractors, supplies, field equipment, professional fees, vehicle costs, travel, and electricity.

Overheads

These reflects the local body share of the department's Aoraki Area Office indirect expenditure, i.e. expenditure (personnel and operating) that cannot be identified in an economically feasible manner as specific to particular projects or services.

For the purpose of forecasting budgets over the 10-year period of this plan, the local body share has been calculated at 20.9% for all years, based on 2008/09 planned local body figures. This will be recalculated each year based on planned local body staffing hours for that year.

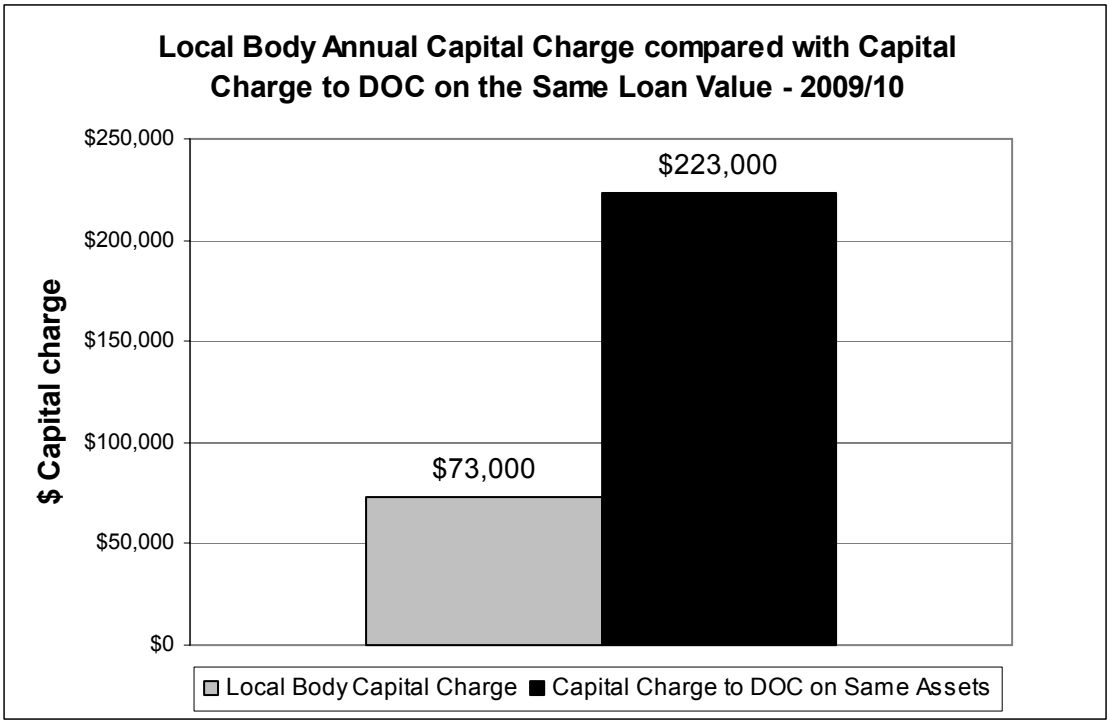
Depreciation

Depreciation of fixed assets is provided on a straight line basis so as to allocate the cost (or valuation) of assets to their estimated residual value over their useful lives.

Capital charge

Treasury charges the department a 'capital charge' which is effectively an interest charge on the use of government funds to build or upgrade assets. This is currently charged to the department by Treasury at a rate of 7.5% per annum. The department absorbs half of this capital charge cost and on-charges a rate of 3.75% per annum to stakeholders on the balance of the local body Loan Memorandum Account (see section 12.3 of this document for further detail on the Loan Memorandum Account and Capital Charge calculation).

Appendix B has further information on the local body cost recovery model.



CPI cost increases

The following annual percentage cost increases have been applied to Personnel, Overheads and Operating expenditure:

	Forecast 2009/10	Forecast 2010/11	Forecast 2011/12	Forecast 2012/13	Forecast 2013/14	Forecast 2014/15	Forecast 2015/16	Forecast 2016/17	Forecast 2017/18	Forecast 2018/19
Personnel	2.6	2.7	2.7	2.5	2.5	2.5	2.6	3.2	2.7	3.1
Road (Roading)	3.3	2.9	2.9	2.4	2.3	2.2	2.3	2.4	2.4	2.2
Property (Landscaping)	2.7	3.1	2.6	2.8	2.8	2.9	3.0	2.6	2.2	2.3
Water (Sewerage)	3.8	3.0	2.8	2.7	3.3	2.9	3.5	3.1	3.2	3.3
Other (Fire, Waste, Flood)	3.5	3.3	2.3	2.4	2.1	2.2	2.3	2.3	2.4	2.5

Forecast percentages provided by Business and Economic Research Limited (BERL)

12.2 Accounting policies

The department is a government department as defined by section 2 of the Public Finance Act 1989. The primary objective of the department is to provide services to the public rather than making a financial return.

In preparing the forecast financial information within this document, estimates and assumptions concerning the future have been made. These estimates and assumptions may differ from the subsequent actual results. Estimates and judgements are continually evaluated and based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

Infrastructure assets

The net book value (NBV) of the Aoraki Local Body assets is $7.2 million at 30 June 2009, of which $3.25 million (45%) has no depreciation charge levied to stakeholders as agreed by the department and stakeholders. All new local body assets will have a depreciation charge included in stakeholder levies.

There is a further $2.3 million (NBV) of non-local body infrastructure assets owned by the department in the village (see list following the main LB Asset Schedule). This excludes the $10 million plus (NBV) worth of visitor assets that the department owns in the village and wider park.

Aoraki/Mount Cook village infrastructure assets are valued by independent valuers, and are stated at fair value. They are revalued at least every five years, with the most recent revaluation of Aoraki infrastructure assets carried out by valuesnet.nz Limited (registered independent valuers) as at 31 March 2008.

When an asset is revalued, the accumulated depreciation of that asset is restated using the latest valuation figures.

Indicative useful lives of assets are as follows (this will fluctuate for individual assets as they are revalued):

- Industrial fire equipment: 45 years
- Landscaping: 44 years
- Roads: 10–100 years
- Sewerage: 64 years
- Solid waste: 38 years
- Flood control: 98 years
- Water supply: 60 years

12.3 Local body capital policy

Funding of local body capital acquisitions

All new fixed assets are paid for by the department and are subject to the department's capital expenditure approval process and funding availability.

A Loan Memorandum Account has been set up from 1 July 2008 to record the total cost of all new assets that are purchased and funded by the department (including significant capital upgrades to existing assets, such as the sewage pond upgrades). All depreciation levied and paid by stakeholders is credited to this account in much the same way as principal repayments on a loan are made.

A discounted capital charge (equivalent to an interest charge) is then levied on the balance of the memorandum loan account (see page 113 for more information on the capital charge).

Note that the impact of revaluing assets purchased since 1 July 2008 will not change the original asset cost value entered into the Memorandum account, but will affect the annual depreciation levied on those assets. The capital charge will correctly adjust to reflect the change in the Loan Memorandum Account.

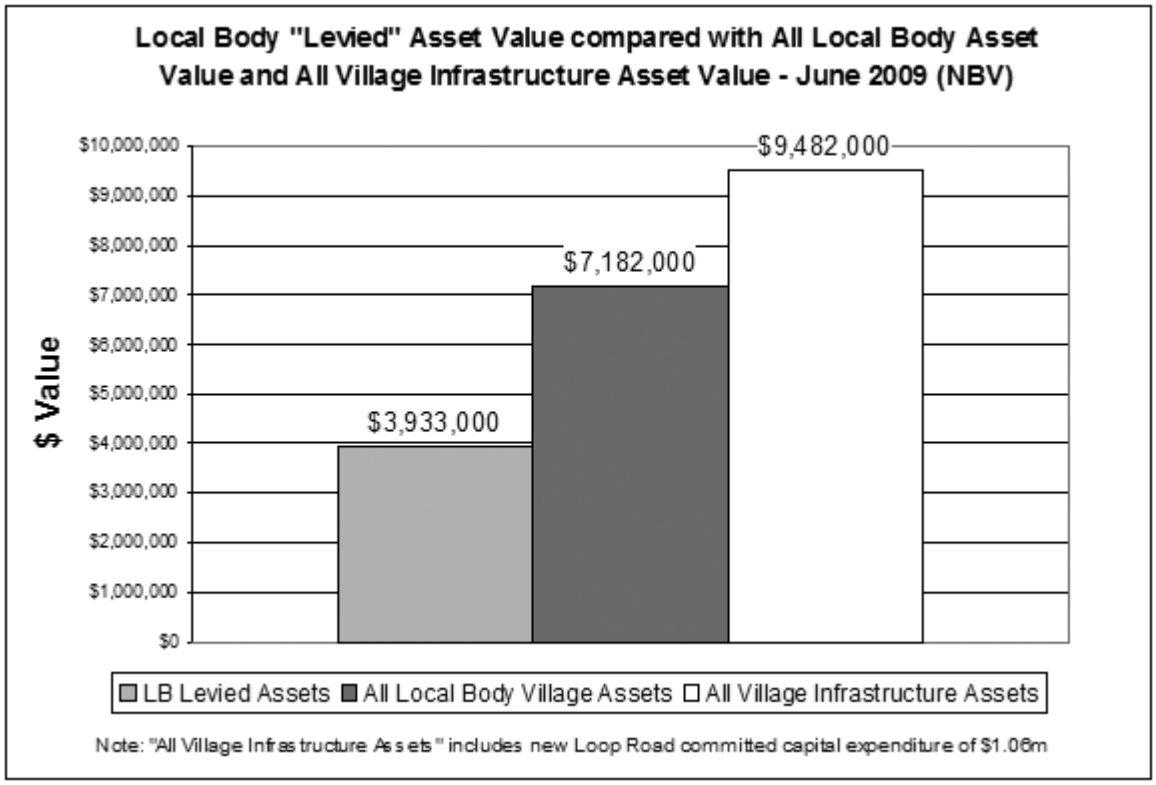
Local Body Loan Memorandum Account (Cost of Assets less Depreciation Charge)

