

# St James Conservation Area

## Operational Plan

VERSION 1.0 – DECEMBER 2009



Department of Conservation  
*Te Papa Atawhai*



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VERSION 1.0 – DECEMBER 2009

Published by  
Department of Conservation  
Canterbury Conservancy  
Private Bag 4715  
Christchurch, New Zealand  
New Zealand Government



Cover: View over Lake Guyon looking north-west to Mt Una (2300m) on the Spencer Mountain range. *DOC image*

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Version 1.0

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This report was prepared by Department of Conservation, Waimakariri Area Office. Publication was approved by the Waimakariri Area Manager.

## REVISION HISTORY

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VERSION NUMBER	DATE OF EDIT	EDITS MADE	EDITED BY	NOTIFICATIONS SENT YES/NO
1.0	December 2009	Document formatted	Community relations, Canterbury Conservancy. Formatted-Business services	

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### NOTE:

When updating this document; version numbers run 1.0 through to 1.9 then 2.0 through to 2.9 etc.

When updating this document; be sure to update the version number on the title page.

Notifications; when updating this document, the following people must be emailed that edits have been completed:

Area Manager - Waimakariri Area Office

Programme Manager - Community Relations,

Community Relations Officer - Canterbury Conservancy

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# 1. Introduction

## 1.1 VISION/OBJECTIVE FOR ST JAMES

Protection is provided for St James natural and historic values while allowing for appropriate public and commercial use.

## 1.2 BACKGROUND

The Government purchased the 78,196 ha St James Station (St James) as public conservation land on 8 October 2008. The purchase includes Crown riverbeds and legal roads within the station, and the status of these will change accordingly. The acquisition of St James excluded Lake Guyon and Lake Tennyson Scenic Reserves, and their status will very likely remain unchanged.

The \$40 million purchase price for the St James leasehold and freehold land was funded by the Nature Heritage Fund. It is a significant financial investment in public conservation land. The Department of Conservation (the Department) anticipates St James can make a valuable contribution to our conservation economy through the provision of ecosystem services, public recreation and biodiversity protection. Direct financial contributions will come from commercial tourism and land-use activities consistent with the Conservation Act 1987. St James may also have a significant potential for carbon sequestration.

St James is on average 30 km across (east to west) and 42 km long (north to south). It includes the headwaters of two major Canterbury rivers - the Waiau and Clarence - and four mountain ranges - Spenser, St James, Opera - and a part of the Hanmer Range. The altitude ranges from 540 m (1850 ft) in the lower Waiau to Mt Una at 2,300 m (7550 ft), with eight other peaks over 2,100 m (7,000 ft), all in the Spenser Mountains. Expansive drylands are situated within the boundaries of this area.

Overall the landscape consists of glaciated valleys, glacial-moraine deposits, streams, wetlands, lakes and high-altitude tarns. At least 430 indigenous plant species and 30 native bird species have previously been identified. The area is regarded as relatively intact. Historically Māori trails ran through the Clarence and Waiau valleys, connecting the east coast of the South Island with the west. These were trading and 'greenstone' trails. In the early European history of the South Island, access routes ran through St James. A number of historic pastoral-farming sites are located on the station.



The modern St James station has a rich history in the early development of high-country pastoral-lease farming. The station as it is today was made up from a number of smaller pastoral leases that were amalgamated over time. Each of these leases had its own history of ownership, development of homesteads and hardships. Scab, rabbits and heavy snow all played an important role in the economic viability of the early runs. The rabbit-exclusion fence that remains to this day in the Clarence River valley and over Maling Pass is one reminder of the past, and the historic Stanley Vale homestead is another reminder.

The Canterbury Regional Landscape Study 1993 and the Hurunui District Plan (1995) cited the area as being of outstanding landscape value. A St James pastoral lease "A report on proposals for protection and public access", completed in 1998, states the area has very high conservation values, including a wide variety of vegetation types, forming continuous unmodified vegetation sequences in excellent condition, a range of wetland types and habitats for birdlife, good quality dense short tussock land and highly natural riverbed vegetation in the upper Clarence. The report also identified several alluvial terraces and fans supporting possibly the best population of tall dense matagouri in Canterbury.

### 1.3 PURPOSE OF PLAN

There is the potential for a wide range of recreational opportunities to be undertaken on St James. On the other hand, there is the possibility of conflict between differing types of recreational activities or with natural, physical and cultural values. These conflicts could increase in the future, with intensification of some uses and diversification of others, or could decrease once St James goes past its initial public interest peak and settles into the national patterns of backcountry use, with combinations of declining use in some areas and peak use in some front-country areas.

The acquisition of St James provides an opportunity for New Zealanders to better experience the history of the station as a new area of public conservation land and that has been set aside to not only protect and preserve biodiversity and recreation values but also to contribute to the delivery of ecosystem services, while providing an economic benefit.

In drafting this operational plan the Department has taken into account the status of neighbouring land, relevant statutory documents and policies, and other consultation processes, such as the review of the Canterbury Management Strategy (currently on hold), the pre-consultative draft guidelines for aircraft access Canterbury Conservancy and the processing of all Wild Animal Recovery Operations (WARO) concessions.

## 2. Land status

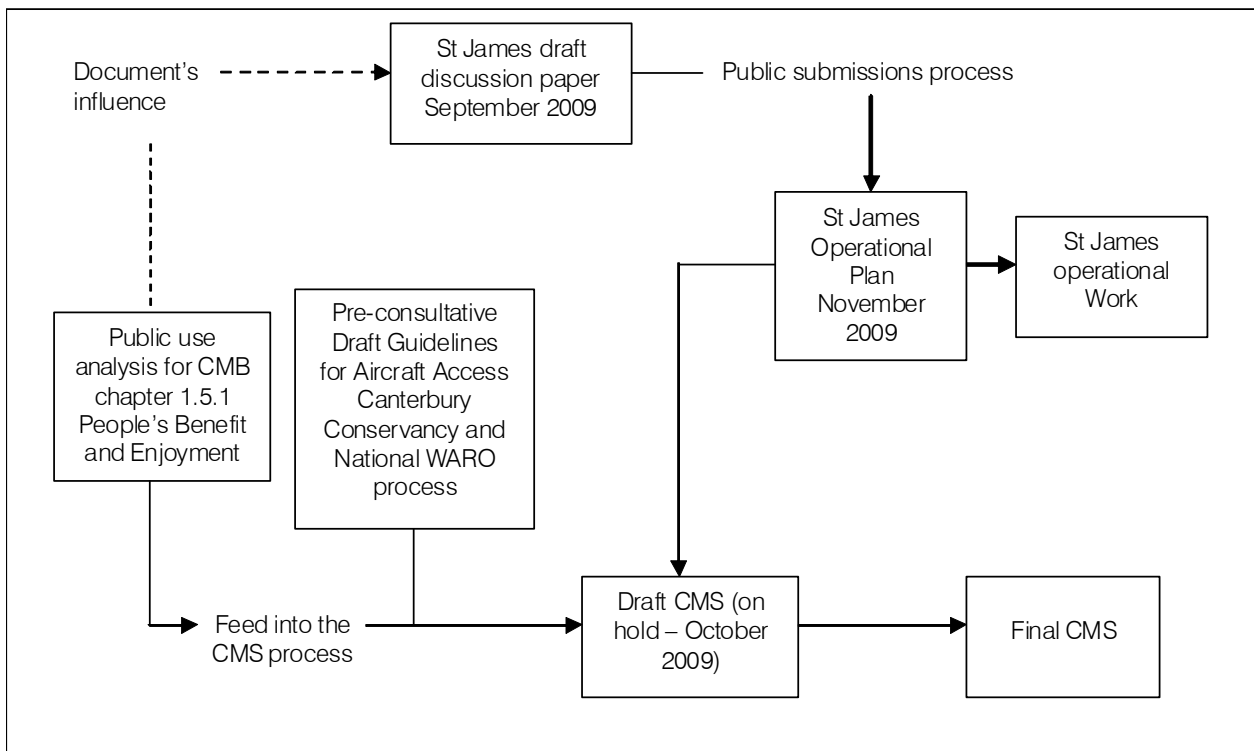
The sale and purchase agreement between the Department and J. L. Stevenson Trust (Stevenson Trust) includes, but is not limited to, the following conditions:

- A 35-year lease has been entered into between the parties, with one further 30-year right of renewal for lease of the Ada homestead area
- The Department accepts the assignment of Meridian Energy's Investigation Licence pursuant to a Deed of Covenant
- The Department accepts the assignment of an easement for power transmission with Transpower
- The Department is to stop all legal roads through St James
- Stevenson Trust will destock St James by 1 June 2010
- Stevenson Trust are entitled to utilise, form and maintain an airstrip for non-commercial purposes (not on an exclusive basis) in the vicinity of Ada homestead
- Stevenson Trust and guests are entitled to access Ada homestead via Maling Pass through the use of a motorised vehicles
- Stevenson Trust and the Department will enter into a deed of right-of-first-refusal, giving the Stevenson Trust the first right of refusal to graze any stock on the property in the event that the Crown at any time during the lease period decides to permit grazing on the property in any format.

The Department has received a request from the Royal Forest and Bird Society of New Zealand (Forest & Bird) to enact section 8 of the National Parks Act 1997, and this has been supported by other members of the public. This request will be considered in due course.

Land adjoining to the west is Lewis Pass National Reserve, to the south Lake Sumner Forest Park and a small part of Glenhope Pastoral Lease, to the north-west Nelson Lakes National Park, to the north-east conservation land in the Paske Stream (formerly Rainbow Station), to the east Molesworth Recreation Reserve, which is Molesworth Station, and to the south-east Hanmer Forest Park.

FIGURE 1. RELATIONSHIP OF THE ST JAMES OPERATIONAL PLAN WITH OTHER CONSERVANCY GUIDELINES/STRATEGIES



## 2.1 LAND STATUS ACTION

- Support Jacks Pass and Tophouse Road (Clarence valley) becoming legal roads maintained by the Hurunui District Council
- Support St James to be managed as a Conservation Area and support an integrated-management approach with neighbouring public conservation land, with future status to be dealt with through the CMS.

# 3 Management considerations

Management considerations are discussed in various categories. Because some issues relate to more than one category, there is some overlap and repetition between categories.

## 3.1 NATURAL HERITAGE

### Landscapes

St James encompasses the formerly glaciated headwaters of the Waiau and Clarence rivers. It lies in the middle of a large tract of public conservation land

that extends almost continuously at this latitude from the Tasman Sea to the Pacific Ocean. To the west and north the public conservation land areas are protected as National Reserve or National Park. To the east are large areas of pastoral lease and public conservation land leased for farming (Molesworth Station). Bordered by these lands and high mountains, St James has remained relatively unmodified and isolated.

The majority of St James is characterised by steeply rising range and valley topography with pastoral land use and development occurring primarily on the valley floors of the Clarence and Waiau rivers and their major tributaries, along with the more accessible and warmer side-slopes. It includes large areas dominated by natural features and processes, virtually unmodified by land-use practices; where lands have been modified, they are now regenerating. As a result St James is predominantly natural in landscape character.

Within short distances St James displays considerable diversity. In the north and west, the mountains are high, have very steep side-slopes with areas of permanent snow, and characteristic glacial landforms, such as cirque basins, tarns, hanging valleys and steep aretes. The natural vegetation sequences of beech forest and alpine tussockland are virtually unbroken. In the south and east the mountain ranges are lower (mainly under 1800 m) with glacial landforms resulting from older ice advances less well defined. These landforms have been modified more recently by glaciofluvial processes, resulting in more pronounced river terracing, alluvial fans and floodplains. Side-slopes, while still steep, are more rounded. The vegetation is a mixture of scrub and tussock with isolated forest remnants, resulting from past fires modifying natural sequences.

Both the two main river valleys, the Waiau and the Clarence have a character different from the other as a result of their geomorphology, elevation, climate and vegetation. The Waiau valley floor appears relatively confined because of the greater vertical difference between the tops of the mountains and the valley floors, compared with the Clarence. Unlike the Clarence valley, much of the vegetation of the upper Waiau mountain slopes is in original forest cover. As the upper Waiau begins to open out, south of the Ada River, the loss of forest cover and the replacement by shrublands becomes apparent on both sides of the river.

St James has previously been identified as an area of outstanding landscape as detailed in the Canterbury Regional Landscape Study 1993 and the Hurunui District Plan (1995).

### **Geological features**

The basement rocks on St James are greywacke and argillite. A tectonic zone with basic volcanics runs in a northeast-southwest direction between the Ada and Waiau rivers, north and south of Mt Stanley, near Maling Pass, and near

Red Hill (Timms Stream). Valley floors and major basins are covered in till and outwash gravels of Otiran and Waimean age, with some areas of post-glacial alluvial and landslide deposits.

The landforms on St James are strongly influenced by glacial, fluvial, and tectonic processes.

### ***Glacial***

Landforms resulting from glacial activity are well defined in the north-western sections of St James. The upper Clarence and the Waiau river valleys are classic u-shaped glacial valleys with very steep and bluffy side-walls, cirques at the heads of side valleys, aretes, hanging valleys, tarns and associated waterfalls.

