CASTLE HILL VILLAGE RESERVES MANAGEMENT PLAN 2019 REVIEW

DRAFT 05, 27 FEBRUARY 2019

REDUCED, UNFORMATTED VERSION FOR AGM DISCUSSION, CONTAINING SECTIONS 2, 4 & 5 ONLY,

IN ASSOCIATION WITH PLANS PROVIDED SEPARATELY AT THE AGM

This working document is a hybrid of the 2010 management plan and modifications towards a draft text for the Review.

- *Unmodified old text, yet to be reviewed, is in grey*
- *Draft new text is in black.*
- *Maps dated 2010 are unmodified from the earlier document.*
- *Maps dated 2019 have been updated*
- *Appendices are not included in this Draft*

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NOT UPDATED
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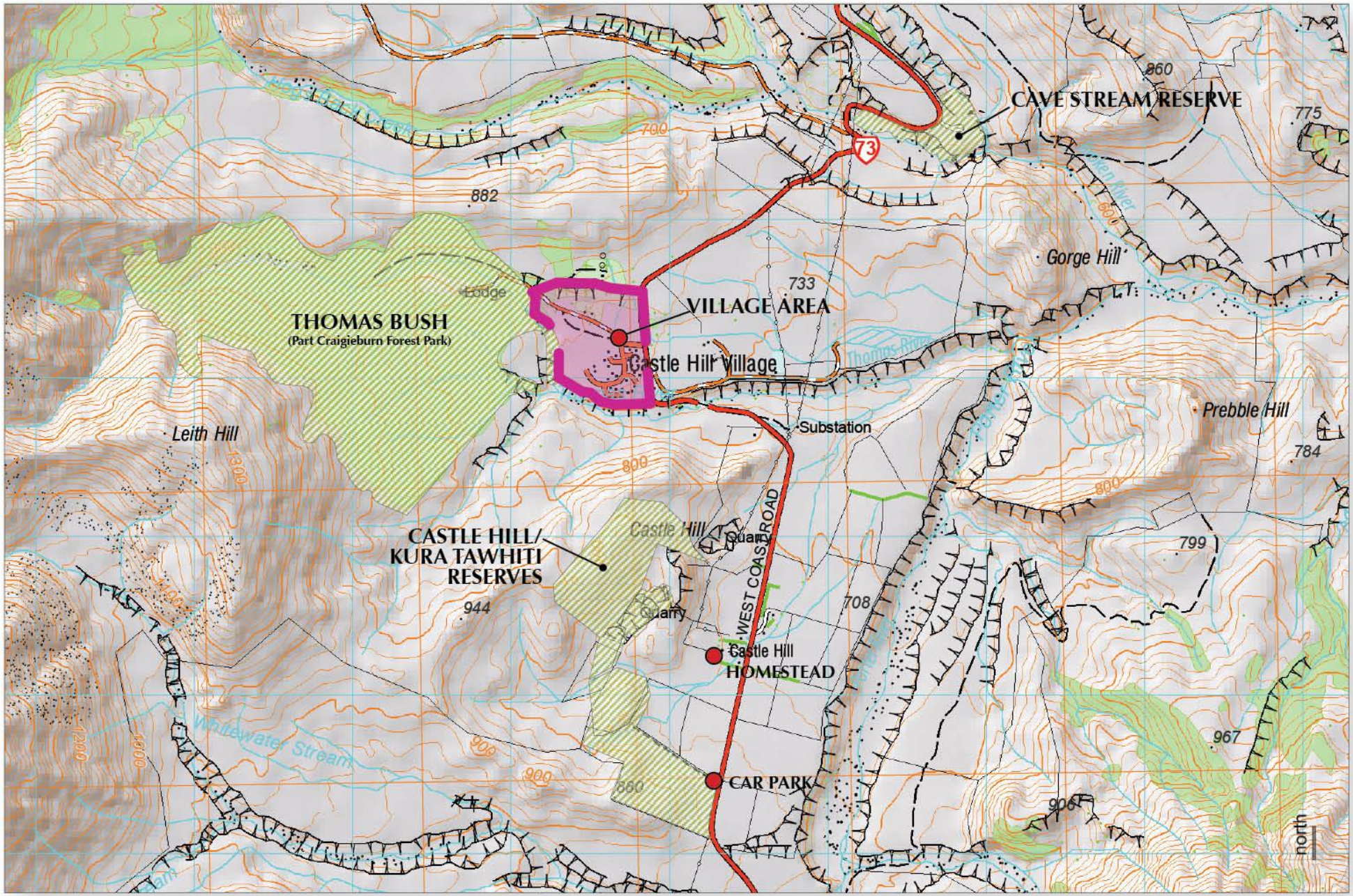
SECTIONS WILL BE SAME