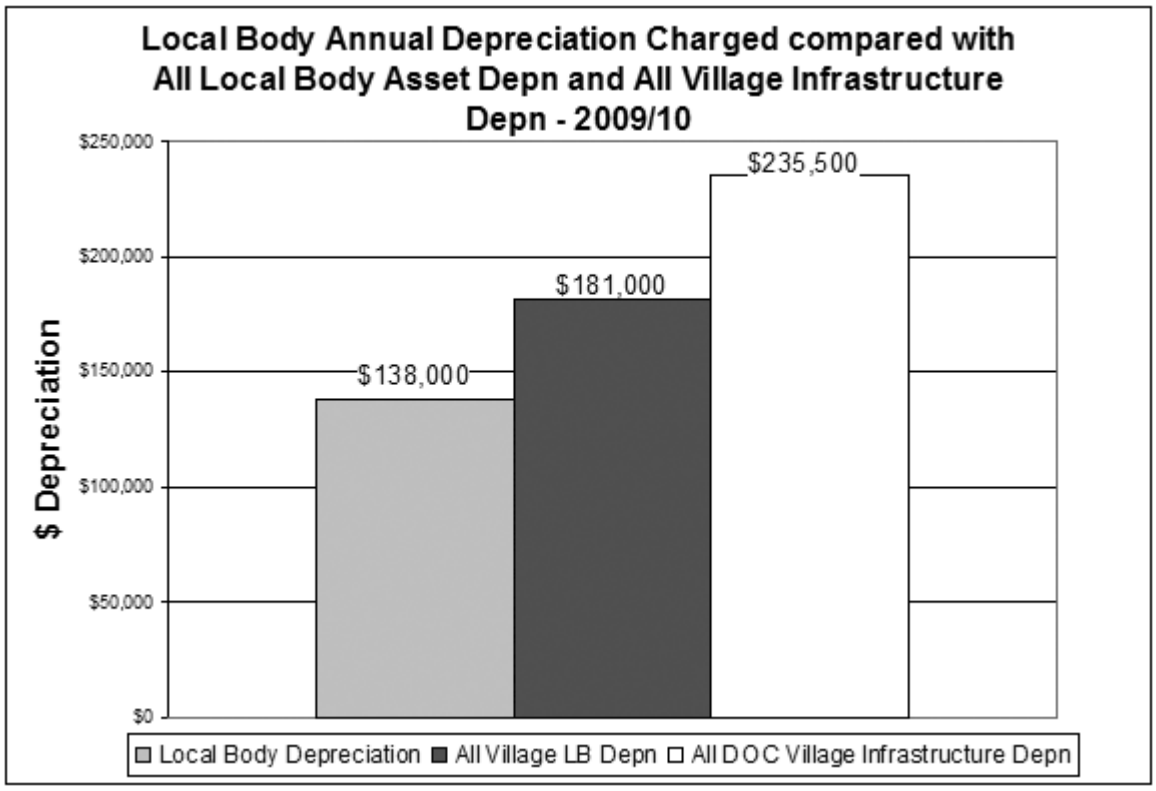
Activity	Forecast 2009/10	Forecast 2010/11	Forecast 2011/12	Forecast 2012/13	Forecast 2013/14	Forecast 2014/15	Forecast 2015/16	Forecast 2016/17	Forecast 2017/18	Forecast 2018/19
	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s
Fire	0	0	0	0	0	341	327	312	298	284
Landscape	0	0	0	0	0	0	0	0	0	0
Roading	0	0	0	8	7	7	204	201	198	195
Sewage	1,150	1,120	1,089	1,059	1,029	999	969	938	908	878
Flood	0	0	0	0	0	0	0	0	0	0
Waste	521	504	486	468	451	433	415	398	380	362
Water	287	271	326	307	287	267	248	228	208	189
Total	1,958	1,894	1,902	1,842	1,774	2,047	2,162	2,077	1,992	1,907

Capital Charge on net balance of LB Loan Memorandum Account

3.75%

Activity	Forecast 2009/10	Forecast 2010/11	Forecast 2011/12	Forecast 2012/13	Forecast 2013/14	Forecast 2014/15	Forecast 2015/16	Forecast 2016/17	Forecast 2017/18	Forecast 2018/19
	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s	$ 000s
Fire	0	0	0	0	0	13	12	12	11	11
Landscape	0	0	0	0	0	0	0	0	0	0
Roading	0	0	0	0	0	0	8	8	7	7
Sewage	43	42	41	40	39	37	36	35	34	33
Flood	0	0	0	0	0	0	0	0	0	0
Waste	20	19	18	18	17	16	16	15	14	14
Water	11	10	12	12	11	10	9	9	8	7
Total	73	71	71	69	67	77	81	78	75	72


Local Body "Levied" Asset Value compared with All Local Body Asset Value and All Village Infrastructure Asset Value - June 2009 (NBV)
$ Value
$10,000,000
$9,000,000
$8,000,000
$7,000,000
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$0
$3,933,000
$7,182,000
$9,482,000
LB Levied Assets
All Local Body Village Assets
All Village Infrastructure Assets
Note: "All Village Infrastructure Assets" includes new Loop Road committed capital expenditure of $1.06m


Local Body Annual Depreciation Charged compared with All Local Body Asset Depn and All Village Infrastructure Depn - 2009/10
$ Depreciation
$250,000
$200,000
$150,000
$100,000
$50,000
$0
$138,000
$181,000
$235,500
Local Body Depreciation
All Village LB Depn
All DOC Village Infrastructure Depn