In both the Waiau and Clarence river valleys, moraines have been deposited over several glacial periods. Some of the more obvious are around Lakes Tennyson and Guyon, both moraine dammed lakes occupying formerly glaciated valleys. The moraines at Lake Tennyson are south of the lake and are a series of arc-shaped loops with intervening hollows. At the southern end of Lake Guyon, a terminal moraine blocks the lake, and at the northern end a younger lateral moraine from the Waiau glacier dams the other end of the lake. Other much older moraines have been deposited around the Edwards/Peters Pass area, in the Henry just west of Delta Stream and in the Waiau near where the Henry River flows into the Waiau around The Downs and Muddy Lakes.

In the Opera and St James ranges glacial features are less obvious - cirques are only weakly developed with occasional small tarns at high altitudes. Some older glacial advances have left minor moraines at lower altitudes with ice-moulded slopes along the mid-Waiiau valley.

### ***Rivers/fluvial activity***

The lower sections of the Waiau and Clarence are v-shaped, reflecting river rather than glacial processes. Terracing is common in the Clarence and Waiau and their main tributaries, with alluvial fans from side-streams a common feature in the Waiau valley.

### ***Faults***

There are a number of areas on St James where tectonic landforms are a feature. The main trace of the Awatere fault crosses Lake Tennyson, Princess Stream, Maling Pass and down into the Waiau valley through to the head of the Ada. Earth movements and quakes along the fault have displaced the lateral moraines west of Lake Tennyson and probably triggered the landslide on the eastern slopes of Mt McCabe.

The Clarence Fault crosses St James in an east-west direction along the Edwards valley and part of the lower Waiau. The fault zone is marked by a fault trace, fault-tilted terraces, offset stream terraces and fans, small fault scarps, fault depressions with associated wetlands, sag ponds and a low relief fault pass (Edwards Pass).

Around Fowlers Pass - and through to Lake Guyon is a minor transcurrent fault between the Clarence and Awatere Faults, marked by scarps on the true left of Pass Stream.

### ***Hot springs***

There are hot springs located on Cow Stream, just above its confluence with the Edwards River. Little is known about other geological features within St James; however, over time the Department's knowledge of these features will increase.

### **Climate**

The prevailing wind on St James is north-westerly, which usually brings rain and sometimes snow to the northwest and western parts of the area. As a consequence there is strongly developed rainfall gradient from approximately 5,000 mm in the north-west over the tops of the Spenser Mountains to 1750 mm at Jacks Pass and Edwards valley/Clarence valley in the south-east. Occasional southwest fronts also bring rain and frequent snow in winter, although snow may fall at any time of the year.

In the lower Clarence around Peters Stream, the climate is continental-like with warm summers and cold winters. Being in the relative rain-shadow of the western ranges, the area has high sunshine hours. Frosts probably exceed 200 per year. These decrease significantly in the west and north-west.

### **Vegetation**

Because of its location and topography, there is a wide range of environmental conditions. These conditions, along with the history of disturbance, are reflected in a diversity of vegetation types on St James.

The most obvious changes in vegetation are between the north-western and south-eastern parts of St James, as rainfall decreases towards the south-east. The major difference between these two parts are the relatively intact expanse of beech forest and alpine tops in the west, compared with the largely tussock and shrubland landscape to the east of the Waiau River described in the Clarence valley section below.

The vegetation in the far west and north-west of the St James is in particularly good condition, with the 'original' vegetation sequences still remaining, from forested valley sides with a natural bushline to alpine grasslands and cushion

fields, bare rock and permanent snow as altitude increases. Some of the valley floor grasslands in these upper valleys also remain comparatively natural – dominated largely by indigenous species with few introduced plants, unlike the valley floor grasslands in the lower parts of the Waiau and the Clarence below approximately 900 m. The Waiau River valley and major tributaries are also very distinctive for their valley-floor matagouri shrublands on alluvial fans – most are still intact with tall dense cover.

Shrublands are the predominant vegetation cover west of the Waiau River where the mountain beech forest cover has been lost, although grasslands replace shrublands on some north-facing slopes such as in the Henry and above the natural timberline at approximately 1400 m. These shrublands are either dominated by *Dracophyllum* on upper-mid valley side slopes, ‘grey scrub’ on steep rocky lower altitude slopes or mānuka/kānuka on mid to lower altitude colluvial slopes downstream of the Henry River.

On the eastern side of the Waiau the shrublands are more diverse and more extensive than in the west and include mānuka/kānuka, grey scrub, and shrublands dominated by *Dracophyllum*, mountain tauhinu, Hebe species, snow tōtara and *Brachyglottis cassinioides* – normally as a mix of species rather than a continuous cover of one species. Mānuka is particularly prevalent in the Stanley River and Waiau valley sides south of Lake Guyon. Mixed species shrublands are more common on shady faces and at higher altitudes up to approximately 1300 m, particularly in the upper Stanley, Edwards River tributaries, and the side catchments and headwaters of the Clarence River. Tall snow tussockland is the dominant vegetation type at higher altitudes (above approximately 1300 m) although they occur throughout mixed species shrublands below this to approximately 1100 m. Areas of red tussockland remain on poorly drained river terraces and moraines at low altitudes (below 1200 m) in both the Clarence and Waiau valleys. Short tussocklands occur throughout St James mainly on valley floors and lower valley sides below about 1300 m and are dominated by a variety of species, both indigenous and exotic. Exotic grasslands, with or without scattered short tussocks or shrubs, are the most common vegetation type on valley floors in the Waiau below Maling Pass, the Ada and Henry valleys.

### ***Forest***

On the western side of the Waiau River extensive intact tracts of forest remain on mountain slopes, particularly in the upper reaches of the Waiau above Maling Pass, in the Boyle, upper Henry, Ada and Jones catchments.

Mountain beech/tawhairauriki is the principal forest species and is dominant above 1150 m, forming the timberline at approximately 1300-1400 m. Below 1150 m mountain beech is co-dominant with silver beech in the Ada, mid to lower Boyle and the Waiau south of Caroline Creek down to and including the Jones River catchment. In the Ada, lower Boyle (up to approximately 970 m),

and the Waiau, south of Maling Pass, red beech/tawhairaunui is also present on side-slopes.

As distances away from the main divide increase, the forests change. The altitudinal limit of the timberline increases eastward reaching 1400 m in the Jones, head of the Waiau and in Muddy Stream. Also moving east silver beech is restricted to lower altitudes (approximately 1050 m) and eventually disappears just east of the Waiau River. Red beech becomes rare in the Waiau catchment south of the Ada River and is not known on St James east of the Waiau. Mountain beech expands to fill the niche vacated by these species. The influence of past fires is also more pronounced in the east, with forests becoming discontinuous, remaining only as sporadic localised remnants within large areas of shrubland and tussock grasslands.

### ***Shrublands***

Shrublands are the dominant vegetation type on the eastern part of St James. They are widespread and very variable.

The main shrublands are extensive mānuka and kānuka in the middle and lower stretches of the Waiau and Stanley rivers, (formerly beech forests), matagouri on fans, and mixed shrublands and tussock shrublands widespread throughout, particularly in the east and south.

### ***Tussockland***

Over the last 1000 years grasslands in the high country have expanded their range into lower altitudes previously occupied by forest. This is particularly evident east of the Waiau River where successive fires have reduced most of the forest cover to remnants on shady faces and in gullies. After the loss of forest cover snow tussock (*Chionochloa* spp) and shrublands would have been the dominant vegetation over much of the eastern part of St James in pre-European times. However, 140 years of burning and grazing have depleted or eliminated tall tussock communities from large areas, restricting it to moister and higher altitudes. Typically tall tussock grasslands have been replaced by short tussock grasslands and fire tolerant herbaceous species such as *Celmisia* spp.

### ***Wetlands***

Seven different wetland 'types' are known to occur on St James, often occurring together forming complex mosaics of wetland types. These wetlands are described as follows:

#### ***Schoenus pauciflorus* (bog rush) wetland (800-1700 m)**

This is the most common wetland vegetation type on St James. It is typically found as headwater and side-stream flushes on gentle to steep slopes, as well as throughout areas of poor drainage along valley bottoms, basins and



moraines, such as those that occur in the Edwards Pass basin, around Lakes Tennyson and Guyon. In places it has also colonised seeps on bluffs.

This wetland type generally has a large exotic component at lower altitudes, and is often heavily damaged by cattle pugging.

#### *Carex sedgelands*

This wetland type is similar to the *Schoenus* wetland type but is dominated by *Carex* sedges. It is only a minor wetland type on St James, occupying wetter sites than the *Schoenus* wetland, and may include areas of standing water. It is largely restricted to fault-sag ponds and moraine hollows in the Edwards Pass basin and in some cirque basins. *Carex* sedgelands often occur as part of a wider mosaic of wetlands species, such as *Schoenus pauciflorus*.

#### *Comb sedge (Oreobolus pectinatus) wetland*

This cushion wetland type is not very common on St James and is largely confined to the hollows and tarn margins of the Lake Tennyson moraine complex and the Edwards Pass basin, often forming mosaics with *Schoenus pauciflorus* and red tussocklands.

These communities are normally highly natural with very few exotics, although fouling by Canada geese and pugging by cattle in Princess Stream and in the Edwards Pass basin is gradually decreasing their naturalness. On drier margins there may also be areas of brown top, sweet vernal and Yorkshire fog.

#### *Wire rush (Empodisma minus) bogs*

This is a very localised vegetation type on St James and the only known area is on the margins of kettleholes on the peaty ridges of the terminal moraines below Lake Tennyson.

The community is permanently wet. It is 'perched' around the perimeter of tarns and appears to be slowly infilling them. The dominant species is wire rush, with emergent red tussock and scattered *Hebe paucitramosa*, mountain tauhinu and bog pine.

#### *Sphagnum bogs*

This type is very uncommon in the east of St James, but is possibly more common around bogs in forest openings on river flats in the west. It appears to be restricted to the mountain beech forest margins and openings, and moraine depressions, near Lake Tennyson, Guyon and Lake Paget (in the Christopher/Ada River valleys). It occupies sites of poor drainage or slow draining seep water, and is usually partially shaded by beech forest.

*Sphagnum cristatum* is the main species, with scattered red tussock and *Carex coriacea*.

#### *Seasonal wetland herbfield* (1100-1700 m)

These are very rare communities on St James, comprising small mat herbs. They occur only in wetlands that are regularly inundated, but dry out seasonally, such as margins of tarns with fluctuating water levels. The only known sites are around the tarns at the northern end of the St James Range, although other occurrences are likely.

Canada geese are a potential threat to this vegetation type because of their disturbance, eutrophication and importation of weeds.

#### *Aquatic herbfield* (1100-2050 m)

This is a very localised vegetation type confined to shallow parts of permanent water bodies, namely Lake Tennyson and its associated moraine tarns, Lake Guyon, Edwards Pass tarns, and the few cirque tarns at tributary heads in the western and northern parts of St James.

The community is very simple, comprised of one or more of the milfoils (*Myriophyllum pedunculatum*, *M. triphyllum*), red pondweed, quillwort, oxygen weed or *Juncus bulbosus*.

### ***Alpine areas***

Above approximately 1500-1550 m, much of the ground is rock or fellfield and scree with a sparse cover of cushion plants, prostrate herbs or specialised scree plants.

#### *Mid-altitude rocky bluffs*

Mid-altitude rocky bluffs in the drier parts of St James can be extensive and usually support scattered shrubs and rupestral plants.

#### *River and lake gravelfields*

This is a vegetation type that is restricted to floodplains of fresh gravel and silt along aggrading parts of the lower Waiau and Clarence rivers. Such areas are frequently flooded and are, therefore, largely occupied by small statured or fast growing herbs, many of which are exotic.

An unusual dry-gravel lake-shore community occurs near the outlet of Lake Tennyson and is characterised by small herbs and short lived annuals.

#### *Racomitrium mossfield* (800-1100 m)

Lower altitude vegetation types of well-drained sites are mainly restricted to the gentle hill country of the Edwards Pass area, and the moraines of the Tennyson and Guyon land systems. It is dominated by woolly moss (*Racomitrium lanuginosum*) with typical associates of a number of low-growing herbs and sub-shrubs. There are also, sparsely scattered throughout, a number of taller statured species, such as mountain tauhinu, mānuka, *Olearia cymbifolia*, *Leucopogon colensoi*, turpentine scrub, bog pine, slim snow tussock, red tussock, Mathews tussock, bristle tussock, hard tussock and *Coprosma cheesemanii*.

### ***Clarence valley***

Most of the lower altitude slopes in the lower Clarence valley south of Pass Stream have been modified by burning and grazing and have a high exotic component and often depleted vegetation cover. Exceptions to this pattern are the 'Edwards Pass basin' and many of the side catchments leading off the Clarence. The Edwards Pass basin is a poorly drained area of land between the Clarence River and Edwards Pass. The basin has been largely created by repeated movement along the Clarence Fault that has left a number of fault-created features including fault-tilted terraces, offset streams and fans, and fault depressions. Because of the basin's low gradient, Horrible Stream and the other small water courses that flow across the basin, end up in an extensive system of meanders and oxbows with wet and dry areas of vegetation. The wet areas are dominated by extensive red tussock, areas of sedgeland, turfland and cushionfields. On the drier sites the cover is mainly scattered short tussocks and a significant proportion of exotic grasses and herbs. These wetland/dryland systems are surrounded by dry and relatively infertile low-relief hill country covered in ancient moraines and an extensive mosaic of open shrublands including bog-pine shrublands, short tussocklands, mossfields, and herbfields. This whole area has been recognised as a Regional Area for Protection (RAP) because of its exceptional diversity of landforms and associated communities, including the most extensive low-relief area still predominantly covered in native vegetation. It supports probably the largest areas of red tussock on St James, certainly on the eastern half of St James. It also has excellent examples of cushion-bog communities and sedge-wetland vegetation. They are diverse, highly natural cover, and very uncommon elsewhere in the area.