SECTION 1: INTRODUCTION

OMITTED FOR AGM



MAP 1 | VILLAGE LOCATION & SURROUNDINGS

Scale: 1:40000 @ A4

2. Castle Hill Village: The Reserves Context and Resource

2.1 Castle Hill Village

Location: Castle Hill Village is located in the Upper Waimakariri Basin of Canterbury, 100km west of Christchurch on State Highway 73 and 60km east of Arthurs Pass. The village is about 2.5 kms north of the Castle Hill Station homestead and about 3kms north of the public car park at the Castle Hill/Te Kura Tawhiti Reserves. (Map 1). Its elevation is between 700 and 740 metres above sea level.

Surroundings: To the west, the Castle Hill Basin is bounded by the Craigieburn Range, with summits up to 2,100m, to the south-east by the Torlesse Range (1,950m) and to the north-east by Flock Hill (998m), with Broken Hill (1,500m) behind. The village occupies an area of gently sloping outwash terrace surrounded by the Porter and Thomas Rivers, Hogsback Creek and Cave Stream, all of which flow into Broken River north of the village.

To the south, east and north Castle Hill village is bordered by Castle Hill Station, and to the west by the Thomas Forest, an outlier of the Craigieburn Forest Park (Map 1). There are four skifields on the Craigieburn Range, Porter Heights to the south and Broken River, Cheeseman and Craigieburn to the north.

Character: The character of Castle Hill is generally alpine or more strictly, inter-montaine, derived from the basin setting, surrounding mountains, forests, grasslands and the mountain climate. This is enriched by the area's limestone features, notably the spectacular rocks of the Castle Hill/Te Kura Tawhiti Reserves, the cave and sinkholes around Cave Stream, the limestone strata of Prebble and Gorge Hills, and jumble of rocks in the aptly-named Broken River

The Castle Hill locality has historical and cultural significance from its Maori and European past, and is a popular recreation and tourist area, with landscapes offering year-round activities, such as walking, tramping, rock climbing, mountain biking, skiing, fishing and scenic appreciation.

2.2 Castle Hill Basin, Description

Geology, Topography & Soils

The Upper Waimakariri Basin is an upland area of steep 'hard rock' mountains and hills that make up the Torlesse & Craigieburn Ranges (80%), outwash fans and terraces (15%), and 'soft rock' limestone hills and features (5%). Hayward & Boffa refer to it as perhaps the best documented mountain area in the South Island, although this may have changed since 1972 (*ibid, p.4*). They also note how much the limestone areas have been a focus of scientific and recreational attention, despite their comprising such a small proportion of the Basin.

Hayward & Boffa's following description of the Basin is an apt statement of the context surrounding Castle Hill Village:

'It is a region of steep mountains, sprawling fans, smooth terraces and wide river beds. It is an area of contrasts: of rain forests and impoverished grasslands, of spectacular erosion and green paddocks, of pleasant hillside streams and raging mountain torrents.' (ibid p.4).

In the Village area specifically, the landforms consist of two main glacial outwash terraces that were later cut by the eroding action of the Thomas River on the south and west of the Village.