AORAKI / MT COOK LOCAL BODY ASSET SCHEDULE - 2009 to 2019

Asset #	Asset Description	Purchase Date	Life (Years)	Cost Value	Accumulated Depreciation	Annual Depn	NBV Jun-09
	INDUSTRIAL FIRE BRIGADE						
	LB Assets - Depreciation Levied To Stakeholders						
10003869/0	Village Fire Monitoring & Paging System	01/07/2005	10	61,199	-18,360	-6,120	36,719
10003871/0	Industrial Fire Brigade Portable Pump - Aoraki	01/07/2005	10	12,700	-3,810	-1,270	7,620
10003528/0	Mt Cook Industrial Fire Brigade	01/02/1980					
10003528/1	Hino FT175LA 4WD Fire Engine NJ5676	01/08/1987	29	219,720	-162,965	-7,021	49,733
10003528/5	Fire Siren - VC Building	01/02/1980	30	5,648	-5,350	-188	110
10003528/6	Fire Siren - Pump House	01/02/1980	30	5,649	-5,351	-188	110
	New Fire Appliance	2014/15	25	350,000			
	Breathing Appartus	2014/15	20	5,000			
				659,916	-195,836	-14,788	94,292
	Stakeholders						
10003563/10	100mm Galv (80 mtr) Herm Sprinkler	01/02/1999	80	20,000	-2,332	-250	17,417
10003563/12	Pipe Insulation & Heating - Herm Sprinkler	01/02/1999	15	50,000	-31,255	-3,357	15,388
10003563/8	160mm MDPE Fire Main (280 mtr)	01/02/1999	80	38,000	-4,424	-476	33,100
				108,000	-38,012	-4,083	65,905
		Fire Total		767,916	-233,847	-18,871	160,198
	LANDSCAPING						
	LB Assets - Depreciation Levied To Stakeholders						
10003529/16	L/Scape - Yha Path (Foundation)	01/02/1982	70	12,000	-4,512	-172	7,316
10003529/17	L/Scape - Matagouri Path 1 (Foundation)	01/02/1982	70	15,000	-5,638	-215	9,147
10003529/18	L/Scape - Snowberry Path (Foundation)	01/02/1982	70	2,847	-1,074	-41	1,732
10003529/41	L/Scape - Yha Path (Surface)	01/02/1982	26	24,360	-24,360	0	0
10003529/42	L/Scape - Matagouri Path 2 (Surface)	01/02/1982	22	699	-699	0	0
10003529/43	L/Scape - Snowberry Path (Surface)	01/02/1982	22	136	-136	0	0
10003529/46	L/Scape - Yha Bridge 1	01/02/1982	53	7,493	-3,735	-141	3,617
10003529/47	L/Scape - Yha Bridge 2	01/02/1982	53	7,569	-3,772	-143	3,654
10003529/50	L/Scape - Path Bollard Lights	01/02/1984	43	65,000	-36,826	-1,516	26,658
10003529/51	L/Scape - Streetlights 1	01/02/1981	44	35,000	-21,787	-797	12,416
10003529/52	L/Scape - Streetlights 2	01/02/1981	44	7,908	-4,928	-180	2,801
10003529/53	L/Scape - Streetlight Control	01/02/1981	26	6,778	-6,778	0	0
10003529/54	L/Scape - Sebastapol Bridge	01/02/1982	53	7,569	-3,772	-143	3,654
10003529/55	L/Scape - Nursery Building	01/02/2000	25	3,954	-1,331	-158	2,465
10003529/56	L/Scape - Shade House	01/02/1982	33	4,519	-3,617	-137	765
				200,832	-122,967	-3,642	74,223
	LB Assets - Depreciation NOT Levied To Stakeholders						
10003529/1	L/Scape - Tennis Court 1 (Foundation)	01/02/1990	69	6,127	-1,635	-89	4,403
10003529/19	L/Scape - Doc Admin Mounds (Foundation)	01/02/1980	100	6,101	-1,734	-61	4,306
10003529/20	L/Scape - Motel Mounds (Foundation)	01/02/1980	100	28,000	-7,942	-280	19,778
10003529/21	L/Scape - Yha Mounds (Foundation)	01/02/1987	100	10,000	-2,127	-100	7,773
10003529/22	L/Scape - School Mounds (Foundation)	01/02/1986	100	10,000	-725	-120	9,155
10003529/23	L/Scape - Hall Mounds (Foundation)	01/02/2000	100	4,745	-303	-49	4,394
10003529/24	L/Scape - Housing Mounds (Foundation)	01/02/1979	100	100,000	-7,925	-1,304	90,770
10003529/25	L/Scape - Workshop Mounds (Foundation)	01/02/1980	100	8,000	-624	-103	7,273
10003529/26	L/Scape - Tennis Court 1 (Surface)	01/02/1990	21	23,392	-20,514	-1,114	1,764
10003529/9	L/Scape - Broadleaf Path (Foundation)	01/02/1982	70	15,000	-5,654	-214	9,131
10003529/12	L/Scape - School Path (Foundation)	01/02/1982	70	336	-127	-5	204
10003529/34	L/Scape - Broadleaf Path (Surface)	01/02/1982	26	36,516	-36,516	0	0
				248,217	-85,825	-3,439	158,953
		Landscape Total		449,049	-208,793	-7,081	233,176

Asset #	Asset Description	Purchase Date	Life (Years)	Cost Value	Accumulated Depreciation	Annual Depn	NBV Jun-09
	ROADING AND STREETLIGHTING						
	LB Assets - Depreciation Levied To Stakeholders						
10003533/0	Sebastapol Drive, Mt Cook	01/02/1970					
10003533/1	Sebastapol Drive - Foundation	01/02/1970	79	70,000	-34,013	-887	35,100
10003533/2	Sebastapol Drive - Surface	01/02/1970	34	10,395	-10,395	0	0
10003533/3	Sebastapol Drive - K & C	01/02/1980	65	25,000	-10,914	-385	13,701
10003533/4	Sebastapol Drive - Sump	01/02/1980	77	2,259	-834	-29	1,396
10003535/0	Kitchener Drive, Mt Cook	01/02/1970					
10003535/1	Kitchener Drive - Foundation	01/02/1970	79	200,000	-97,218	-2,533	100,249
10003535/2	Kitchener Drive - Surface	01/02/1970	34	30,819	-30,819	0	0
10003535/3	Kitchener Drive - K & C	01/02/1980	65	15,000	-6,532	-231	8,236
10003535/4	Kitchener Drive - Culvert 1	01/02/1970	96	50,000	-19,893	-523	29,584
10003535/5	Kitchener Drive - Culvert 2	01/02/1970	96	50,000	-19,893	-523	29,584
10003535/6	Kitchener Drive - Culvert 3	01/02/1970	96	50,000	-19,893	-523	29,584
10003536/0	Blackburn Place, Mt Cook	01/02/1980					
10003536/1	Blackburn Place - Foundation	01/02/1980	74	20,000	-7,662	-271	12,068
10003536/2	Blackburn Place - Surface	01/02/1980	27	2,671	-2,671	0	0
10003536/3	Blackburn Place - K & C	01/02/1980	65	15,000	-6,527	-232	8,242
10003536/4	Blackburn Place - Sump	01/02/1980	77	5,649	-2,085	-73	3,491
10003537/0	Wakefield Drive, Mt Cook	01/02/1970					
10003537/1	Wakefield Drive - Foundation	01/02/1970	79	35,000	-17,006	-443	17,551
10003537/2	Wakefield Drive - Surface	01/02/1999	16	5,187	-3,053	-324	1,810
10003537/3	Wakefield Drive - K & C	01/02/1980	65	18,000	-7,846	-278	9,876
10003537/4	Wakefield Drive - Sump	01/02/1980	77	2,259	-834	-29	1,396
10003539/0	Mueller Place, Mt Cook	01/02/1981					
10003539/1	Mueller Place - Foundation	01/02/1981	72	20,000	-7,592	-278	12,130
10003539/2	Mueller Place - Surface	01/02/1981	26	2,535	-2,535	0	0
10003539/3	Mueller Place - K & C	01/02/1981	65	15,000	-6,304	-231	8,465
10003539/4	Mueller Place - Sump	01/02/1981	77	2,259	-804	-29	1,425
10003540/0	Kea Place, Mt Cook	01/02/1981					
10003540/1	Kea Place - Foundation	01/02/1981	72	7,321	-2,788	-102	4,432
10003540/2	Kea Place - Surface	01/02/1981	26	1,171	-1,171	0	0
10003540/3	Kea Place - K & C	01/02/1981	65	5,637	-2,377	-87	3,173
10003540/4	Kea Place - Sump	01/02/1981	77	2,259	-804	-29	1,425
10003541/0	Sealy Place, Mt Cook	01/02/1981					
10003541/1	Sealy Place - Foundation	01/02/1981	72	12,000	-4,555	-167	7,278
10003541/2	Sealy Place - Surface	01/02/1981	26	1,521	-1,521	0	0
10003541/3	Sealy Place - K & C	01/02/1981	65	7,044	-2,971	-108	3,965
10003541/4	Sealy Place - Sump	01/02/1981	77	2,259	-804	-29	1,425
10003542/0	Du Faur Place, Mt Cook	01/02/1981					
10003542/1	Du Faur Place - Foundation	01/02/1981	72	15,000	-5,695	-209	9,096
10003542/2	Du Faur Place - Surface	01/02/1981	26	1,940	-1,940	0	0
10003542/3	Du Faur Place - K & C	01/02/1981	65	12,000	-5,049	-185	6,766
10003542/4	Du Faur Place - Sump	01/02/1980	77	3,389	-1,251	-44	2,094
10003544/0	Ponds Access Rd, Mt Cook	01/02/1976					
10003544/1	Ponds Access Rd - Foundation	01/02/1976	76	65,000	-27,668	-857	36,475
10003544/2	Ponds Access Rd - Surface	01/02/1976	28	4,971	-4,971	0	0
10003546/0	House 3 Access Rd, Mt Cook	01/02/1965					
10003546/1	House 3 Accesss Rd - Foundation	01/02/1965	80	3,422	-1,857	-43	1,522
10003546/2	House 3 Access Rd - Surface	01/02/1999	10	311	-293	-18	0
10003547/0	Pilots Road, Mt Cook	01/02/1987					
10003547/1	Pilots Road - Foundation	01/02/1987	72	2,982	-887	-41	2,054
10003547/2	Pilots Road - Surface	01/02/1987	17	271	-271	0	0
10003550/0	Mt Cook Village Roads	01/02/1970					
10003550/1	Village - Drainage 300Mm Pipe	01/02/1978	79	200,000	-76,955	-2,533	120,513
10003550/2	Village - Drainage 150Mm Pipe	01/02/1978	79	40,000	-15,373	-507	24,120
10003550/5	Truck Snow Plough Blade	01/02/1985	19	5,649	-5,649	0	0
10003550/6	Loader Snow Plough Blade	01/02/1985	19	2,259	-2,259	0	0
	New Snow Plough Blade	2012/13	20	8,000			
	Reseal Local Body Roading	2015/16	75	200,000			
				1,251,439	-482,430	-12,781	548,227