Williams valley, the head of Timms Stream and the Styx River, the base of Peters valley as well as all the side catchments north of Tent Stream are covered largely in indigenous species and are relatively unmodified, often with mountain beech remnants, surrounding shrublands and tall tussocklands interspersed with patches of bare ground and gravelfields on north facing slopes. The head of Timms Stream; Catley Stream, Pass Stream, and Duncans Stream are all included in Recommended Areas for Protection (RAPs) in the Balaclava District. They were recommended because they contained a wide range of communities that are highly natural because of their low exotic component and minimal disturbance by stock. These side catchments also contain the most extensive and continuous *Dracophyllum* shrublands and slim-

leaved tussocklands on St James. The beech forest remnants in the Catley and Duncans Stream are also in very good condition, with a wide variety of understorey shrub and herb species and excellent regeneration. Williams valley, Peters valley and the Styx River are all in the Miromiro District, which was not surveyed during the Protected Natural Area survey, but the Williams valley and the upper Styx River contain relatively large areas of beech forest compared with many of the other Clarence River side-catchments. There is no beech forest in Peters valley but the valley floor is covered in a dense and continuous cover of red tussock interspersed with occasional sedgeland along water courses.

North of Pass Stream, side slopes, including those at low altitude, are covered in indigenous species mainly bristle tussock, scattered shrubs and slim-leaved tussock, the latter increasing in cover above 1100 m. Poorly drained sites on the Clarence valley floor are commonly covered in areas of red tussock.

The vegetation at the head of the Clarence valley above Lake Tennyson, the moraines south of the Lake Tennyson and Princess Stream is all in excellent condition. This area contains a very wide range of landforms and natural vegetation forming continuous, unmodified sequences from valley floors to high altitude cirques and mountain tops. The upper Clarence valley floor and lower side slopes are covered in good quality, dense, short tussockland that supports a low number of introduced species compared with similar grasslands in the rest of the Balaclava District. The riverbed vegetation is also highly natural, lacking many of the introduced species that characterise many of the riverbeds in the rest of the district, particularly viper's bugloss and woolly mullein.

Despite a history of burning and grazing, the vegetation of the moraines is of very good quality, with good stature and a low component of exotic species. Wire rushlands around the raised bogs do not occur elsewhere in South Marlborough and are more allied to wetlands of the Lewis Pass area. The moraines also support the only known locality of *Cyathodes empetrifolia* in South Marlborough. This is also one of the two areas on St James that supports bog-pine shrublands, a vegetation type which would have been more common on the moraines before burning.

This is the only place known on St James where five species of *Chionochloa* occur together - mid-ribbed (*C. pallens*), slim leaved (*C. macra*), broadleaved (*C. flavescens*), red tussock (*C. rubra*) and carpet grass (*C. australis*). The beech remnants in the upper Clarence are also the largest tracts of beech forest in the Clarence valley and contain occasional plants of the nationally threatened red mistletoe, *Peraxilla tetrapetala*.

Other special features of this area are the well-preserved terminal-moraine loop-ridges, hollows and peat tarns. These are very distinctive glacial landforms, which are regionally unique. The fault traces associated offset

moraines and the earthquake-triggered landslides are tectonic features of regional scientific and educational importance.

The beech forest remnants show conspicuous cattle sign pugging and browsing of forest edges with areas of exotic grassland.

The area supports a suite of species that are restricted to wet, high-alpine sites (absent from the rest of the ecological district) including *Coprosma serrulata*, *Gaultheria nubicola*, *Celmisia lateralis*, *C. baastii*, *Raoulia eximia*, *Anisotome baastii*, *Epilobium porphyrium*, *Euphrasia monroi*, *Forstera tenella*, *Gunnera densiflora*, *Nertera balfouriana*, *Poa subvestita*, *Carex testacea*, alpine rush and others.

In the St James Range, including the catchments of the Edwards and Stanley rivers, south of a line from about Glenrae Saddle to Fowlers Pass and Pass Stream, the mountain slopes are very steep with extensive areas of bedrock bluffs, rock outcrops, sheet scree and on north-facing slopes large areas of bare ground. North of this line the terrain is much less broken, especially the main ridge north of Lake Guyon, which is broad with easy contours on shoulders and upper slopes.

The vegetation is a mix of small mountain-beech remnants in steep shady gullies, surrounded by extensive kānuka shrublands below 1000 m, particularly on sunny slopes and mixed species shrublands dominated by *Dracophyllum* on shady slopes. Most of the mountain-beech remnants show good regeneration with little windfall, and contain a reasonable diversity of understorey species, especially along riparian zones. The mānuka and kānuka have developed after clearance by burning and it is apparent that beech is reinvading these stands. In dense stands the understorey is typically sparse with much bare ground, but the more open stands support a range of other shrubs and herbs.

The scrub and shrubland communities are amongst the most extensive, diverse and dense in the ecological district. There is beech forest on alluvium that fringes the lake, covering most of the lake-margin fans and lower slopes and most of the line gullies on the flanks of Mt Stanley and Lake Hill. Here there is abundant regeneration and moderate species diversity, including the regionally rare *Brachyglottis greyi* and *Pittosporum patulum*.

Carpet grass turflands are extensive at high altitudes, particularly on slopes and basins scoured by old glaciers.

Along the ridge north of Mt Stanley are a number of small tarns with no outlet fringed by herbfields within the zone of water fluctuation. This community, although small in extent, is nationally threatened, comprising very small herbs that are adapted to the fluctuating water regime. Some of the tarns have eutrophied because of fouling by Canada geese and stock.

### ***Threatened plants***

The Protected Natural Area (PNA) survey recorded 482 indigenous species in the Balaclava Ecological District. Around one-tenth of these were not recorded on St James, but probably a similar number of species occur in the Lewis District - on the western side of the Waiau River (i.e. plants not recorded in the PNA survey) - that were not recorded in the Balaclava District. An intensive survey such as the PNA survey has not, however, been done in the Lewis Ecological District to confirm this. A number of these plants are threatened and have conservation rankings developed from criteria that assesses their distinctiveness, threat, vulnerability and value.

On St James these include:

#### *Leonobebe cupressoides* (nationally endangered)

This is a whipcord Hebe with a very patchy eastern South Island high-country distribution from Marlborough to Otago. It has been previously recorded from the upper Waiau, its northern limit in this catchment. It was also found in the Henry River near the swing-bridge and in the Boyle midway between the Boyle and Rokeby huts.

#### *Pittosporum patulum* (nationally endangered)

This is a small tree of beech forests and subalpine shrublands and is lightly distributed throughout North Canterbury. Adult specimens are very rare, presumably eliminated due to possum browsing, and most occurrences comprise only juveniles or saplings. On St James it has been recorded from four sites - Horrible Stream, Lake Guyon, the base of Maling Pass and the Williams valley.

#### *Gunnera densiflora* (nationally endangered)

This is a robust creeping herb of subalpine tussockland seepages and flushes, and is known only from South Marlborough and inland Canterbury, where it is sporadic. It is known on St James from the headwaters of the Clarence River.

#### *Hebe salicornioides* (nationally endangered)

This whipcord Hebe has a sporadic distribution in western Marlborough and Canterbury. It reaches its northern limit in the Wairau gorge, and is typically a shrub of areas of impeded drainage, such as the red tussocklands near Lake Tennyson.

#### *Peraxilla tetrapetala* (declining)

This is a red-flowered mistletoe that is a parasite on mountain beech. It is known from mountain beech remnants in Cat Stream and around the western shore of Lake Tennyson and occasionally in the Waiau forests. Nationally this species is now very rare because of possum browsing.

*Traversia baccharoides* (declining)

This scruffy looking daisy is found on edges of shrublands and on tallus slopes and is close to its southern limit on St James.

Several other nationally threatened plants have also been recorded around the shores of Lake Tennyson and include *Myosotis laingii* (presumed extinct), *Deyeuxia lacustris* (nationally critical) *Lobelia ionantha* (declining) and *Montia angustifolia* (naturally uncommon).

Other locally rare and notable species include:

*Carmichaelia corrugata*

This is a mat broom which is restricted to alluvial flats in the eastern South Island. On St James it was found in a few scattered colonies along the terraces of the Clarence River.

*Brachyglottis greyi*

This shrub daisy, although relatively common in the lower North Island, is very local in Marlborough and Canterbury.

## **Fauna**

### ***Birds***

A specific field survey for fauna has not been undertaken in the St James. However, indigenous species recorded in forest and scrub remnants include bellbird/korimako, grey warbler/riroriro, silvereye/tauhou, South Island rifleman/tititipounamu, South Island fantail/pīwakawaka, South Island tomtit/miromiro, tūī, long tailed cuckoo/koekoeā, shining cuckoo/pīpīwharauoa, and brown creeper/pīpīpi. In the west, in the section of St James that goes out to the Lewis Pass and between the Ada and Christopher huts, kākārīki were recorded in tree tops, and kākā are known.

The Waiau and Clarence river beds, valley floor tarns and some associated flats are habitat for numerous species including black-fronted tern/tarapirohe, South Island pied oyster-catcher/tōrea, banded dotterel/turiwhatu, southern black-backed gull/karoro, pied stilt/poaka, black shag/kōau and paradise shelduck/pūtakitaki. Australasian harriers/kāhu were occasionally seen around valley flats along with a mixed array of introduced birds.

Birds observed around mountain tops and high altitude slopes were New Zealand pipit/pīhoihoi, kea, and in the early 1980s rock wrens/piwauwau were known to be present in the cirque basins of the Spenser Mountains.

### ***Bats***

The western valleys could be a habitat for bats/pekapeka; however, no bat surveys have been undertaken in St James. Opportunistic surveying is likely to

be the main method for increasing knowledge. Undertaking appropriate surveys will be included in any new development on St James.

### ***Lizards***

There is likely to be an interesting and varied lizard fauna on St James, as indicated by the variety of species recorded in the general vicinity. Records are available adjacent to the public road on the eastern side of the St James, but there are no records anywhere else. The PNA report refers to a number of lizard species being found but is not very specific. (For example Samoa Ridge had five species recorded).

There is a diversity of lizard fauna on St James particularly in the Clarence River valley. Most of them are confined to rock outcrops or talus, usually at the base of mountain slopes and margins of terraces. The most commonly occurring species are common skink and the 'common gecko' (*Hoplodactylus maculatus*).

The long-toed skink (*Oligosoma* "long-toes") and the spotted skink (*O. lineocellatum*) both occur on St James in the mid-Clarence valley. The long-toed skink was first recognised in the upper Clarence valley and the Balaclava Ecological District is one of its strongholds. The only other location known outside of South Marlborough is near Lake Tekapo and in the Craigieburn Range.

It is important to ensure lizard surveys are conducted over the entire area over time, but locally-intensive surveys are important whenever considering some new activity or land disturbance.

### ***Fish***

St James encompasses a wide range of freshwater habitat types including tarns, lakes, wetlands, rivers and streams. There is little detailed information on fish and freshwater invertebrate communities and a survey of these components of the freshwater ecosystem has not been carried out.

The existing record from the Freshwater Fish Database for the area states there are three principal salmonids occurring in the area, namely brown trout, rainbow trout and Chinook salmon. Rivers and streams provide significant spawning and rearing habitat for adults and sub-adults of all three species. These species in turn support significant recreational fisheries, notably a wilderness, trophy brown-trout fishery and a regionally- important salmon fishery.

A typical suite of indigenous freshwater fish typical of mid- to higher-altitude freshwater habitats is represented including the galaxiids: dwarf galaxias, koaro, Canterbury galaxias (formerly common river galaxias) and alpine



galaxias; other non-galaxiid fauna includes: upland bully, torrent fish and long-finned eel.

An important component of establishing the extent of aquatic values within St. James and the bordering Clarence valley will be to establish a greater knowledge dwarf galaxias, longfin eel and the northern flathead galaxias, in terms of their range and population estimates, with monitoring where appropriate.

Management of the fish-spawning population and fishing within St James is managed by Fish and Game New Zealand. Principle concerns for the freshwater fisheries are the provision of angler access to the recreational salmonid fisheries and the maintenance of fish passage for migratory salmonid and indigenous species to complete their lifecycles.

### ***Invertebrates***

There was no survey undertaken for invertebrates. Some beetles and wētā were collected during the PNA survey. These were typical of the dry, open eastern South Island. Most species are widespread in Canterbury and Otago. Alpine grasshoppers are conspicuous in the tussocklands, alpine herbfields and scree slopes. *Brachaspis nivalis* and *Paprides nitidus* are common throughout, while *Brachaspis collinus* is found in the St James Range, but may occur further west.