The soils of the Village consist of early Tertiary sediments including siltstone, sandstone, conglomerate, and high country yellow brown earths, overlain in places by deposits of glacial outwash. The two soil types covering the area of the Village are the "Cass" and "Craigieburn" types.[1] These soils would have originally covered the Village at depths of between 300 mm – 600 mm over gravels, and were friable, porous, low in clay and sandy in texture. These characteristics have been modified by construction of the Village since the early 1980s but continue to comprise the basic ground surface of the village reserves.

[1] Hayward and Boffa (1972), p67

Climate

The Castle Hill climate is characteristic of an intermontane basin, with warm summers and cool winters. Winds are predominantly from the northwest but colder southerly winds also occur. These can on occasions be strong, gusty and damaging. Burrows and Wilson characterise it as

> *'The mountain weather is very changeable, alternating between strong westerly cyclonic airflow, with rainfall along the Main Divide and some distance eastward, and cold southerly airflow bringing precipitation to the eastern foothills.'*[2]

Anticyclonic calm or easterly winds can bring warm days in summer and cold nights with frost in winter.

Annual precipitation is around 900mm at Castle Hill, and annual sunshine 1700 hours[3]. Snowfalls are common in the winter, clothing the upper mountains all season but rarely lying more than a few days or up to a week in the village. Frosts in the Village occur on average on more than 100 days annually with severe frosts down to minus 12^{o} C recorded.

The predominantly tree clad reserves of the Village play an important part in sheltering houses from the buffeting winds, ameliorating frosts, and retaining snow in shaded areas for snow-based recreation.

[2] Burrows and Wilson 'Vegetation of the Mountains' in Winterbourn et al *The Natural History of Canterbury'*, p. 287

[3] LINZ (2002), p11

Vegetation

The vegetation of lower slopes in the Upper Waimakariri Basin is stated in areas of less than 1,000mm rainfall to comprise largely mountain beech forest, the canopy density suppressing other species except possibly a few Coprosma.[4] Molloy[5] proposed that before human occupation, all but the alpine summits, open riverbeds and small areas of valley floor supported beech forest. Burrows[6] earlier considered that mountain totara and mixed hardwood forest were probably also minor elements. Following human occupation, beginning about 1300AD, the forests were progressively burned, to be replaced in part with grasslands.

Beginning in 1858 the site was grazed as part of the Castle Hill Run, then Station, so that by the 1980's, when development of the Village began, the site had long been covered with modified short tussock and open grassland amidst surrounds of exotic conifer and larch originating from the original Enys Homestead site.

The Castle Hill Basin is botanically important as the home for a number of rare plants, particularly in the limestone areas surrounding the Village. The area also is the 'type locality' for several indigenous plant species, meaning that these species were first described at Castle Hill and that other plants with the same name from anywhere in New Zealand must be able to be

[4] Burrows and Wilson, p.301

[5] Molloy, B.P.J. (1977). The Fire History in "Cass: History and Science in the Cass District, Canterbury, New Zealand" University of Canterbury, ChCh. p157-171

[6] Burrows, C.J. (1960). "Recent changes in vegetation of the Cass area of Canterbury" NZ Geographer p16; 57-70

referred to a specific plant specimen from this area. None of these are however in the village or its reserves. Appendix 4 lists the rare plants found in the Basin.

2.3 Castle Hill Basin, History

The Village is close to the group of scenic, cultural and scientific reserves containing limestone features, a conservation area and the Statutory Acknowledgement Area of Castle Hill/*Kura Tawhiti*. Archaeological, traditional and published records indicate the area was important from the *Waitaha* to the *Ngai Tahu* periods of Maori history.

A memorial in Cathedral Square, Christchurch states that Canterbury was occupied from about 850AD until 1505 by the *Hawea/Rapuwai/Waitaha* confederation, then from 1505-1675 by *Ngāti Mamoe* and from 1675-1837 by *Ngai Tahu*. These dates are likely to also apply to the Castle Hill area in, with small variations.