Asset #	Asset Description	Purchase Date	Life (Years)	Cost Value	Accumulated Depreciation	Annual Depn	NBV Jun-09
	LB Assets - Depreciation NOT Levied To Stakeholders						
10003543/0	Black Birch Access Rd, Mt Cook	01/02/1999					
10003543/1	Black Birch Access Rd - Foundation	01/02/1999	75	35,000	-4,350	-467	30,183
10003543/2	Black Birch Access Rd - Surface	01/02/1999	10	2,457	-2,314	-143	0
				37,457	-6,664	-611	30,183
		Roading Total		1,288,896	-489,094	-13,392	578,410
	SEWAGE RETICULATION AND TREATMENT						
	LB Assets - Depreciation Levied To Stakeholders						
10003551/0	Sewerage - Mt Cook Village	01/02/1977					
10003551/1	150Mm Pipe - Village	01/02/1977	80	250,000	-98,122	-3,126	148,751
10003551/2	100Mm Pipe - Village	01/02/1977	80	100,000	-39,256	-1,250	59,494
10003551/3	Manholes - Village	01/02/1977	80	100,000	-39,159	-1,252	59,588
10003551/4	Manholes - Village (New)	01/08/2002	80	1,356	-95	-17	1,244
10003552/0	Sewerage - Larch Grove Rd	01/02/1974					
10003552/1	Controls Larch Grove Rd	01/02/1974	31	1,130	-1,130	0	0
10003552/2	Civil & Electrical Larch Grove	01/02/1974	57	35,000	-21,083	-616	13,300
10003552/3	Chalet Pumps - Larch Grove Rd	01/02/1999	15	5,649	-3,546	-377	1,726
10003553/0	Sewerage - Ponds Access Rd	01/02/1969					
10003553/1	Top Pond Civil Works	01/02/1969	103	150,000	-57,399	-1,456	91,144
10003553/2	Top Pond Liner	01/02/1969	35	122,010	-122,010	0	0
10003553/3	Bottom Pond Civil Works	01/02/1976	100	150,000	-48,621	-1,500	99,879
10003553/4	Bottom Pond Liner	01/02/1976	28	122,010	-122,010	0	0
	New Sewerage Upgrade	01/04/2009	40				
10004893/0	Aerator #1 - Oxidation Pond - East Side	01/04/2009	40	47,128	0	-1,178	46,931
10004894/0	Aerator #2 - Oxidation Pond - South Side	01/04/2009	40	47,128	0	-1,178	46,931
10004895/0	Aerator #3 - Oxidation Pond - West Side	01/04/2009	40	47,128	0	-1,178	46,931
10004896/0	Oxidation Pond #1 (below Mt Cook Village)	01/04/2009	40	457,089	0	-11,427	455,184
	Stage 2 - Oxidation Ponds	30/06/2009	40	536,000	0	-13,400	534,883
	Village Sewage Piping Part Upgrade	2009/10	40	74,000			
		Sewage Total		2,245,627	-552,433	-37,957	1,605,988
	FLOOD, DEBRIS FLOW AND AVALANCHE PROTECTION						
	LB Assets - Depreciation Levied To Stakeholders						
10003554/0	Stream Control - Kitchener	01/02/1958					
10003554/1	Kitchener Dyke 1	01/02/1958	102	15,000	-7,394	-147	7,459
10003554/2	Kitchener Dyke 2	01/02/1958	102	40,000	-19,758	-392	19,849
10003556/5	Black Birch Flood Alarm	01/02/1986	21	899	-565	0	334
10003557/0	Stream Control - Chalets	01/02/1979					
10003557/1	Chalets Swale	01/02/1979	54	3,728	-2,031	-69	1,628
10003557/2	Chalets Sump	01/02/1979	100	1,695	-499	-17	1,179
10003558/0	Stream Control - Governors Bush	01/02/1980					
10003558/1	Governors Bush Training Wall	01/02/1984	92	20,000	-5,290	-218	14,492
				81,322	-35,537	-844	44,942
	LB Assets - Depreciation NOT Levied To Stakeholders						
10003555/1	Geo-Tech Wall - Glencoe Training Wall	01/01/1999	100	556,793	-32,912	-5,568	519,429
10003555/2	Geo-Tech Wall - Hermitage Dyke	01/01/1999	100	397,709	-23,441	-3,977	371,087
10003555/3	Geo-Tech Wall - Tavern Dyke	01/01/1999	100	95,450	-5,635	-955	89,052
10003555/4	Geo-Tech Wall - Lower Dyke	01/01/1999	100	55,679	-3,282	-557	51,953
10003555/5	Geo-Tech Wall - Monitoring Markers Glencoe	01/01/1999	50	4,493	-532	-90	3,887
10003556/1	Geo-Tech Wall - Black Birch Stopbank 1	01/01/1999	100	1,113,586	-65,712	-11,136	1,038,968
10003556/2	Geo-Tech Wall - Black Birch Secondary	01/01/1999	100	445,434	-26,318	-4,454	415,554
10003556/3	Geo-Tech Wall - Black Birch Depot Stopbank	01/01/1999	100	30,000	-2,813	-300	26,887
10003556/4	Geo-Tech Wall - Oxidation Pond Stopbank	01/01/1999	100	256,351	-14,112	-2,564	240,249
10003556/6	Geo-Tech Wall - Monitoring Markers Black	01/01/1999	50	5,391	-638	-108	4,665
				2,960,886	-175,397	-29,708	2,761,730
		Flood Total		3,042,208	-210,933	-30,551	2,806,672

Asset #	Asset Description	Purchase Date	Life (Years)	Cost Value	Accumulated Depreciation	Annual Depn	NBV Jun-09
	SOLID WASTE DISPOSAL						
	LB Assets - Depreciation Levied To Stakeholders						
10003559/0	Mt Cook Solid Waste	01/02/1975	0	0	0	0	0
10003559/1	Ex Mwd Workshops (33% Share)	01/02/1975	54	66,000	-40,937	-1,218	23,845
10003559/2	Paper Press - Workshop	01/02/1993	22	7,908	-5,542	-359	2,007
10003559/3	Paper Press Controls - Workshop	01/02/1999	19	2,259	-1,120	-119	1,021
10003559/4	Park Bins - Waste	01/02/1994	13	1,130	-1,130	0	0
10003559/5	Village Rubbish Storage Bins	01/02/1985	22	3,389	-3,389	0	0
10003559/6	Roll Doors (4.3Hx4.4W) - Depot	01/02/1975	36	10,168	-9,438	-282	447
10003559/7	Roll Doors (2.5Hx2.4W) - Depot	01/02/1975	36	6,778	-6,292	-188	298
10003559/8	Ford N1017 9T Rubbish Truck PY3001	01/09/1991	18	107,324	-100,368	-5,962	994
	New Refuse System	2009/10	30	530,000			
				734,956	-168,215	-8,129	28,612
	LB Assets - Depreciation NOT Levied To Stakeholders						
10003559/1	Ex Mwd Workshops (33% Share)	01/02/1975	54	134,000	-83,115	-2,472	48,413
				134,000	-83,115	-2,472	48,413
		Waste Total		868,956	-251,330	-10,601	77,024
	WATER SUPPLY AND RETICULATION						
	LB Assets - Depreciation Levied To Stakeholders						
10003560/0	150Mm Pipe X 200M - Black Birch	01/02/1977	82	25,000	-9,566	-305	15,129
10003561/0	Water Supply - Glencoe	01/02/1957					
10003561/1	Intake - Civil Glencoe	01/02/1957	65	1,130	-894	-17	219
10003561/2	40Mm Pipe X 150M - Glencoe PE	01/02/1983	77	7,287	-2,405	-95	4,787
10003561/3	75Mm Pipe X 150M - Glencoe Galv	01/02/1957	91	30,000	-16,906	-331	12,763
10003561/4	Reservoir 1 - Glencoe 1,360,000 Ltr	01/02/1965	55	70,043	-55,291	-1,274	13,478
10003561/5	Reservoir 2 - Glencoe 1,360,000 Ltr	01/02/1965	55	70,043	-55,291	-1,274	13,478
10003562/0	Water Supply - Black Birch	01/02/1977					
10003562/1	Intake - Civil Black Birch	01/02/1977	45	30,000	-20,886	-671	8,443
10003562/2	Surge Chamber - Black Birch	01/02/1977	82	2,824	-1,082	-34	1,708
10003562/3	Reservoir 1 - Black Birch 1,000,000 Ltr	01/02/1977	82	400,000	-153,114	-4,881	242,006
10003562/4	Reservoir 2 - Black Birch 1,000,000 Ltr	01/02/1977	82	400,000	-153,114	-4,881	242,006
10003562/5	Reservoir 3 - Black Birch 1,000,000 Ltr	01/02/1977	82	400,000	-153,114	-4,881	242,006
10003562/6	Pump 1 - Black Birch	01/02/1977	29	7,908	-7,908	0	0
10003562/7	Pump 2 - Black Birch	01/02/1977	29	7,908	-7,908	0	0
10003563/0	Water Supply - Mt Cook Village	01/02/1957					
10003563/4	Control Cable 1 - Village	01/02/1977	31	27,113	-27,113	0	0
10003563/6	150mm AC Pipe (2 k/m)	01/02/1977	80	220,000	-86,315	-2,752	130,933
10003563/7	150mm AC Pipe (1k/m)	01/02/1965	84	120,000	-61,936	-1,431	56,634
10003563/11	Fire Hydrants - Village	01/02/1977	80	80,000	-31,377	-1,001	47,623
10003563/16	80mm Galv Pipe (3800 mtr)	01/02/1965	84	350,000	-180,561	-4,175	165,264
10003563/17	65mm Galv Pipe (283 mtr)	01/02/1965	84	30,000	-15,453	-358	14,189
10003564/0	Water Supply - Sebastapol Drive	01/02/1977					
10003564/1	Controls Pumphouse - Sebastapol Dr.	01/02/1993	18	50,000	-42,634	-2,851	4,515
10003564/2	Pump House - Sebastapol Drive	01/02/1977	54	20,000	-11,582	-373	8,046
10003564/3	Generator Pump House - Sebastapol Dr.	01/02/1980	34	30,000	-25,065	-884	4,051
10003565/0	Water Supply - Park Hq	01/02/1985					
10003565/2	Water Alarm Relay System (in VC)	01/02/1985					
10004747/0	Water Treatment Plant - Stage 1	01/11/2008	20	319,028	0	-15,951	309,723
	Water Treatment Plant - Stage 2	2011/12	20	75,000			
				2,773,284	-1,119,514	-48,419	1,536,998