Several butterfly and moths were collected from Lake Guyon by Fereday in the 1880s - *Epichorista hemionana*, *Orocrambus callirrhous*, *Dasyuris strategica*, *Epiphyryne xanthaspis* and *Graphania agorastis*.

Given the paucity of information on invertebrates in the St James, the following is a very general comment regarding invertebrate values and their threats. Several endemic subalpine insects have been collected within the St James (above 900 m) including *Brachaspis nivalis*, *Paprides nitidus* and *Sigauss* species.

While *Brachaspis nivalis* is not threatened, the genus includes three species that are either nationally endangered or in decline. To that extent, any known populations of *Brachaspis* grasshopper in the eastern Southern Alps/Kā Tiritiri o te Moana have conservation significance.

The nearby Poplars Pastoral Lease carries a rich suite of endemic invertebrates including ground and cave wētā, large carabid beetles, tussock butterflies and moths and several threatened spiders. The likelihood of these species being present on St James is high. To that extent, protection of as many semi-natural habitats as possible is important for maintaining continuity of species range within the Amuri District.

Protection emphasis should be placed on low-altitude wetlands and surrounding grass/sedge habitats, which usually support rich trophic guilds of invertebrates. Similarly, enclaves of native shrublands usually maintain a different range of invertebrates, in many cases obligate feeders (e.g. Geometrid moths), and pollinators.

The last form of protection needed to maintain invertebrate diversity is ecological connectivity, both horizontally and vertically. Protecting altitudinal sequences of biological communities in the Alps is becoming increasingly important (with increasing land-use change).

***Action points for natural heritage:***

- Consider St James in a Canterbury conservancy-wide context for prioritisation of any biodiversity surveys
- Ecological surveys shall be undertaken as part of an Assessment of Environmental Effects (AEE) for any new development proposals
- Cattle and sheep grazing should only occur if biodiversity values can be protected.

### 3.2 CULTURAL HERITAGE

Although there are no recorded Māori archaeological sites on St James there are a number of access routes used by Māori travelling between the east and west sides of the South Island during the summer months. The main routes used were via the Awatere River and Tarndale on Molesworth and Lake Tennyson (Rangitahi), Waiau (Wai-au-uwha), and Ada valleys on St James, and then out to the West Coast via Cannibal Gorge (Kopi o kai tangata) and Maruia.

Te Rūnanga o Ngāi Tahu is the main iwi for the South Island. The local rūnanga is Te Rūnanga o Kaikōura.

St James Station, like many of the early larger Canterbury runs is an amalgamation of several smaller runs. The current property had its beginnings when the 'Edwards Block' was taken up by G. Edwards in 1862. A cob homestead was built in the Edwards River valley, but it may not have been built by Edwards. There has been a suggestion there is some evidence of this occupation in the form of cob mounds, but the exact location is not known. In 1863 Edwards transferred the run to G. Willmer who also ran St Mary's and Rockhouse in the Waiau along with the Edwards block.

Other runs to be taken up in the area and then added to make up the current St James are as follows:

<b>RUN</b>	<b>RUNHOLDER</b>	<b>DATE</b>	<b>AMALGAMATED</b>
Rockhouse	G. Willmer	1863	1863
St Mary's	G. Willmer	1863	1863
Lake Guyon	W.T.L. Travers	1860	1879
Ada	W.T.L. Travers	c1864	1879
Henry	W.T.L. Travers	c1864	1879
Stanley Vale	J. Young	1865	1892

By 1877 the Clarence Valley Run (Lake Tennyson, Lower Valley and Mt. Muntz Runs) had been amalgamated to make up St Helens. From 1896 to 1902 this was managed, along with St James, by J. McArthur. In 1907 W. H. F. and A. L. Pratt took over St James while the New Zealand Loan and Mercantile Agency Co. took over St Helens.

The Ada and Henry runs, as far as can be ascertained, did not have homesteads built and were run by Travers, his managers and later runholders from Lake Guyon.

The Lake Guyon homestead was a cob building on the lake shore. There is considerable evidence of this early occupation at the site, including remains of cob buildings on the shore of the lake. When Young took up a block of land in 1865 he located his homestead near the Stanley River about 3.5 km south of the Lake Guyon homestead. He soon transferred the run to W.L. Fowler and he named it Stanley Vale. Access to Lake Guyon and Stanley Vale from Hanmer was by way of Jollies Pass, the Clarence valley and Fowlers Pass. A two-roomed mud and stud hut with vertical board and batten cladding and other homestead features still remains on the site.

Little is known about the Rockhouse and St Mary's runs, except that these two runs were merged with the original Edwards Block by Willmer and were located to the south of the Henry River and west of the Waiau.

The current St James run buildings are located on the Tophouse Road in the Clarence valley with a base in the Waiau valley near the confluence with the Ada River. The St James homestead itself was burnt down in 1947. However, the woolshed, stable and cookhouse still survive from the 1880s. The current Ada homestead in the Waiau Valley was built some time between 1879 and 1896 by J McArthur, possibly with portions of it being relocated from Lake Guyon and Stanley Vale.

### **Significant historic places**

The New Zealand Historic Places Trust Pouhere Taonga (NZHPT) was established in 1954 and has become a leading national historic-heritage agency. It is governed and managed as a crown entity under the Crown Entities Act 2004, and its powers and functions are prescribed by the Historic Places Act 1993. The Trust's mission is to promote the identification, protection, preservation and conservation of the historical and cultural

heritage of New Zealand. Any place, site or structure identified for its historic value requires authorisation from NZHPT approval prior to any work being undertaken.

St James Station has a number of historic places ranging from homestead sites with their associated buildings to rabbit-exclusion fences.

### ***St James Station run buildings***

Located in the Clarence valley there are three historic buildings - the woolshed, cookhouse and the stable. All these buildings may have been built around 1880, which would tie in with McArthur's development of St James and with it being managed jointly with St Helens. Because of the construction of the woolshed and stables and the integrity of the cookhouse, these buildings have considerable historic value.

### ***Lake Guyon homestead site***

At the Lake Guyon homestead site there is clear evidence of early occupation. Still visible today are the remains of the cob homestead, poplar trees, and garden and orchard area with its rock walls, sheep-dip and yards.

This site is an important archaeological site as it has had very little modification over the years.

### ***Ada homestead and out-buildings***

The complex at the Ada consisting of the homestead, men's quarters and implement shed is a good representation of early colonial-run buildings with the main interest being in the mud and stud construction of the homestead itself. Nearby, surrounded by silver birch trees, is the grave of musterer Peter Sinclair.

### ***Stanley Vale***

The Stanley Vale homestead, built by Young around 1866, is in good condition having been restored in 1988. This mud and stud, timber-clad two-roomed hut and its setting along with a belt of poplar trees, like Lake Guyon is significant in the establishment of pastoral farming in the area.

### ***Edwards River homestead site***

Although this site has not been visited the outline of the 1860s cob homestead and some cob fence remains are supposed to be visible. Because the Lake Guyon site appears to be more intact, it is regarded as more significant than the Edwards.

### ***Rabbit-exclusion fence***

The section of the 1880s rabbit-exclusion fence from near the top of Maling Pass down to the Waiau, known as the 'wing fence' is in good condition. The fence, which reportedly went for 78 miles, was built in the Amuri in an endeavour to control a rabbit plague. Any sections of this fence that remain are important and rate highly alongside the Horsley Down's, and Mackenzie to Hakataramea rabbit fences. There is also an original heavy iron gate at Maling Pass entrance and another outside Fowlers Hut, where a further section of fence also remains.

### ***Fowlers Hut***

This is a two-roomed hut built about 1890 by the Hurunui Rabbit Board to provide accommodation for Rabbit Board staff to maintain the fence and carry out rabbit control. On the Tophouse Road frontage is a section of the original 1880s rabbit-exclusion fence complete with iron gate.

The hut and section of fence has high regional historic significance.

Other historic and archaeological sites within St James:

- New Zealand Forest Service wild-animal control huts - Christopher Cullers (door refers to this as Ada Cullers)
- Scottie's Hut ruin - Edwards River valley
- McArthur's bridge site - Waiau River valley.
- Old Bridge Hut - Waiau River valley.
- Pack tracks - Fowlers Hut to Stanley Vale and down the Stanley River to the Waiau; lower Waiau to Edwards towards Tin Jug Hut; Peters valley and Pass - Clarence homestead to the Edwards; Henry River to Old Bridge Hut.
- First St James homestead site in the lower Styx River valley.
- Hot springs reserve - Cow Creek. Cow Stream is important as this area has been set aside to be reserved.
- Henry River - camp site and set of old yards.
- Jervois Stream - saw pit near hut and yards.
- Survey cairns in the Stanley, Guyon and Henry areas, and possibly others.
- Fowlers Hut and woolshed site - near Fowlers Hut

### ***Action:***

- Complete an assessment of historic sites within St James
- Record archaeological sites into the Historic Places Trust database and monitor, and, where necessary, seek HPT permission prior to management actions taking place
- Assess and rank historic sites values in relation to Canterbury Conservancy priorities
- Record in AMIS all historic assets for St James

- Include key historic sites interpretation in St James interpretation plan to inform visitors of the values of the sites
- Monitor impacts from mountain-bike usage on Fowlers Pack Track, including the establishment of photo-point monitoring from Stanley to Fowlers Hut, and consult with New Zealand Historic Places Trust

### **A managed herd of horses**

The St James horse herd was established by the Stevenson family and has been managed by them since 1927. Management of the herd involved controlling the areas they resided in, their breeding, culling of weak and undesirable animals and herd size. Progeny were removed bi-annually for sale. Under the purchase agreement with the Stevenson family the stallions have been removed, as will be any saleable progeny for the next few years. The older mares, for which St James was the only home they have ever known, and which would be unlikely to relocate well, were to be left to live out their days on the property.

However, the herd has clearly brought enjoyment to many of the visitors to St James in the past and is a distinctive feature and may enhance the historic connections and recreational enjoyment as well as promoting wider visitor opportunities. The public views supported this and it is expected that this can be achieved through limiting a breeding population of horses to 30 and the total population to no more than 80. The horses are to be managed by an experienced operator at no cost to the Department so as to maintain the integrity of the St James-type horse. The horses will be managed within the framework of the Conservation Act and Conservation Act General Policy.

#### ***Action:***

- Allow the retention of herd of 30 breeding horses with a total population of no more than 80 horses

## **3.3 THREATS**

### **Animal Pests**

The St James Station is beset with animal pests: feral deer, pigs, Canada geese, stoats, cats, rats, mice, hedgehogs and wasps. They heavily modify the native vegetation, flora and fauna - directly and indirectly - and severely impede regeneration and population recovery. Since one of the main rationales for acquisition of St James was to conserve its outstanding indigenous (native) biodiversity, animal-pest control is important. With minimal management resources, encouraging effective hunting is vital. Any animal hunting on St James requires the person to hold a current Department hunting permit.

Canada geese are likely to be a major issue. In the past extensive culls and egg pricking were conducted to keep numbers down. If numbers get too large there may be an issue with enrichment of sensitive wetlands. Hunters wanting to shoot geese may also exert pressure to have driving access to wetlands to hunt, and to bring dogs into the area. Canada geese hunting require a Department hunting permit but also a game-bird licence from Fish and Game.

Recreational hunters will be given first opportunity to reduce animal numbers to keep animal numbers at a low level; however, if pest levels increase to an undesirable level where they are having high impacts on the biodiversity values, the status will be changed. At this point WARO and other options will be considered (refer to section 5 for further detail).

***Action:***

- Allow hunting pursuant to the Canterbury conservancy-wide hunting permit system
- Encourage hunting of deer, pig and geese species by allowing dog use (excluding kiwi areas) and vehicle access to the Waiiau River

**Weeds**

St James is comparatively free of weeds except in the south-eastern parts of area. The main weed species present are broom, Spanish heath, and wilding pines. Broom bushes are scattered down the Waiiau River, on the riverbed, terraces and lower hill slopes from about the Ada homestead to the southern boundary at the Steyning and Edwards rivers – becoming denser to the south and spreading into the lower Edwards River. Broom is also thick in places in the lower Styx and the lower Clarence valleys. Spanish heath is concentrated in two large patches in the lower Styx valley and spreading over the Hanmer Range into Hanmer Conservation Park in isolated locations. It is also found in the Edwards Pass area. Wilding pines are not a major problem on St James but do occur in the lower Clarence, south of the Peters/Williams valley.

Other exotic plants that have spread from their initial sources, but are still localised, are rowan around Lake Guyon, and scattered near the Waiiau/Ada River confluence, and gooseberry, growing under matagouri on hillsides from Lake Guyon to the Henry River in the Waiiau River valley and the lower Ada valley

As parts of St. James have had very little movement of people, vehicles and equipment from outside the station, the inadvertent introduction of weeds is highly likely once these areas are opened up. This would particularly apply to the more open eastern areas. Weed hygiene is therefore really important and any construction equipment and materials should be carefully checked and cleaned. 4WD vehicles and horses are also likely sources of weeds, but would be more difficult to control. Restricting access to a limited number of places

where weed impact would be less devastating, contained and relatively easy to control would help, and research on effective methods to encourage/enforce weed hygiene could be useful.