Asset #	Asset Description	Purchase Date	Life (Years)	Cost Value	Accumulated Depreciation	Annual Depn	NBV Jun-09
	LB Assets - Depreciation NOT Levied To Stakeholders						
10003545/0	Pump House Road, Mt Cook	01/02/1999					
10003545/1	Pump House Road - Foundation	01/02/1999	75	4,132	-519	-55	3,558
10003545/2	Pump House Road - Surface	01/02/1999	10	376	-354	-22	0
10003548/0	Glencoe Tanks Access Rd, Mt Cook	01/02/1999					
10003548/1	Glencoe Tanks Access Rd - Foundation	01/02/1999	75	8,000	-999	-107	6,895
10003548/2	Glencoe Tanks Access Rd - Surface	01/02/1999	10	633	-596	-37	0
10003549/0	Hermitage Tanks Access Rd, Mt Cook	01/02/1999					
10003549/1	Hermitage Tanks Access Rd - Foundation	01/02/1999	75	2,796	-351	-37	2,408
10003549/2	Hermitage Tanks Access Rd - Surface	01/02/1999	10	254	-239	-15	0
10003562/8	Pump 3 Valving - Black Birch	01/02/1999	29	10,000	-3,217	-346	6,437
10003563/1	Balance Tank 240,000 Litre	01/02/1999	80	120,000	-14,059	-1,501	104,440
10003563/2	Balance Tank Flow Meter - Village	01/02/1999	15	6,778	-4,255	-452	2,071
10003563/3	Civil Works & Electrical Supply - Village	01/02/1999	50	3,389	-638	-68	2,683
10003563/5	Control Cable 2 - Village	01/02/1999	25	25,000	-9,452	-998	14,550
10003563/9	150mm PVC (300 mtr)	01/02/1999	80	35,000	-4,097	-438	30,465
10003563/13	80mmm PVC Pipe (375 mtr)	01/02/1999	80	35,000	-4,082	-438	30,480
10003563/14	80mmm PVC Pipe (250 mtr)	01/02/1999	80	25,000	-2,909	-313	21,778
10003563/15	110mm PVC Pipe (28 mtr)	01/02/1999	80	2,705	-318	-34	2,353
10003563/18	100mm Galv Pipe (40 mtr)	01/02/1999	80	3,864	-455	-48	3,361
				282,927	-46,540	-4,908	231,479
		Water Total		3,056,211	-1,166,054	-53,327	1,768,477
	Total LB Assets - Depreciation Levied To Stakeholders			7,947,376	-2,676,932	-126,559	3,933,282
	Total LB Assets - Depreciation NOT Levied To Stakeholders			3,637,487	-352,438	-42,749	3,248,249
	All Local Body Assets			11,584,863	-3,029,370	-169,309	7,181,531

DOC Other infrastructure assets in the village (not levied)

Category	Asset
Buildings	Emergency Services Building Village Day Shelter
Carparks	New Visitor Centre Carpark Village Day Shelter Carpark
Tracks and Fencing	Bowen Bush Track Govenors Bush Track Village Fencing
Bridges & Barriers	YHA Bridge Sebastapol Drive Footbridge Glencoe Stream Pedestrian Bridge Other Timber Bridges on MCV Paths Blackbirch Stream Barriers
Roading	Larch Grove Road Bowen Drive } Known as Loop Road Terrace Road New Loop Road Capital Works ($1.06m)

These assets have a combined net book value for the year ending 2009/10 of $2.3m, with an annual depreciation charge paid by the department of $68,000.

13 Document review

This document will apply to the period from 1 July 2009 to 30 June 2019. The plan will be reviewed every three years during this period, i.e. 1 July 2012, 1 July 2015, and 1 July 2018.

The timeline below shows the planned reporting and reviews of this LTCP during the 10-year period:

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Annual Report and Plan	Annual Report and Plan	Annual Report and Plan	Annual Report and Plan	Annual Report and Plan	Annual Report and Plan	Annual Report and Plan	Annual Report and Plan	Annual Report and Plan	Annual Report and Plan
		LTCP Review			LTCP Review			LTCP Review	Prepare new LTCP

The document may also be reviewed in the event of a significant change in policy or catastrophic event that causes a change in the way infrastructure is funded or delivered. Any such review would be conducted by the department in consultation with stakeholders at stakeholder meetings.

Appendices

Appendix A – Contextual documents

This appendix provides links to further information about the various constraints and requirements that the department has to meet. These include legislation, policies, and other plans that affect the management of national parks and therefore the village, drinking water standards, and resource consents.

Relevant Legislation – National Parks Act 1980 and Conservation Act 1987

- The National Parks Act 1980 sets out how all national parks are to be managed, and in section 43 sets out the legal framework for the administration and management of national parks.
- The Aoraki/Mount Cook village is situated within the Aoraki/Mount Cook National Park and therefore all of the legislation and policy outlined in this section that controls the management of the Aoraki/Mount Cook National Park also applies to village management.
- The Conservation Act 1987 sets out the rules for the consideration of applications and granting of concessions for activities on public conservation land. This applies to all non-government leases in the village.

National Parks Act 1980:
http://www.legislation.govt.nz/act/public/1980/0066/latest/DLM36963.html?search=ts_act_national+parks_resel&sr=1

Relevant sections:

4 Parks to be maintained in natural state, and public to have right of entry

(1) It is hereby declared that the provisions of this Act shall have effect for the purpose of preserving in perpetuity as national parks, for their intrinsic worth and for the benefit, use, and enjoyment of the public, areas of New Zealand that contain scenery of such distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest.

(2) It is hereby further declared that, having regard to the general purposes specified in subsection (1) of this section, national parks shall be so administered and maintained under the provisions of this Act that—

(a) They shall be preserved as far as possible in their natural state:

(b) Except where the Authority otherwise determines, the native plants and animals of the parks shall as far as possible be preserved and the introduced plants and animals shall as far as possible be exterminated:

(c) Sites and objects of archaeological and historical interest shall as far as possible be preserved:

(d) Their value as soil, water, and forest conservation areas shall be maintained:

(e) Subject to the provisions of this Act and to the imposition of such conditions and restrictions as may be necessary for the preservation of the native plants and animals or for the welfare in general of the parks, the

public shall have freedom of entry and access to the parks, so that they may receive in full measure the inspiration, enjoyment, recreation, and other benefits that may be derived from mountains, forests, sounds, seacoasts, lakes, rivers, and other natural features.

15 Amenities areas

(1) The Minister may, on the recommendation of the Authority made in accordance with the management plan, by notice in the Gazette, set apart any area of a park as an amenities area, and may in like manner revoke any such setting apart.

(2) While any such area is set apart, the development and operation of recreational and public amenities and related services appropriate for the public use and enjoyment of the park may be authorised in accordance with this Act and the management plan.

(3) The principles applicable to national parks shall, notwithstanding section 4 of this Act, apply only so far as they are compatible with the development and operation of such amenities and services

43 Parks to be administered by Department

The Department shall, subject to this Act, and in accordance with—

(a) Any statements of general policy adopted under section 44 of this Act; and

(aa) Any conservation management strategy for the time being in force in respect of a park; and

(b) Any management plan for the time being in force in respect of a park— administer and manage all national parks in such a manner as to secure to the public the fullest proper use and enjoyment of the parks consistent with the preservation of their natural and historic features and the protection and wellbeing of their native plants and animals.

49 Concessions

(1) The Minister may, in accordance with Part 3B of the Conservation Act 1987, grant a concession in respect of any park; and the said Part 3B shall apply as if references in that Part to a conservation area were references to a park and with any other necessary modifications.

(2) Before granting any concession over a park, the Minister shall satisfy himself or herself that a concession—

(a) Can be granted without permanently affecting the rights of the public in respect of the park; and

(b) Is not inconsistent with section 4 of this Act.

(3) The Minister may impose a reasonable charge for the use of any facilities (other than a path or track) provided by the Minister in or in respect of any park.

(4) A concessionaire of any part of any park may, to the extent that the concessionaire's concession document so provides, impose a reasonable charge for the use of any facilities (other than a path or track) provided by the Minister in or in respect of the park.

(5) Any person who—

(a) Has, in accordance with any concession or other consent of the Minister, erected any structure or facility in any park; or

(b) Uses for camping sites or for parking places for vehicles any part of any park; or

(c) Carries on any activity in any park— may, subject to the relevant conservation management strategy or management plan (if any) and the terms and conditions (if any) of the concession document concerned, impose a reasonable charge in respect of access to or the use of structures, sites, or places, or the carrying on or products of the activity.

(6) Nothing in this section authorises any person to do anything on or in respect of any private land.

(7) This section is subject to Part 2 of the Forests (West Coast Accord) Act 2000, in relation to land that is added to a national park as a result of a declaration under section 8(1) of that Act.

50 Accommodation within parks

(1) The Minister may, from time to time, in accordance with the management plan for a park, and on such terms and conditions as to design, materials, situation, custody, use, rental, inspection, maintenance, public access, or otherwise as he determines,—

(a) Establish, or authorise, or assist in the establishment by any body or person (whether incorporated or not), of camping grounds, huts, hostels, accommodation houses, hotels, and other buildings, or facilities in any park:

(b)

(c) Erect or authorise the erection of accommodation for the use of rangers or officers of any Department of State or other persons engaged in the administration, control, or management of the park or the protection of forests in or adjacent to the park:

(d) Grant concessions over or in respect of land within the park as sites for dwellings for persons or bodies (whether incorporated or not) carrying on any activity within the park.

(2) In the exercise of the powers conferred by subsection (1) of this section, the Minister may permit the use of stone, gravel, or similar substances found in the park.

(3)

(4) Notwithstanding subsection (1) of this section, the Minister may grant a lease or licence of any hotel, accommodation house, or facility that was established in any park before the commencement of this subsection, whether or not the grant of any such lease or licence is authorised by either of those subsections.

(5) While a lease or licence granted under subsection (4) of this section is in force, the following provisions shall apply:

(a) The person or body carrying out any review of the management plan for the park shall have regard to the provisions of that lease or licence:

(b) Before granting a new lease or licence in place of that lease or licence, or a renewal of that lease or licence, the Minister shall have regard to the provisions of the management plan (if any) that is for the time being in force for the park.

Conservation Act 1987

http://www.legislation.govt.nz/act/public/1987/0065/latest/DLM103610.html?search=ts_act_conservation_resel&sr=1

Relevant sections

- Section 17S – Contents of application.
- Section 17U – Matters to be considered by Minister.
- Section 17W – Relationship between concessions and conservation management strategies and plans.
- Section 17X – Power of Minister to impose and enforce conditions.
- Section 17Y – Rents, fees, and royalties.
- Section 17ZH – Powers of Minister where services are provided by the Minister or the Director-General (see section 11 of this document).

Statutory documents

General Policy for National Parks, Conservation Management Strategies and National Park Management Plans

Section 43 of the National Parks Act 1980 gives the same statutory powers as that Act to the General Policy for National Parks, the Canterbury Conservancy Conservation Management Strategy and the National Park Management Plans (NPMP) in the management and administration of the Park.

Section 44 of the National Parks Act 1980 provides for the adoption by the New Zealand Conservation Authority (an independent appointed body) of statements of general policy that give both direction and guidance to conservation managers and to communities on how to preserve and protect these special areas and the indigenous species in them.

In particular, the purpose of the General Policy for National Parks is to implement the National Parks Act 1980 and to provide consistent national direction for the administration of national parks through conservation management strategies and national park management plans.

The Canterbury Conservancy Conservation Management Strategy sets out the management policies and objectives for all public conservation lands in Canterbury and allows for the management of the park in context of the surrounding landscape and other conservation areas, reserves and parks in the conservancy.

The purpose of the NPMP is to express the overall management intentions for the park, for the 10 years from 2004 when it became operative. This planning document contains detailed and specific management objectives and policies for the management of the park as a whole. Sections 5 and 6 of the NPMP address the management of the Aoraki/Mount Cook village.

These planning documents all become 'operative' after undergoing a statutory process with public input and approval and adoption by the New Zealand Conservation Authority. The Canterbury-specific planning documents (CMS and the NPMP) were also approved by the Aoraki Canterbury Conservation Board.

Both the Conservation Authority and Conservation Board are statutory bodies that provide advice to the Minister and the Director-General of Conservation on conservation policy, the management of national parks, and the other activities and responsibilities of the department.

General Policy for National Parks (New Zealand Conservation Authority, April 2005)

http://www.doc.govt.nz/upload/documents/about-doc/role/policies-and-plans/general-policy-for-national-parks.pdf

Relevant sections

- Section 9 – Accommodation and Related Facilities

Aoraki/Mount Cook National Park Management Plan

http://www.doc.govt.nz/publications/about-doc/role/policies-and-plans/national-park-management-plans/aoraki-mount-cook-national-park-management-plan/

Relevant sections

- Section 1 – Introduction. Sets the scene and legislative background.
- Section 5 – Aoraki/Mount Cook Village Management. This sets out management objectives for the village.
- Section 6 – Aoraki/Mount Cook Village Policies. This sets out the methods and policies for achieving the objectives for the village as set out in section 5 of the management plan.

New Zealand drinking water standards

The Ministry of Health is responsible for setting standards for drinking water and have information on their website available at:

http://www.moh.govt.nz/moh.nsf/indexmh/drinking-water-proposed-legislation

The current drinking water standards are the New Zealand Drinking Water Standards 2008.

Resource consents

Resource consents are on the Environment Canterbury website. Resource consents held by the department for local body activities are:

CRC054838 To take and use water: expires 27 February 2044.

This consent authorises the taking of water from Black Birch Stream, Glencoe Stream, and Kitchener Creek.

CRC054839 To undertake works in the bed and banks of a river: expires 27 February 2044.

This consent authorises use and maintenance of intake structures and pipes in Black Birch Stream, Glencoe Stream, and Kitchener Creek.

CRC 054830 To discharge water to water: expires 27 February 2044.

This consent authorises the discharge of overflows and diversion from intakes when water sediment levels trigger automatic closure of intakes, into Black Birch Stream, Gumboot Pond, and Glencoe Stream.

CRC054829 To discharge effluent onto land: expires 24 August 2042.

This consent authorises the discharge to land up of to 610 cubic metres per day of treated domestic septic tank effluent.

CRC981164 Geotechnical protection structures: expires 25 February 2033.

This consent authorises at or about map references H36:7634-1437, H36:7589-1514 and H36:7595-1548:

- Placing and reconstructing dykes in Black Birch and Glencoe Streams.
- Removing a footbridge over Glencoe Stream.
- Excavating sand gravel and other natural material from the beds of Black Birch Stream, Glencoe Stream, and Kitchener Creek

CRC084612 Discharge of storm water: expires 8 Jul 2043.

This consent authorises the discharge of storm water from the car parking around the Visitor Centre.

Appendix B – Aoraki/Mount Cook Local Body Cost Recovery Model

Aoraki/Mount Cook Local Body Cost Review

During the 2009 financial year, a review of the Aoraki/Mount Cook Local Body Cost Recovery Model (LBCRM) was undertaken by Pricewaterhouse-Coopers (PWC). The draft report was then peer reviewed by Morrison Low & Associates Ltd (ML). Comments, feedback and suggestions from ML were then considered by PWC and a final report was produced where all principles, assumptions, opinions, and conclusions were agreed on by both parties.

Following the release of the PWC report, the concessionaires were invited to make comments on the report and its conclusions. A subcommittee of independent advisors and department staff then considered the comments and agreed on the final LBCRM for the Aoraki/Mount Cook village.

Aoraki/Mount Cook Local Body Cost Recovery Model

The seven categories of local body expenditure in the Aoraki/Mount Cook village are outlined in the table below. The concessionaires and the department will only be charged for the type of local body expenditure for which they receive a service.

The table illustrates the type of funding policy and funding mechanism for each type of local body expenditure.

Local Body Expenditure	Funding Policy	Funding Mechanism
Water Supply & Reticulation	User Pays	Water Meters
Sewage Reticulation & Treatment	User Pays	Water Meters
Solid Waste Disposal	User Pays	Quantity of Bins
Landscaping	General Recovery	Property Valuation – CV
Industrial Fire Brigade	General Recovery	Property Valuation – CV
Roading & Street Lighting	General Recovery	Property Valuation – CV
Flood, Debris, and Avalanche Protection	General Recovery	Property Valuation – CV

User Pays

Water meter readings will be used to determine the concessionaires' and the department's share of water supply and sewerage reticulation expenditure. The residential area of the village will be monitored by one water meter and the share of expenditure relating to this will be apportioned based on the concessionaires' and the department's business usage. The water meter readings will be taken as a percentage of the overall water usage in the village to determine the share of expenditure to be recovered.