Weed control in the St James Conservation Area by the previous landowners and LINZ was to prevent the riverbeds, river flats, and terraces being taken over by broom and gorse. This was achieved by maintaining the existing control programme that has been in place for the last 15 years. This included control in the upper reaches of the Waiau, in the Stanley, and containment in the lower Edwards, Waiau, and in the Styx. This control also included Regional Pest Management Strategy work carried by LINZ on the areas on land that they administered before the handover.

St James has a small wilding-tree problem in the southern region and trees will be controlled as and where found.

***Action:***

- Broom control to continue in the Waiau above the containment line at Charlies Saddle and in the Clarence around the Styx area
- Monitor the existing Spanish heath infestation in the Edwards valley
- Monitor and control all other ecological weed species as appropriate
- Monitor native regeneration in the uncontrolled dense broom areas
- Control wilding trees as appropriate

**Fire**

Fire poses a serious threat, one that will initially be heightened after de-stocking, as the grass grows rank and the woody vegetation begins to regenerate. In succeeding decades, so long as feral deer and pigs are kept in check, the regenerating vegetation will become progressively less flammable as undergrowth of ferns and broadleaved species develops and takes over.

Fire can be started naturally through lightning strikes, but is far more likely to be caused by human carelessness.



## ***Fire-management advice***

### **Fire environment:**

#### ***Topography***

The topography generally falls within the high rainfall divide, and the inter-montane range and basin landscapes. These are characterised by glaciated mountains with extensive screes, with a series of inland ranges and smaller basins clad in bush, scrub and tussock and broken by mountain lakes and rivers.

The altitudinal zones most relevant to vegetation fire range from montane to high alpine, with the typical topographical variations in sun and wind exposure as well as rainfall, humidity and drainage.

#### ***Fuel***

The fuels can be coarsely categorised into three main fuel classes that are recognised in the New Zealand Fire Danger Rating System. These are forest, grassland and scrubland.

#### ***Weather***

The area falls under the influence of three climate zones, the majority falling within the intermediate elevations of the Southern Alps/Kā Tiritiri o te Moana and foothills.

- Higher elevations of the Southern Alps, with average annual rainfall exceeding 2000mm
- Intermediate elevations of the Southern Alps/Kā Tiritiri o te Moana and foothills, with average annual rainfalls of between 800 mm to 1500 mm. Summers are warm due to the influence of foehn winds, with temperatures sometimes exceeding 30° C. North-westerlies predominate with sometimes strong gales over the tops and in the valleys.

Fuel loadings will change as a result of increased public activity and reduced grazing. In these periodically high fire-risk areas, considerable care is required in the management of fire risks, both the risk of fire ignition and the risk of people entrapment by a fast-spreading grass fire. Fire preventative measures, such as vegetation (fire fuel) management (e.g. mowing and/or prescribed burning) and/or activity management (e.g. vehicle controls) may be required.

#### ***Action:***

- Assess fire-preventative measures
- Undertake a fire-threat profile

#### **Avalanche**

The St James Walkway will have an avalanche risk assessment done on it and appropriate management actions taken to help reduce visitor risk from avalanches. The majority of the rest of the terrain in the St James Conservation Area will be classified using the avalanche terrain exposure scale system (ATES). This splits the terrain into 'simple', 'challenging' and 'complex'. This information, along with recommendations on visitor skill and experience

levels for the various terrain types, will be made available to the public and updated as appropriate.

***Action:***

- Undertake an avalanche-risk assessment

**Vehicles**

Motorised vehicles have the potential to do great damage to the biodiversity values and affect the visitor experience by conflicting with other recreational users who have arrived to experience solitude. They also pose a risk of fire, weed importation and pollution. Controlling and limiting vehicle access will minimise the threats.

There are existing 4WD tracks over both Maling and Edwards passes. The use of the passes to gain further access into St James has been considered, including minimising any potential adverse effects. Users who would benefit from access over the passes as far as the Waiau River are hunters, fishers, 4WD enthusiasts and water based activities such as rafting/kayaking and canoeing.

***Action:***

- Provide controlled vehicular access as far as the Waiau River via Maling and Edwards passes, subject to road conditions, climate, fire threat and biodiversity impacts

**Rubbish and waste**

Visitors will be advised to leave nothing (except footprints) and the standard 'pack it in pack it out' policy is to prevail.

***Action:***

- Advocate 'pack in and pack out' rubbish/waste policy

**Didymo**

As of early February 2009, didymo has not been detected in the Waiau River in the St James. Didymo is, however, well established on the eastern boundary of the conservation area in the Clarence River. There is the risk of recreational activities moving didymo from the infected Clarence River into waterways within the conservation area.

Other 'nearby' waterways known to contain didymo include the Buller River in the neighbouring Nelson/Marlborough Conservancy and the Hurunui River in North Canterbury. These sites pose a potential risk because of their close proximity to the conservation area and the risk of short-hop travelling activities bringing non-decontaminated items into the area.

***Action:***

- Undertake advocacy to educate the public, acknowledging that this area is a high-value site.

### 3.4 VISITOR USE AND EXPERIENCE

The St James Conservation Area comprises several valley systems that all run into the Waiau River, which runs from north to south through the middle of St James. There are several key access points into St James, providing opportunities for clear orientation maps and information on a range of activities that can be undertaken in the area - particularly walking/tramping, biking, horse riding, hunting, and fishing.

The primary purpose of the purchase of St James, with management vested in the Department of Conservation, is to safeguard its natural and cultural heritage values. Associated with that is the provision of public access to allow St James to be experienced by visitors. Therefore, the focus of management needs to be on the protection and restoration of natural and cultural attributes, whilst allowing public visitation compatible with these protection and restoration goals.

St James is undoubtedly attractive to a range of people.

#### **Buildings, tracks and other facilities**

##### ***Huts and bridges***

Many of the acquired huts are considered to have historic status. The Historic Places Act 1993 defines an archaeological site as a place associated with pre-1900 human activity, where there may be evidence relating to the history of New Zealand. Therefore, before any work can be carried out on these huts an archaeological authority must be obtained from NZHPT.

The Department has inspected all of the huts open to the public within St James. Toilets have recently been replaced at Cannibal Gorge, Ada Pass, Christopher, Anne and the Boyle Flats huts on the St James Walkway. These interim measures provide safe facilities for the public's use and enjoyment of the area.

Given the potential change in visitor use (e.g. mountain biking and horse trekking) further assessment may be required for additional facilities at the huts for overnight stay.

### ***St James Walkway***

There are five huts on or near the St James Walkway These are Magdalen, Boyle Flats, Rokeby Hut, Anne and Christopher.

Other huts, bivvies and structures on St James:

### ***Caroline Creek Bivvy***

The bivvy is a basic two-person one in the upper Waiau River. It is now on Te Araroa - a walking trail from Cape Reinga to Bluff ([www.teararoa.org.nz](http://www.teararoa.org.nz)).

The existing bivvy was built by the New Zealand Forest Service (NZFS) for the purpose of deer culling and to provide accommodation for cullers working the upper Waiau and Caroline Creek. It is not in the most suitable location for trampers moving up and down the upper Waiau valley as it was not planned for this purpose. There is an informal campsite at the head of the valley that is used by trampers moving to or from Nelson Lakes National Park over Thompson or Waiau Pass. The more common route is the Waiau Pass from Blue Lake at the head of the Sabine valley, which is also part of Te Araroa. There is the need to investigate the options for locating a hut/campsite to service routes through Nelson Lakes National Park. As part of this investigation an avalanche-risk assessment needs to be undertaken.

### ***Lake Guyon Hut***

The Lake Guyon Hut is on the shores of Lake Guyon. It is a standard hut that can sleep four people and was built as a NZFS Wild Animal Control hut, which confers on it an historic value. This is likely to become a popular spot either en route to Fowlers Pass or as a side trip from the St James Walkway, the Waiau valley or an overnight stopping point on a Nelson Lakes to Lewis Pass trip. Visitors to Lake Guyon Hut will come in from several directions: people travelling Te Araroa, side trips from St James Walkway and from Maling Pass, Fowlers Pass, or the Stanley River.

Lake Guyon Hut has had limited use because of the previously limited public access. It is in an extremely well-preserved condition and should be retained and maintained for public use. Because of its well-preserved condition, this hut has considerable historic value and offers the experience of staying in a well-preserved NZFS cullers' hut. This is an experience that is becoming rarer as these huts become dilapidated or are replaced.

### ***Stanley Vale***

The Stanley Vale homestead built by Young around 1866 is in good condition having been restored in 1988. This mud and stud, timber-clad two-roomed hut and its setting along with a belt of poplar trees, like Lake Guyon, is significant in the establishment of pastoral farming in the area.

### ***Jervois Hut***

Jervois Hut is located by Jones Stream. This hut is not on a recognised track or route and does not seem to be a destination for trampers, but it is likely that this hut is used by hunters. It is under minimal maintenance.

Other huts have been added to public conservation land through the purchase. Many of these, i.e. Fowlers Hut, Scotties Camp and the old Bridge Hut are in poor condition and may not be used as visitor facilities but may instead be managed for their historic values.

### ***Pool Hut***

Pool Hut is located in the Waiau valley and maybe managed as part of the cycleway.

### ***Waiau River bridge (dilapidated).***

This bridge is dilapidated and currently closed to the public. It will be replaced with a new structure as part of the cycleway development project.

### ***St James homestead – historic complex***

This site has never been accessible to the public and it is expected that it will become a very popular site with visitors. It is a very important historical site dating back to the late 1800s. It is critical that these valuable assets are protected.

### ***Action:***

- Manage existing historic huts for their historic and recreational values
- Monitor hut use and informal campsites and build/ upgrade facilities as necessary
- Assess the need for additional overnight facilities at the existing huts
- Provide relevant interpretation in huts in accordance with the St James interpretation plan.

### ***Tracks and roads***

There are many existing farm tracks and roads within St James. The legal roads are to be closed as part of the purchase agreement, but this does not include Tophouse Road, which is the access road in the Clarence valley. It is intended this road be maintained by the Hurunui District Council in future.

The existing 4WD tracks: are Edwards Pass, Peters valley, Williams valley - Amuri ski field, Maling Pass, Waiau valley (assorted roads) Ada valley, Henry valley, Lake Guyon and Stanley.

St James also hosts a number of walking tracks including the St James Walkway, Te Araroa, Waiau Pass and Fowlers Pass.

***Action:***

- Support Tophouse Road (Clarence valley) becoming legal road maintained by the Hurunui District Council
- Allow public 4WD access over Maling and Edwards passes
- Maintain all other 4WD and farm tracks for motorised vehicle access for management purposes only, in conjunction with public non-motorised recreational use of these tracks

***Fences***

There are many fences on St James and some of these fences are identified as having historic value. The section of the 1880s rabbit-exclusion fence from near the top of Maling Pass down to the Waiau, known as the ‘wing fence’ is in good condition. Any sections of this fence that remain are important and rate highly alongside the Horsley Down’s and Mackenzie to Hakataramea rabbit fences. There is also an original heavy iron gate at Lake Tennyson and another outside Fowlers Hut, where a further section of fence also remains. Given the historic value of these fences, remnants of this fence shall be maintained. However, the retention of the other fences on St James will need to be assessed at the conclusion of the farming practices.

***Action:***

- Assess and maintain sections of the historic rabbit exclusion fence
- As funding permits, assess and remove all other unnecessary fences on St James

***Private but – Ada homestead***

The Ada homestead land (approximately 10 ha) has been leased to the Stevenson Trust for the next 65 years. This allows for the construction of one more building and controlled 4WD access over Maling Pass. The homestead is not to be used for commercial purposes. The Stevenson Trust also has the use of the airstrip and cattle yards and the lease area will be fenced off.

The Stevenson Trust owns the buildings, one of which has been identified as having historic value.

***Action:***

- Monitor potential conflict between the public and the Stevenson Trust family members

- Advocate to the Stevenson Trust the historic values of the buildings

### **Recreation Opportunity Spectrum (ROS)**

When purchased, St James Conservation Area covered a range of Recreational Opportunity Spectrum (ROS) classes, ranging from ‘rural’ and ‘front-country’ to ‘remote’ and ‘wilderness’.

Valley floors (Waiau, Henry, Ada, parts of the Edwards) are predominantly zoned as rural; however, this may change once destocking has been carried out and the area begins to re-vegetate. The Edwards valley has been described as mainly rural in character, which would be likely to push it into more of a rural class setting for the valley floor. Key access points and roadsides (Boyle, Lake Tennyson and the Tophouse Road) are front-country sites.

Wilderness and remote areas largely comprise the mountaintops of the Libretto, Opera, Spenser and St James ranges, along with a less accessible stretch of the Waiau centred near the confluence of the Stanley River. The rest of the area is zoned as backcountry class.

#### ***Action:***

- Assess the ROS zoning to give a mix of front-country, backcountry, remote and wilderness areas

### **Recreation and commercial opportunities**

The St James offers outstanding opportunities for a wide range of recreational opportunities. Most recreational opportunities can also be provided commercially. For a number of these activities, activity minimum-impact codes have been established (refer to appendix 6).

Any concession applications received will be processed as per the standard concession processes and assessed against all relevant statutory documents and processes.

#### ***Action:***

- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes
- All activities should abide by the minimal impact codes: <http://www.doc.govt.nz> (enter ‘minimal impact code’ into search box).