The quantity of bins collected will be used to determine the concessionaires' and department's share of solid-waste disposal expenditure. The quantity of bins from the residential area of the village will be collated and this will be apportioned based on the concessionaires' and department's business usage. The quantity of bins will be taken as a percentage of the overall quantity of bins in the village to determine the share of expenditure to be recovered.

General Recovery

Capital value property valuations will be used to determine the concessionaires' and department's share of landscaping, industrial fire brigade, roading and street lighting, and flood, debris flow, and avalanche protection expenditure. The capital value property valuations will be provided by Quotable Value New Zealand at 1 August 2009 and every three years from this date. The capital values of the concessionaires' and department's properties in the village will be taken as a percentage of the total capital value in the village to determine the share of expenditure recovered.

Quarterly Reconciliation & Cost Recovery Invoicing

The information gathered from the water meters and the quantity of bins will be reconciled at the end of each quarter. This information in combination with the capital value property valuations will be used to allocate the appropriate actual expenditure for the year to each concessionaire and the department. For the first three quarters of the financial year, a cost-recovery invoice will be issued in the month following the appropriate quarter using the budgeted expenditure i.e. October, January, April. The final invoice in covering the period to June will be based on actual expenditure for the year and therefore adjust for any shortfall or overpayment from the previous three quarters.

Transitional Period

The 2010 financial year will be a transitional year to the new LBCRM. The first three quarters will be invoiced based on the budget using the capital value property valuations for all the types of local body expenditure. The final quarter will be based on actual expenditure for the year and will incorporate the information available on actual water meter readings and quantity of bins for the year. This will be used as an adjustment invoice for the 2010 financial year. From 1 July 2010, the process will be as listed in the previous section.

Appendix C – Village properties

The table overleaf shows all properties in the village that have services provided by the department through its local body function, as at the time of writing. Properties have been described as follows:

Commercial (accommodation): Commercial premises used for the purpose of providing accommodation to visitors.

Commercial (other visitor services): Commercial premises used to supply services to visitors to the park other than accommodation, e.g. the visitor centre, and the café/bar.

Residential: Private residential dwellings.

Other: Other properties not included in above categories, including the school, community hall, pump house, nursery buildings, and workshop buildings.

Key to business names:

Alpine Guides	Alpine Guides (Aoraki) or Alpine Guides (Mount Cook)
AMCAVL	Aoraki/Mount Cook Alpine Village (the Hermitage)
AMCBOT	Aoraki/Mount Cook School Board of Trustees
AMC	Aoraki/Mount Cook Alpine Lodge
AMC Ski Planes	Aoraki Mount Cook Ski Planes
CMC	Canterbury Mountaineering Club
DOC	Department of Conservation
MCRA	Mount Cook Residents Association
NZAC	New Zealand Alpine Club
NZDA	New Zealand Deerstalkers' Association
TOMPL	The Old Mountaineers' Property (the Old Mountaineers' Café/Bar)
YHA	Youth Hostel Association of New Zealand

Village properties, showing services used or consumed

Road name	Building	Type	Water Connection	Sewer Connection	Flood, Debris, Avalanche Protection	Solid Waste	Village Roading	Land-scaping	Industrial Fire Brigade
Kitchener Drive	YHA – Youth Hostel	Commercial (accommodation)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kitchener Drive	Department – Emergency Services Building	Other	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kitchener Drive	DOC – Workshop Complex 'Depot'	Other	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wakefield Drive	AMC Ski Planes Flats	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wakefield Drive	AMC Ski Planes Flats	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wakefield Drive	DOC Flats	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wakefield Drive	DOC Flats	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Blackburn Place	AMCAVL B.B Lodge	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Blackburn Place	DOC Flats	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Road name	Building	Type	Water Connection	Sewer Connection	Flood, Debris, Avalanche Protection	Solid Waste	Village Roading	Land-scaping	Industrial Fire Brigade
Blackburn Place	Alpine Guides Flats	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sebastopol Drive	MCRA – Community Hall	Other	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sebastopol Drive	Mount Cook School	Other	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sebastopol Drive	DOC Flats	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sebastopol Drive	DOC – Pump House	Other	No	No	Yes	No	Yes	Yes	Yes
Du Faur Place	AMCAVL Flats	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Du Faur Place	TOMPL Staff Accommodation	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Du Faur Place	AMCAVL Flats	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mueller Place	AMC Ski Planes House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mueller Place	DOC House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Road name	Building	Type	Water Connection	Sewer Connection	Flood, Debris, Avalanche Protection	Solid Waste	Village Roading	Land-scaping	Industrial Fire Brigade
Mueller Place	AMCAVL House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mueller Place	AMCBT – School House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mueller Place	THL House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mueller Place	AMC Ski Planes House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mueller Place	AMCAVL Flats	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pilots Road	AMC Alpine Lodge House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pilots Road	AMC Alpine Lodge House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kea Place	DOC House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kea Place	AMCAVL House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kea Place	DOC House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kea Place	DOC House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sealy Place	DOC House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Road name	Building	Type	Water Connection	Sewer Connection	Flood, Debris, Avalanche Protection	Solid Waste	Village Roading	Land-scaping	Industrial Fire Brigade
Sealy Place	YHA House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sealy Place	AMCAVL House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sealy Place	AMCAVL House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sealy Place	AMCAVL House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sealy Place	AMCAVL House	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Motels Access Road North	AMCAVL Flats 8 – 11 (the Barn)	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Motels Access Road North	AMCAVL Motel Units 329–332	Commercial (accommodation)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Motels Access Road North	AMCAVL Motel Units 325–328	Commercial (accommodation)	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Road name	Building	Type	Water Connection	Sewer Connection	Flood, Debris, Avalanche Protection	Solid Waste	Village Roading	Land-scaping	Industrial Fire Brigade
Motels Access Road North	AMCAVL Motel Units 317–324	Commercial (accommodation)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Motels Access Road South	AMCAVL Flats 12–13	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Motels Access Road South	AMCAVL Flat 14	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Motels Access Road South	AMCAVL Flat 15	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Motels Access Road South	AMCAVL Motel Units 301–312	Commercial (accommodation)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Motels Access Road South	AMCAVL Motel Units 313–316	Commercial (accommodation)	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Road name	Building	Type	Water Connection	Sewer Connection	Flood, Debris, Avalanche Protection	Solid Waste	Village Roading	Land-scaping	Industrial Fire Brigade
Bowen Drive	AMCAVL (ex laundry)	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	AMCAVL Flat 7	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	AMCAVL Flat 6	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	AMCAVL Flat 5	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	AMCAVL Flats 3–4	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	AMCAVL Flats 1–2	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	DOC Day Shelter	Other	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	DOC Admin Office	Other	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	AMCAVL Petrol Pumps	Other	No	No	Yes	Yes	Yes	Yes	Yes
Bowen Drive	Old Shop, Telecom Exchange	Other	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Road name	Building	Type	Water Connection	Sewer Connection	Flood, Debris, Avalanche Protection	Solid Waste	Village Roading	Land-scaping	Industrial Fire Brigade
Bowen Drive	AMCAVL Shop/Office	Other	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	DOC House 2	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	DOC House 1	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	Aoraki Mount Cook Alpine Lodge	Commercial (accommodation)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	AMCAVL Staff 2 & 3	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	AMCAVL Staff 1 'Kea Lodge'	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bowen Drive	AMCAVL Staff 'Aorangi'	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Generator Shed Road	AMCAVL Generator Shed	Other	No	No	Yes	Yes	Yes	Yes	Yes
Generator Shed Road	DOC House 3	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Generator Shed Road	Hotel Staff 4	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Road name	Building	Type	Water Connection	Sewer Connection	Flood, Debris, Avalanche Protection	Solid Waste	Village Roading	Land-scaping	Industrial Fire Brigade
Larch Grove Road	DOC Visitors Centre	Commercial (other visitor services)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Larch Grove Road	TOMPL – The Old Mountaineers' Café/Bar	Commercial (other visitor services)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Larch Grove Road	AMCAVL – Chalets	Commercial (accommodation)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Glencoe Access Road	AMCAVL – Glencoe Lodge	Commercial (accommodation)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Terrace Road	AMCAVL – The Hermitage Complex	Commercial (accommodation)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Terrace Road	AMCAVL – Hotel Staff (Girls Admin)	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Terrace Road	AMCAVL – Wakefield Cottage	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Terrace Road	AMCAVL – Sefton Lodge	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Terrace Road	AMCAVL – Hotel Staff House (General Manager)	Domestic	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Road name	Building	Type	Water Connection	Sewer Connection	Flood, Debris, Avalanche Protection	Solid Waste	Village Roading	Land-scaping	Industrial Fire Brigade
Hooker Valley Road	CMC – Wyn Irwin Hut	Other	Yes	No	No	Yes	No	No	Yes
Hooker Valley Road	NZDA - Thar lodge	Other	Yes	No	No	Yes	No	No	Yes
Hooker Valley Road	DOC - White Horse Hill campground toilets	Other	Yes	Yes	No	Yes	No	No	Yes
Hooker Valley Road	DOC - Day Shelter	Other	Yes	Yes	No	Yes	No	No	Yes
Tasman Valley Road	DOC - Day Shelter	Other	No	No	No	Yes	No	No	Yes
State Highway 80	Aoraki/Mount Cook Airport	Other	No	No	No	Yes	No	No	Yes
State Highway 80	NZAC – Unwin Lodge	Other	No	No	No	Yes	No	No	Yes

Glossary

Amenities Area: An amenities area in a national park is an area set aside within the park where the development and operation of recreational and public amenities and related services appropriate for the public use and enjoyment of the park may be authorised, provided it is consistent with the National Parks Act 1980 and the management plan for the park.

appropriation: the annual budget approved for a government department by Cabinet.

AS/NZS1158: Australian and New Zealand Standard number 1158 for street lighting. This document contains the rules that must be followed for street lighting.

as-built plans: plans and maps of existing infrastructure, pipe networks, etc.

breathing apparatus (BA): safety equipment used by fire fighters in building or structure fires to protect from smoke inhalation. Breathing apparatus, or BA sets consist of a face mask, air regulator and compressed air tank.

capital charge: a cost levied on the Crown's investment in each government department. It reflects the cost to the Crown of investing in a department against other uses of that money. It's similar to interest payments on the net money borrowed to purchase assets.

civil defence: the Ministry of Civil Defence and Emergency Management leads the way in making New Zealand and its communities resilient to hazards and disasters. Civil defence is managed throughout the country by the Ministry with local authorities having responsibilities for providing local resources and personnel.

community: the community of residents who live in the village. It includes both seasonal/transitory and permanent residents who live in village houses, flats, and staff accommodation blocks, but does not include visitors to the park.

concession: an authority to carry out a business or commercial activity (or to land or hover an aircraft) on public conservation lands, granted by the Minister of Conservation.

concessionaire: any individual, company or other entity to which a concession has been granted by the Minister of Conservation.

debris load: the amount of rock and other loose material in the upper catchments that could potentially come down in heavy rain, earthquake or other event.

depreciation: the cost of an asset divided by the years of its useful life.

dykes: a dyke, embankment, flood bank, levee, or stop bank is a natural or artificial slope or wall to regulate water levels. It's usually earthen and often parallel to the course of a river or the coast. The banks at Aoraki/Mount Cook village are constructed of rock and gravel.

eco-sourcing: ensuring that plants planted in an area are sourced, grown or propagated from plants that naturally occurred in the area, rather than a plant of the same species that may originate from anywhere that the species naturally grows.

Escherichia coli (E. coli): a bacterium that is commonly found in the gut of warm-blooded animals. Some strains can cause food poisoning in humans. Because it can survive outside the body, E.coli is commonly used as an indicator of faecal contamination of water supplies.

flood zones: areas within the village that are designed as the route that flood waters and debris flows will take to safely direct these through and away from the village.

fuse plug spillway: a fuse plug is a collapsible dam. A fuse plug has been put into the Black Birch Stream stop bank to divert any flows which might overflow the bank into the secondary stop banks, which will protect structures including the sewerage treatment-plant on Black Birch Fan.

gazetted: the New Zealand Gazette is a government publication that publishes official notices. A change in the status of land is made official by the publishing of a notice in the Gazette.

Geographical Information System (GIS): a computer-based system that enables 'layers' of information to be overlaid, foe example over maps or aerial photographs in a visual presentation. It's a useful tool for analysing where things are 'on the ground' and where they may interact or overlap. All the annotated photographs in this LTCP were prepared using GIS.

geotechnical protection works: a system of walls, rock groynes, artificially dug flood ways and other engineered structures designed to safely divert flood waters and other debris away from developed areas.

GPS: Global Positioning System.

head differential: the difference in height between two points at either end of a water pipe. It results in a high-water pressure at the downhill end due to the effect of gravity acting on the water.

lease: a form of concession that gives the holder the right of exclusive occupation of the lease area.

levels of service: the measurable, defined standard of service that will be provided to the community and stakeholders by the department. Levels of service include specific and measurable standards which can be monitored and reported on.

local body services: the 'hard services' provided to the residents and businesses of the Aoraki/Mount Cook village by the department on behalf of the Crown. These services comprise water supply, sewage disposal, rubbish disposal, roading, landscaping and fire fighting.

LTCP: Long Term Community Plan.

macerator pump: a kind of pump used in sewerage systems which use a grinding or blending mechanism to reduce human waste to a slurry, which can then be moved by pumping.

New Zealand drinking water standards: these are the standards set by the Ministry of Health that must be met by organisations providing a reticulated drinking water supply to the public.

NPMP: Aoraki/Mount Cook National Park Management Plan. Department of Conservation, 2004. This document is the statutory planning document for the management of the park.

NZS 4404:1981: New Zealand Standard 4404, published in 1981. Sets out the standards that are required for roads.

overhead: indirect costs of management of an activity, at Aoraki/Mount Cook village this includes things like office costs (computer lease, share of electricity), vehicle lease and running costs, and staff housing costs.

park: Aoraki/Mount Cook National Park.

park management purposes: activities involved with the management and operation of the park.

peak demand: the maximum flow of water being used. If the peak demand for water is higher than what the system can cope with there may be shortages during really busy periods of high-water demand.

PFA: Public Finance Act 2004, which sets the rules for the use of public funds by government and government departments.

poo pot: a system of portable, sealed, plastic container and biodegradable bags used by climbers to remove human waste from the park for disposal.

potable water: water of a suitable quality for human consumption.

protozoa: a group of organisms that can cause disease in humans, the most well known are giardia (*Giardia lamblia*) and cryptosporidium (*Cryptosporidium* species).

resource consents: authorisations under the Resource Management Act 1990. In the park, resource consents are required for activities such as taking water from streams, discharging treated sewage effluent back onto the land, and modification to the beds of streams and rivers for flood control.

return period: this is the likelihood of an event of a certain size occurring. 1:100 means 1 chance in 100 years. This is a measure of probability. If an event happens one year, the chance is the same the next year. You can therefore have several 100-year events in the space of a couple of years. With a 1:100 year event, it's about 98% certain that it will happen within a period of the next 30 to 300 years.

size 3 avalanche events: could bury and destroy a car, damage a truck, destroy a small building or break a few trees.

size 4 avalanche events: could destroy a railway car, large truck, several buildings, or a forest area up to four hectares. They typically have a mass of 10,000 tonnes and a path length of 2000 metres.

size 5 avalanche events: the largest snow avalanches known. They could destroy a village or a forest area up to 40 hectares. They typically have a mass of 100,000 tonnes and a path length of 3000 metres.

slip lining: used to repair leaks or restore structural stability to an existing pipeline. Slip lining is completed by installing a smaller, 'carrier pipe' into a larger 'host pipe', grouting the annular space between the two pipes and sealing the ends.

stakeholders: individuals, organisations or businesses who consume services and are financial contributors to the operation of the Aoraki/Mount Cook village infrastructure through levies or other payments. This group includes both concessionaires and the department as a consumer of village services.

sump: a shallow artificial pond that is designed to direct storm water away though permeable soils.

tōpuni: Aoraki/Mount Cook tōpuni confirms and places an 'overlay' of Ngāi Tahu values over Aoraki/Mount Cook (the mountain), the Mount Cook Range and the Hooker Valley.

traffic control/calming: structures and features on a road that are designed to slow traffic down. It includes chicanes, speed bumps and narrowed passing bays.

training wall (civil engineering): a wall built along the bank of a river or estuary parallel to the direction of flow to direct and confine the flow. There are two training walls in the park, a large one in Glencoe Stream under the water treatment plant, and a smaller wall behind the old Alpine Guides base. Contrary to popular belief, 'training wall' is the engineering term for these structures – it's not because they have been also used for climbing training!

turbidity: turbidity is the cloudiness or haziness of a fluid caused by individual particles (suspended solids) that are generally invisible to the naked eye, similar to smoke in air. The measurement of turbidity is a key test of water quality.

In drinking water, the higher the turbidity level, the higher the risk that people may develop gastrointestinal diseases. This is especially problematic for people with immunity deficiencies because contaminants like protozoa, viruses or bacteria can become attached to the suspended solid. The suspended solids interfere with water disinfection involving chlorine because the particles act as shields for the contaminating micro-organisms. Similarly, suspended solids can protect contaminating micro-organisms from ultraviolet sterilisation of water.

This is important at Aoraki/Mount Cook village because the UV water-treatment plant, which kills any potentially dangerous bacteria, viruses or other organisms, is less effective on turbid water. Turbidity of water coming into the system is measured and monitored to ensure water quality, with intakes automatically closed if levels become too high.

ultraviolet light treatment plant: a method of treating drinking water with ultraviolet to kill bacteria and viruses in the water.

UV: ultraviolet light – used in the water-treatment plant at Aoraki/Mount Cook village.

visitor asset: an asset such as a track, bridge or hut, owned and managed by the department for the Crown.