### ***Camping, picnicking and car parks in the Clarence valley***

The eastern parts of St James that are easily accessible from the Tophouse Road offer many opportunities for picnicking, short walks, botanising, bird-watching and photography.

The need for designated car parks, including toilets, needs to be assessed. In the interim informal parking will be allowed, and use and impacts will be monitored. If found to be necessary, formal car parks will be established.

The St James homestead site near the junction of Tophouse Road and Williams Valley Road provides an opportunity for the public to have easy access to an historic, functioning homestead. This area will need to be monitored in relation to the effects on the historic nature of the buildings and any site degradation. It will need to be considered for interpretation opportunities as part of the St James interpretation plan.

#### ***Action:***

- Assess and monitor the establishment of car parks along Tophouse Road
- Provide orientation map panels at key access points
- Assess interpretation needs for St James homestead site as part of the St James interpretation plan
- Monitor the use of St James homestead site
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

### ***Tramping***

St James provides the opportunity for recreationalists to experience day, overnight and multiple-day trips in various terrains for various levels of fitness. These diverse opportunities make the area a popular choice with the local tramping clubs and also the neighbouring regions of Nelson/ Marlborough, West Coast and lower North Island.

The St James Walkway is a 66-km tramp and is officially the longest walkway in New Zealand. It is also one of the few tracks anywhere in the Southern Alps/Kā Tiritiri o te Moana between Nelson Lakes and Mt Aspiring National Park that provides facilities close to 'great walk' standard.

Numerous other tramping trips are available including the Zampa Tops, Opera Range and northern parts of the Libretto Range, whose easy tops and proximity to the Lewis Pass make them popular with clubs for winter tramping.



Te Araroa - a walking trail from Cape Reinga to Bluff ([www.teararoa.org.nz](http://www.teararoa.org.nz)) - enters St James at the Waiau Pass and follows down river flats to the confluence of the Waiau and Ada rivers where it joins the St James Walkway near the Ada homestead. Te Araroa then continues up the Anne River and out to Boyle village via the southern section of the St James Walkway.

***Action:***

- Support unrestricted foot access throughout St James
- Promote the use of Te Araroa through St James
- Promote St James Walkway as a traditional kiwi backcountry experience
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

***Mountaineering***

A number of the higher peaks in the Spenser Mountains (including Mounts Una, Enid and Humbolt) present more demanding alpine challenges and regularly attracts mountaineers in both summer and winter.

The Spenser Mountains are regularly used by climbers throughout the year. The main peaks that are climbed are Gloriana (2218 m), Faerie Queen (2236 m) and Mt Una (2300 m). In the St James Range further east, Mt Princess (2126 m) is climbed from Lake Tennyson.

***Action:***

- Support unrestricted foot access throughout St James
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

***Mountain biking (non-motorised)***

Mountain biking is already a popular activity in nearby Hanmer Springs, including Jacks and Jollies passes and through the Rainbow pylon road in Molesworth Station and Clarence Reserve. Access from Tophouse Road into St James via the three passes - Maling, Fowlers and Edwards - opens up a lot more terrain for mountain bikers.

Given the previous limited vehicle access, the farm tracks are not extensively rutted and as a result provide excellent surfaces for non-motorised mountain biking. Mountain biking (non-motorised) within the St James Conservation Area should be restricted only by the topography and vegetation. Mountain biking on the St James Walkway shall be excluded to minimise potential conflict between trampers and mountain bikers. However, mountain bikers

can access the Anne and Christopher huts on the St James Walkway via alternative routes (i.e. existing farm-track network).

As part of the 'national cycleway' initiative, a route through St James Conservation Area has been selected. The St James Cycleway project consists of building two sections of new track. Section one is a 4.8 km section of track from Maling Pass to Lake Guyon in the Waiau valley. Section Two is a 10.7 km section of track requiring limited work from Lake Guyon to the Muddy Lakes area. Both sections contain new track construction and maintenance/upgrade of existing 4WD track, and are contained within the St James providing approximately 55 km of cycle trails.

***Action:***

- Support mountain biking (non-motorised) in the St James Conservation Area, restricted only by the topography and vegetation, and excluding the St James Walkway (mountain bike - non motorised - access to Anne and Christopher huts on the St James Walkway via existing farm tracks is acceptable).
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

***Horse trekking***

As with mountain biking (non-motorised), horse trekking in St James should be restricted only by topography and vegetation. The use of the St James Walkway shall be excluded to minimise the potential conflict between activities. However, access to Anne and Christopher huts on the St James Walkway via existing farm tracks is acceptable.

Fowlers Pass is an historic stock route into the Waiau that has been used for horse trekking. Access via this pass will continue to be promoted. Access from Tophouse Road into St James via Maling and Edward passes will be promoted, as it allows for greater choice of areas to ride. Interactions between different recreational users may result in potential conflict; this may be monitored in the interim.

Currently no facilities have been established at the huts to cater for horse trekkers; however, this will be monitored and minimal facilities for overnight horse trekking may be established.

There is a potential risk associated with horse trekkers interacting with the St James horse herd. Caution will need to be exercised and the location of stallions will need to be communicated to the public.

***Action:***

- Support independent horse trekking on St James restricted only by the topography and vegetation, and excluding the St James Walkway (horse trekking to Anne and Christopher huts on the St James Walkway via existing farm tracks is acceptable)
- Monitor the use of Fowlers Pass track for track degradation
- Monitor conflicts between horse trekkers and other users
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

***Motorised access (including 4WD and motorbikes)***

It is proposed that from 1 June 2010 open access will be permitted on formed and marked tracks over the Maling and Edwards passes into the Waiau valley; at the Waiau River there will be a clearly defined site where it is intended vehicles must stop. Both routes could be subject to closures for vehicle access because of environmental considerations (e.g. snow, floods, ice, and extreme fire risks) and vehicle impacts on the track. The department reserves the right to close access at any time and for any period.

The access will be managed to minimise potential conflicts with other recreational users, whilst allowing for a wide and varied range of recreational user to enjoy the St James area.

***Action:***

- Allow controlled vehicle access as far as the Waiau River via Maling Pass and Edwards valley
- Monitor the physical and social effects of vehicle access
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

***Kayaking/rafting and canoeing***

Below the point where it is joined by the Ada River, the upper Waiau River is one of the best rivers for rafting and kayaking in the eastern South Island. Graham Egarr's *New Zealand's South Island Rivers - A Guide for Canoeists, Kayakers and Rafters* (1995) reports that a "remote section of interesting and difficult water" between here and the point where it meets the Lewis Pass highway is "said to be the best trip in Canterbury north of the Rangitata Gorge". This is the result of four spectacular gorges (regularly grades IV-V), the first of which is just above the Henry/Waiiau confluence. However, despite its challenges for kayakers and rafters the Waiau has up until now seen comparatively limited use, largely it would seem because of restrictions on vehicle access.

***Action:***

- Provide 4WD motorised vehicle access as far as the Waiau River via Maling Pass and Edwards valley for rafting/kayaking and canoeing
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

***Hunting – deer, pigs and game birds***

Deer and chamois occur throughout St James and pigs are widespread in the south and east. No formal assessment of the popularity of the area for hunting has come to hand during the preparation of this report, but evidence from hut books (Lake Guyon and the St James Walkway) indicates that recreational hunters use the area extensively, is backed up by the recent submissions. Canada geese and other waterfowl occur in significant numbers in the upper Waiau valley (including on the smaller lakes like Muddy Lake and Little Lake near the Henry/Waiiau confluence) and would appear to offer excellent opportunities for game-bird shooting. Excluding kiwi areas, the use of dogs for hunting purposes shall be considered and managed as part of the hunter-permit process.

Motorised access for hunting shall be allowed for over Maling and Edward passes and via aircraft, in accordance with the pre-consultative draft guidelines for aircraft access in Canterbury Conservancy.

***Action:***

- Allow hunting pursuant to the Canterbury conservancy-wide hunting permit system
- Encourage hunting of deer, pig and geese species by allowing dog use (excluding kiwi areas) and 4WD vehicle access as far as the Waiau River via Maling Pass and Edwards valley, and aircraft access for hunters in line with the pre-consultative draft guidelines for aircraft access in Canterbury Conservancy
- Assess St James in relationship to Canterbury Conservancy “Management of dogs on land administered by the Department of Conservation”

***Fishing***

The upper Waiau is highly valued as a wilderness fishery and is regarded as one of the best rivers for wild-trophy trout in New Zealand, while Lake Guyon has been described as a “trout fishing gem”. It is also highly valued for its remoteness and tranquillity. The upper Waiau is an important area for salmon spawning and there is good trout fishing in Lake Tennyson.

Recreational fishing, either with or without a fishing guide, is a popular activity on the Waiau, Ada and Henry rivers and at Lake Guyon and Lake Tennyson. Fishing is likely to be more popular now that access is more easily available. The fishing season is open from 1 October to 30 April. New Zealand Fish and Game are responsible for the regulations that govern fishing for sports fish and the management of the fish stock.

Motorised access for fishing shall be allowed for over Maling and Edward passes and via aircraft, in accordance with the pre-consultative draft guidelines for aircraft access in Canterbury Conservancy.

***Action:***

- Provide a range of access for fishers including 4WD vehicle access as far as the Waiau River via Maling Pass and Edwards valley, and aircraft access in line with the current Canterbury Conservancy aircraft guidelines
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

***Aircraft access and landings sites***

Historically a local helicopter company has held a Land Information New Zealand (LINZ) recreation permit over this area. That permit holder provided helicopter services to visitors by flying in recreationists, such as hunters, heli-hunters and heli-skiers; positioning anglers, rafters and kayakers along the Waiau River, and undertaking scenic landings.

There is an airstrip adjacent to the Ada homestead, which the Stevenson Trust have requested continued use of. Other landing sites are to be assessed in the Waiau valley.

Access for aircraft landings will be processed in line with the Pre-Consultative Draft Guidelines for Aircraft Access Canterbury Conservancy. These guidelines will determine the use for areas within St James and for all of Canterbury. They will remain open for feedback, and whilst subject to change, form the operational guideline for the processing of aircraft concessions in Canterbury. The guidelines also incorporate the Wild Animal Recovery Operations (WARO) and commercial heli-hunting.

WARO zones and operations are currently being authorised through a national process that will be complete by 1 December 2009. Currently St James remains unclassified for WARO and no such operations are likely to be considered in the foreseeable future.

Heli-hunting as an activity is being considered through a separate process and will be subject to public notification. Applications for heli-hunting in the St James will not be considered in the foreseeable future.

Well founded justifications would need to be developed as part of any future consideration for WARO or heli-hunting activity in St James.

Applications for aircraft landings (excluding WARO and heli-hunting) are being considered and approved for a maximum period of no more than three years. These concessions will be reviewed at least annually taking into the consideration the results of any visitor impact monitoring that will be undertaken.

***Action:***

- Monitor aircraft landing impacts on other recreational users
- Process any concession application received as per the standard concession processes and assess against all relevant statutory documents and processes, including the Pre-Consultative Draft Guidelines for Aircraft Access Canterbury Conservancy.

***Skiing and heliskiing***

The Hanmer Springs Ski Area (formerly called the Amuri Ski Field) is on the north-east slopes of Mt St Patrick (1774 m) in the south-eastern sector of St James and is accessed by a road up the Williams valley off Tophouse Road. The field, which is about 45 minutes drive from Hanmer Springs, has a poma lift and a rope tow. It is not a big field but it is made up of three basins and thus has a variety of terrain that caters for a spectrum of users. The ski field is usually open from June to September. It has been operated by Amuri Ski Club Inc. and a heli-ski operation has also been run in the southern parts of the St James Range. Heli-skiing will be considered within the St James Range between Fowlers Pass and the Edwards valley.

The use of ski mobiles is not permitted on public conservation land as they are unregistered vehicles.

***Action:***

- Allow continued use of the Hanmer Ski Area for skiing via a concession agreement
- Process a concession application that has been received, as per the standard concession processes, and assess it against all relevant statutory documents and processes
- Allow heli-skiing in areas defined by the Pre-Consultative Draft Guidelines for Aircraft Access Canterbury Conservancy

### ***Stock grazing***

There are considerable biodiversity values on St James that need to be protected. Any grazing will be detrimental to these values and would need to be assessed in line with the Conservation General Policy 2005. Because stock cannot be contained without a likely adverse effects on natural values, or be managed at a low enough stocking rate to minimise effects on natural values and still be economic, the majority of grazing will be phased out as per the purchase agreement.

Opportunities may exist if a suitable stock type and grazing regime can be found and it is not in conflict with the carbon-sequestration objective. Any grazing concession, should it be a future outcome, will be offered to the Stevenson family first in accord with Agreement for Sale and Purchase.

#### ***Action:***

- Give biodiversity values upmost importance in assessing any concession applications for grazing
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

### ***New commercially-managed huts and facilities***

It has been suggested that there may be interest from prospective concessionaires to develop a range of accommodation that will assist people in experiencing and enjoying St James. This accommodation could cater for fishers, horse riders, hunters, walkers and mountain-bikers.

#### ***Action:***

Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

### ***Hydro-electric power generation and/or irrigation-water storage***

There is the potential for the generation of hydro-electric power and water storage within both the Waiau and Clarence rivers. The Ministry of Economic Development and the Canterbury Water Management Strategy websites contain information about ideas that have been developed so far. At the present time no proposals have been made for the section of the Waiau River that lies within St James, but this could change. Future investigations may identify sites with potential that could be considered for development.

As part of the sale and purchase agreement the Department was assigned Meridian Energy's Investigation Licence, which allows for monitoring sites to be established.

***Action:***

- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

***An electricity-generating wind farm***

The St James Range adjacent to the Clarence River is the most likely location for any considerations of wind power generation. The existing roads and electricity infrastructure in the Clarence valley could be used to support a new wind farm. There may be other potential sites within St James, but they are likely to be disadvantaged by their impact on conservation values, remoteness from roads and a supporting line network. To gauge the potential for wind-power generation, monitoring masts would need to be erected.

***Action:***

- Process any concession application as per the standard concession processes and assess against all relevant statutory documents and processes

**Hut and campsite revenue**

There are multiple huts on St James and plenty of areas to freedom camp. Dependent upon the classification of each hut, the appropriate hut fees should be paid by users through the normal procedures of buying hut tickets or a backcountry hut pass. If camping occurs within 100 m of these huts and the facilities are used then half the hut fee should be paid for camping. In other sites on St James where freedom camping occurs the visitor will not need to pay camping fees.

***Action:***

- Adhere to the Department's hut and campsite service fees
- Advocate fee compliance

**Public information**

People using the St James for a range of activities will benefit from accurate information about the recreation opportunities, safety issues, and the natural and cultural values in the area. The area itself will also benefit from raising awareness of values and how they are best protected. Information for the public will be provided through the DOC website, on-site orientation map panels, brochures, and interpretation panels. Website information will be kept up to date and provision of other information and interpretation will be prioritised in a St James interpretation plan.



There are several key access points into St James, providing obvious sites for clear orientation maps and information on a range of activities that can be undertaken in the area – particularly walking/tramping, biking, horse riding, hunting, and fishing. Public information in and around Hanmer will require liaison with relevant agencies and interest groups, and the Hanmer i-SITE.

***Action:***

- Provide accurate information on values, recreation opportunities, and safety issues through a range of media
- Produce a St James interpretation plan to identify appropriate themes, media and priorities for interpretation
- Liaise with relevant Hanmer agencies and interest groups regarding Hanmer public information
- Work with Hanmer i-SITE to effectively disseminate visitor information in and around the Hurunui District

### 3.5 CARBON SEQUESTRATION

The drier half of St James, generally east of the Waiau River, has the potential for further carbon sequestration through indigenous vegetation recovery. The land area could be as large as 10,000 ha and may have the potential to fix as much as three tonnes of carbon per hectare per year. Much of this drier country had already been withdrawn from grazing because of its low productivity. In the absence of grazing and burning, some of this land is already showing a change back to a ‘more woody’ vegetative state. In some places native shrubs such as mānuka are demonstrating vigorous growth. The Department will also need to evaluate the financial costs/benefits of grazing versus carbon sequestration. It is not known whether these two land uses are mutually exclusive or could be integrated. It may be possible to graze the valley floor, for example of the Clarence and Edwards valleys, and retain vegetative cover on the hills for carbon sequestration.

***Action:***

- Carbon credits will be assessed according to Government policy

## 5 References and acknowledgements

Documents and publications used to produce this operational plan include:

Balaclava, Sedgemere and Dillon Ecological Districts: survey report for the Protected Natural Areas Programme, Shannel Courtney and Joseph Arand, Dept of Conservation, Nelson/Marlborough Conservancy Nelson, N.Z. 1994

Canterbury Conservation Management Strategy - current 2002 and draft version (on hold) 2009

Canterbury Conservancy Technical Support advice on St James Conservation Area biodiversity and historic values, 2009

Canterbury Conservancy Technical Support advice on St James Conservation Area recreation opportunities analysis, 2009

Hurunui District Plan, 1995

Pastoral lease tenure review report to Knight Frank Limited, Dept of Conservation, 1998

Pre-Consultative Draft Guidelines for Aircraft Access Canterbury Conservancy, Canterbury Conservancy, 2009

St James Pastoral Lease, A report on proposals for protection and public access, Andy Dennis, prepared for the Executive of Federated Mountain Clubs of New Zealand Inc. (FMC), 1998.

Conservation resources of St James Pastoral Lease, Canterbury

## APPENDIX 1: SUMMARY OF ACTION POINTS

### LAND STATUS

#### ***Action:***

- Support Jacks Pass and Tophouse Road (Clarence valley) becoming legal roads maintained by the Hurunui District Council
- Support St James to be managed as a Conservation Area and support an integrated-management approach with neighbouring public conservation land, with future status to be dealt with through the CMS.

### MANAGEMENT CONSIDERATIONS

### NATURAL HERITAGE

#### ***Action:***

- Consider St James in a Canterbury conservancy-wide context for prioritisation of any biodiversity surveys
- Ecological surveys shall be undertaken as part of an Assessment of Environmental Effects (AEE) for any new development proposals
- Cattle and sheep grazing should only occur if biodiversity values can be protected.

### CULTURAL HERITAGE

#### **Significant historic places**

#### ***Action:***

- Complete an assessment of historic sites within St James
- Record archaeological sites into the Historic Places Trust database and monitor, and, where necessary, seek HPT permission prior to management actions taking place
- Assess and rank historic sites values in relation to Canterbury Conservancy priorities
- Record in AMIS all historic assets for St James
- Include key historic sites interpretation in St James interpretation plan to inform visitors of the values of the sites
- Monitor impacts from mountain-bike usage on Fowlers Pack Track, including the establishment of photo-point monitoring from Stanley to Fowlers Hut, and consult with New Zealand Historic Places Trust

## **A managed herd of horses**

### ***Action:***

- Allow the retention of herd of 30 breeding horses with a total population of no more than 80 horses

## **T H R E A T S**

### **Animal Pests**

#### ***Action:***

- Allow hunting pursuant to the Canterbury conservancy-wide hunting permit system
- Encourage hunting of deer, pig and geese species by allowing dog use (excluding kiwi areas) and vehicle access to the Waiau River

### **Weeds**

#### ***Action:***

- Broom control to continue in the Waiau above the containment line at Charlies Saddle and in the Clarence around the Styx area
- Monitor the existing Spanish heath infestation in the Edwards valley
- Monitor and control all other ecological weed species as appropriate
- Monitor native regeneration in the uncontrolled dense broom areas
- Control wilding trees as appropriate

### **Fire**

#### ***Action:***

- Assess fire-preventative measures
- Undertake a fire-threat profile

### **Avalanche**

#### ***Action:***

- Undertake an avalanche-risk assessment

### **Vehicles**

#### ***Action:***

- Provide controlled vehicular access as far as the Waiau River via Maling and Edwards passes subject to road conditions, climate, fire threat and biodiversity impacts

## **Rubbish and waste**

### ***Action:***

- Advocate 'pack in and pack out' rubbish/waste policy

## **Didymo**

### ***Action:***

- Undertake advocacy to educate the public, acknowledging that this area is a high-value site

## VISITOR USE AND EXPERIENCE

## BUILDINGS, TRACKS AND OTHER FACILITIES

### **Huts and bridges**

#### ***Action:***

- Manage existing historic huts for their historic and recreational values
- Monitor hut use and informal campsites and build/ upgrade facilities as necessary
- Assess the need for additional overnight facilities at the existing huts
- Provide relevant interpretation in huts in accordance with the St James interpretation plan.

### **Tracks and roads**

#### ***Action:***

Support Tophouse Road (Clarence valley) becoming legal road maintained by the Hurunui District Council

Allow public 4WD access over Maling and Edwards passes

Maintain all other 4WD and farm tracks for motorised vehicle access for management purposes only, in conjunction with public non-motorised recreational use of these tracks

### **Fences**

#### ***Action:***

- Assess and maintain sections of the historic rabbit exclusion fence
- As funding permits, assess and remove all other unnecessary fences on St James

## **Private hut – Ada homestead**

### ***Action:***

- Monitor potential conflict between the public and the Stevenson Trust family members
- Advocate to the Stevenson Trust the historic values of the buildings

## RECREATION OPPORTUNITY SPECTRUM (ROS)

### ***Action:***

- Assess the ROS zoning to give a mix of front-country, backcountry, remote and wilderness areas

## RECREATION AND COMMERCIAL OPPORTUNITIES

### ***Action:***

- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes
- All activities should abide by the minimal impact codes: <http://www.doc.govt.nz> (enter 'minimal impact code' into search box).

## **Camping, picnicking and car parks in the Clarence valley**

### ***Action:***

- Assess and monitor the establishment of car parks along Tophouse Road
- Provide orientation map panels at key access points
- Assess interpretation needs for St James homestead site as part of the St James interpretation plan
- Monitor the use of St James homestead site
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

## **Tramping**

### ***Action:***

- Support unrestricted foot access throughout St James
- Promote the use of Te Araroa through St James

- Promote St James Walkway as a traditional kiwi backcountry experience
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

### **Mountaineering**

#### ***Action:***

- Support unrestricted foot access throughout St James
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

### **Mountain biking (non-motorised)**

#### ***Action:***

- Support mountain biking (non-motorised) in the St James Conservation Area, restricted only by the topography and vegetation, and excluding the St James Walkway (mountain bike - non motorised - access to Anne and Christopher huts on the St James Walkway via existing farm tracks is acceptable).
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

### **Horse trekking**

#### ***Action:***

- Support independent horse trekking on St James restricted only by the topography and vegetation, and excluding the St James Walkway (horse trekking to Anne and Christopher huts on the St James Walkway via existing farm tracks is acceptable)
- Monitor the use of Fowlers Pass track for track degradation
- Monitor conflicts between horse trekkers and other users
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

### **Motorised access (including 4WD and motorbikes)**

#### ***Action:***

- Allow controlled vehicle access as far as the Waiiau River via Maling Pass and Edwards valley
- Monitor the physical and social effects of vehicle access

- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

### **Kayaking/rafting and canoeing**

#### ***Action:***

- Provide 4WD motorised vehicle access as far as the Waiau River via Maling Pass and Edwards valley for rafting/kayaking and canoeing
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

### **Hunting – deer, pigs and game birds**

#### ***Action:***

- Allow hunting pursuant to the Canterbury conservancy-wide hunting permit system
- Encourage hunting of deer, pig and geese species by allowing dog use (excluding kiwi areas) and 4WD vehicle access as far as the Waiau River via Maling Pass and Edwards valley, and aircraft access for hunters in line with the pre-consultative draft guidelines for aircraft access in Canterbury Conservancy
- Assess St James in relationship to Canterbury Conservancy “Management of dogs on land administered by the Department of Conservation”

### **Fishing**

#### ***Action:***

- Provide a range of access for fishers including 4WD vehicle access as far as the Waiau River via Maling Pass and Edwards valley, and aircraft access in line with the pre-consultative draft Canterbury Conservancy aircraft access guidelines
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

### **Aircraft access and landings sites**

#### ***Action:***

- Monitor aircraft landing impacts on other recreational users
- Process any concession application received as per the standard concession processes and assess against all relevant statutory documents and processes, including the Pre-Consultative Draft Guidelines for Aircraft Access Canterbury Conservancy.



## **Skiing and heliskiing**

### ***Action:***

- Allow continued use of the Hanmer Ski Area for skiing via a concession agreement
- Process a concession application that has been received, as per the standard concession processes, and assess it against all relevant statutory documents and processes
- Allow heli-skiing in areas defined by the Pre-Consultative Draft Guidelines for Aircraft Access Canterbury Conservancy

## **Stock grazing**

### ***Action:***

- Give biodiversity values upmost importance in assessing any concession applications for grazing
- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

## **New commercially-managed huts and facilities**

### ***Action:***

- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

## **Hydro-electric power generation and/or irrigation-water storage**

### ***Action:***

- Process any concession applications received as per the standard concession processes and assess against all relevant statutory documents and processes

## **An electricity-generating wind farm**

### ***Action:***

- Process any concession application as per the standard concession processes and assess against all relevant statutory documents and processes

## HUT AND CAMPSITE REVENUE

### ***Action:***

- Adhere to the Department's hut and campsite service fees
- Advocate fee compliance

## PUBLIC INFORMATION

### ***Action:***

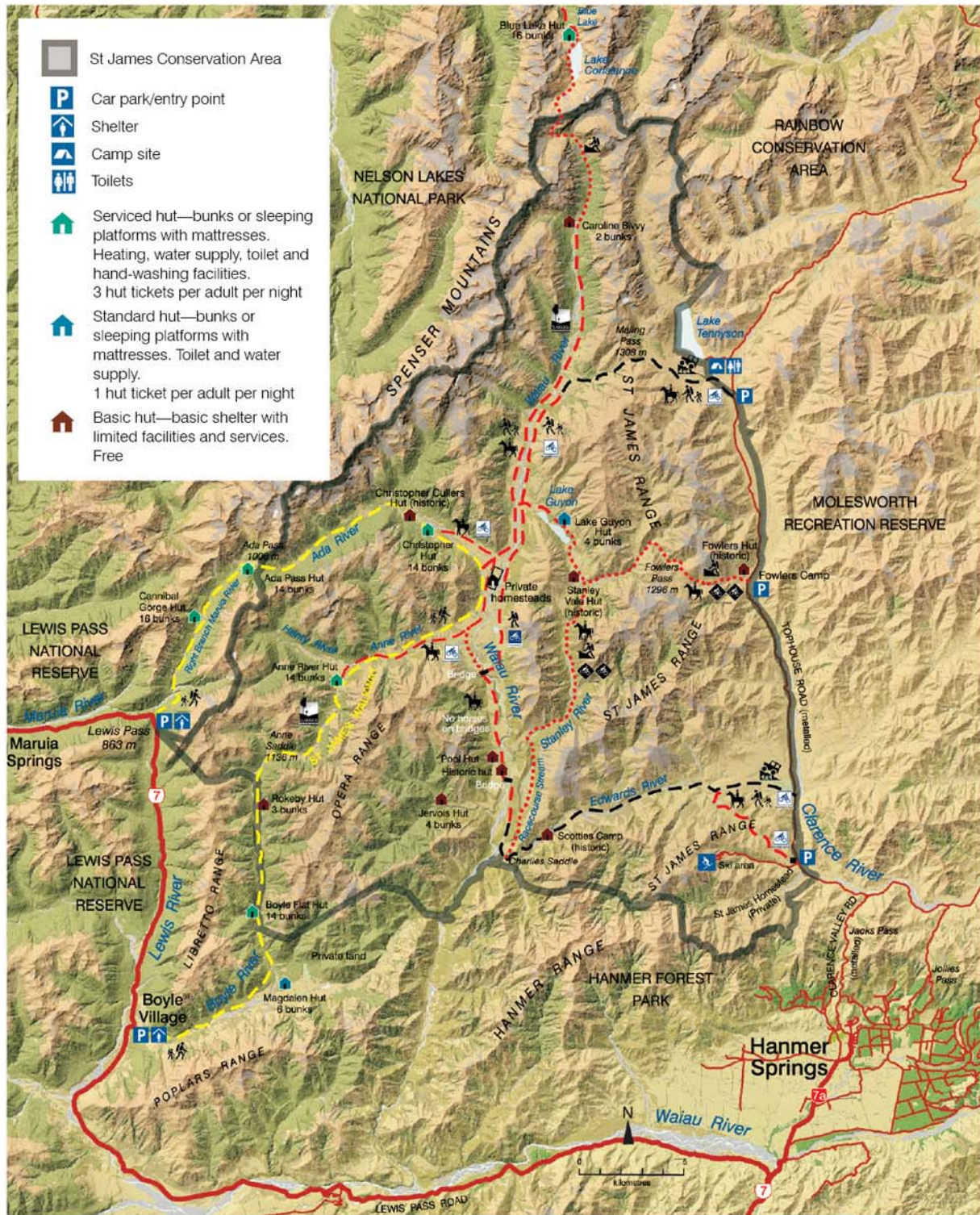
- Provide accurate information on values, recreation opportunities, and safety issues through a range of media
- Produce a St James interpretation plan to identify appropriate themes, media and priorities for interpretation
- Liaise with relevant Hanmer agencies and interest groups regarding Hanmer public information
- Work with Hanmer i-SITE to effectively disseminate visitor information in and around the Hurunui District

## CARBON SEQUESTRATION

### ***Action:***

- Assess carbon credits according to Government policy

# APPENDIX 2: ST JAMES CONSERVATION AREA MAP



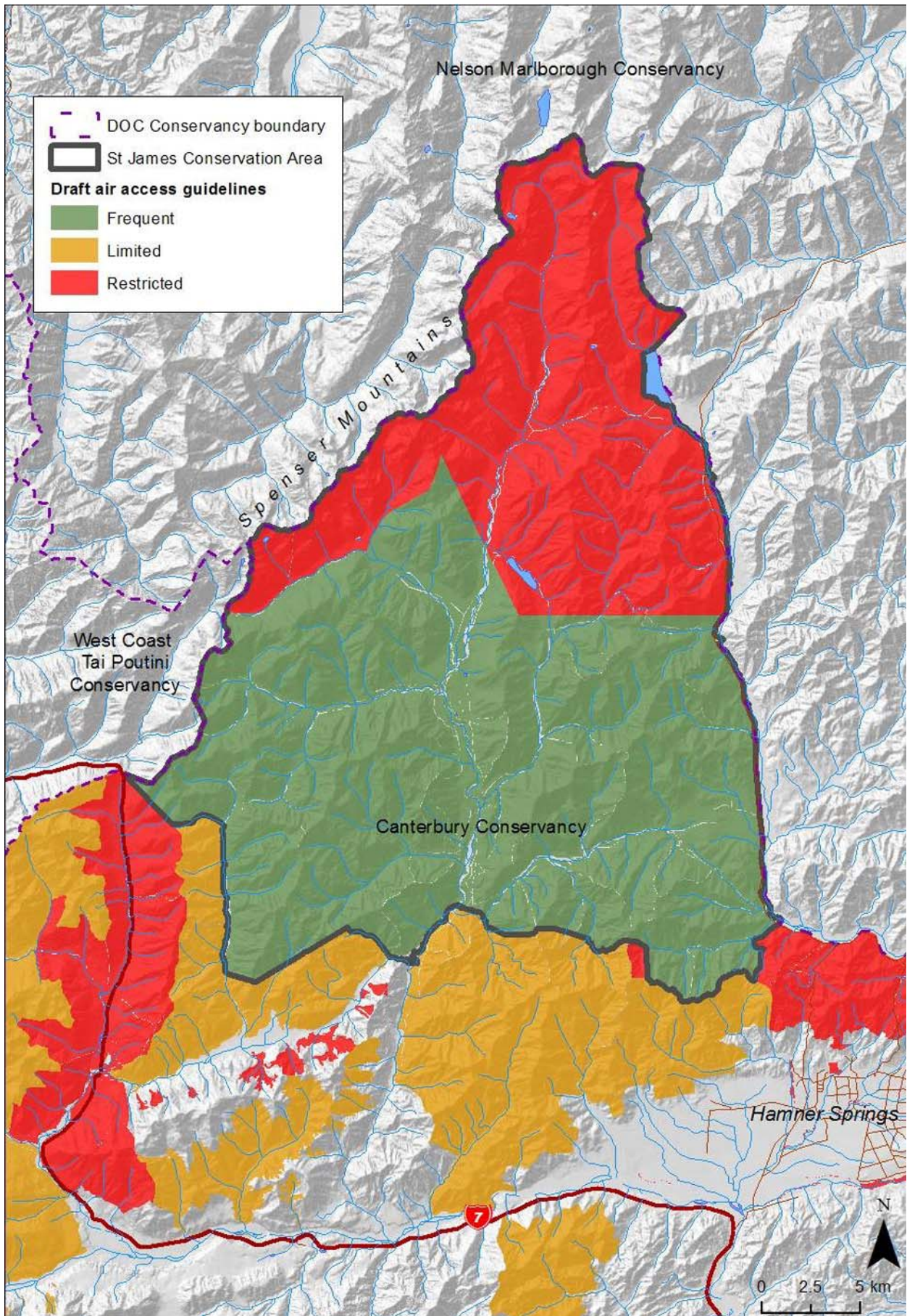
- St James Conservation Area
- Car park/entry point
- Shelter
- Camp site
- Toilets
- Serviced hut—bunks or sleeping platforms with mattresses. Heating, water supply, toilet and hand-washing facilities. 3 hut tickets per adult per night
- Standard hut—bunks or sleeping platforms with mattresses. Toilet and water supply. 1 hut ticket per adult per night
- Basic hut—basic shelter with limited facilities and services. Free

- Tramping tracks**  
Easy tramping track—generally well-formed track for comfortable overnight tramping/hiking
- Tramping track—mostly unformed but has track directional markers, poles or cairns
- Route—unformed, suitable only for people with high-level backcountry skills and experience
- St James Walkway

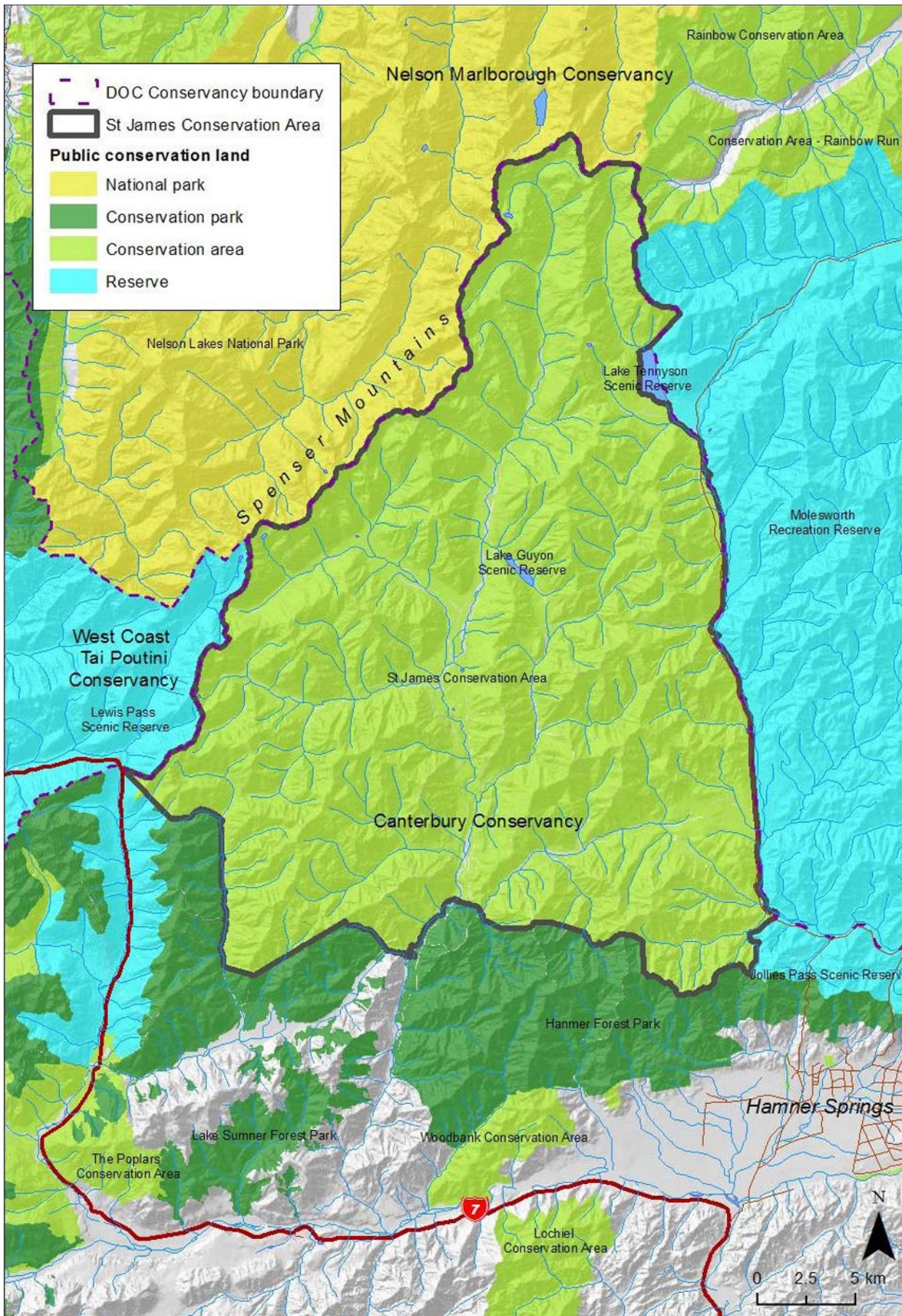
- Te Araroa through-route
- Horse riding
- 4WD route

- Mountain-bike tracks**  
Grade 3—steep slopes and/or avoidable obstacles possibly on narrow track and/or with poor traction. There may be exposure at track's outer edge.
- Grade 4—a mixture of long, steep climbs, narrow track, poor traction and difficult obstacles to avoid or jump over. Generally exposed at the track outside edge. Most riders will find some sections easier to walk.
- Grade 6—Downhill/tree-ride-specific tracks. Extremely steep sections with large drop-offs and other unavoidable obstacles. May include man-made structures and jumps.

APPENDIX 3: ST JAMES CONSERVATION AREA PRE-CONSULTATIVE DRAFT AIRCRAFT ACCESS GUIDELINES MAP



# APPENDIX 4: ST JAMES AND THE SURROUNDING LAND STATUS



APPENDIX 5: ADA HOMESTEAD LEASE AREA

# St James Station lease area



Legend	
<span style="color: blue;">●</span>	Water intake
<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>	Proposed boundary
<span style="color: red; border-bottom: 1px solid red; width: 10px; display: inline-block;"></span>	Existing fence
<span style="border-bottom: 1px solid pink; width: 10px; display: inline-block;"></span>	Stockyard
<span style="color: blue; border-bottom: 1px solid blue; width: 10px; display: inline-block;"></span>	Proposed Airstrip
<span style="color: red;">★</span>	GPS waypoints
<span style="border: 1px solid red; display: inline-block; width: 10px; height: 10px;"></span>	LINZ parcel boundaries


**Department of Conservation**  
*Te Papa Atawhai*  
 New Zealand Government