Waitaha: Histories[7] indicate that Waitaha called the Castle Hill area *'te Kohanga'* or 'birthplace of the Gods'. At this time the area of the limestone rocks was of prominence as an astronomical 'observatory' for predicting the coming seasons, which was crucial for kumara cultivation. In summer a considerable population migrated from the coast and supported this role, living in marae within and adjacent to the rocks. In spring, kumara were brought in pots from the lowlands.

The limestone geology was sacred to Waitaha due to the eons of creatures whose remains had built up the rock since the beginnings of time. They were seen as ancestors in the chain of life. Prominent leaders were buried in this vicinity, including *Rakaihautu* the primary occupant who first explored and occupied the South Island about 850AD.

Ngai Tahu[8]: The Ngai Tahu name *Kura Tāwhiti* means "treasure from a distant land". Kura Tāwhiti was one of the mountains claimed by the ancestor, *Tane Tiki*, for his daughter *Hine Mihi*. He wanted feathers from the kākāpō taken from this area to make a cloak for her.

The area was used by Ngāi Tahu for *mahinga kai*. They collected *kiore* (Polynesian rat), *tuna* (eel), *kākāpo, weka, kiwi, kākā* and kererū. Kura Tāwhiti was within a network of trails and temporary campsites used for seasonal journeys in gathering such *kai*. Knowledge of these trails is held by whānau and hapū and is regarded as taonga.

Expeditions were also undertaken for other purposes, notably:

- *Ahikāroa* – keeping cooking fires burning on the land;
- *Mātauranga* – handing down knowledge of practices and methods;
- *Kōrero pūrākau* – telling the associated traditional stories;
- *Hīkoi rohe* – passing on familiarity with tribal and hapū trails and boundaries.

Ancient rock art remnants on the outcrops of *Kura Tāwhiti* are particular *taonga*. The outcrops provided shelter and temporary camping places and aspects of the occupants' lives and beliefs are recorded here. These outcrops and their rock art have *tapu* status for *Ngāi Tahu."*[9]

[7] *'Song of Waitaha the Histories of a Nation'* Ngatapuwai Trust, ChCh 1994

[8] From Department of Conservation Website *www.doc.govt.nz/Community/005~Conservation-and-Maori/Topuni/060~Kura-Tawhiti.asp*

[9] Ibid

Statutory Acknowledgement Area: In 1998 an area of the Castle Hill reserves was designated as *Topuni* under the Ngai Tahu Claims Settlement Act, to ensure that the values Ngai Tahu place on this area are recognised, acknowledged and respected. These are 3 kms from the Village, and while central to the character of Castle Hill, have no specific implications for the reserves that are the subject of this Management Plan.

European: The first European to visit the Upper Waimakariri Basin, with Maori guides, was Joseph Pearson, in 1857. Grazing runs were occupied soon after at Castle Hill and Craigieburn (now Flock Hill), and the first bridle track over Porter's Pass was made in 1858-59. In the Castle Hill vicinity this followed the east side of the Porter River and did not directly pass today's Village site (see Map 1).

Castle Hill and Craigieburn stations remained isolated until 1865, when a coach road was constructed from Christchurch to the West Coast via Arthurs Pass. This road, known as **'the Bealey Road',** was intended to access the West Coast goldfields, and established the route still followed by State Highway 73 today, passing the eastern boundary of today's Village. In 1866 the first Cobb & Co stage coaches connected Christchurch with Hokitika.

Castle Hill Station was farmed by the Porter brothers from 1858 to 1864, their accommodation being on the Porter River. John and Charles Enys took over the run in 1864 and in 1865 built a homestead called *Trelissick* on a site on the north side today's Village (area (v) on Appendix 1(b)). Trelissick was the name of the Enys family property in Cornwall. The site today is owned by the Brittan family although the house no longer exists.

In 1871 an accommodation house called the **Castle Hill Hotel,** servicing the coaches, was built on the Bealey Road (SH73) immediately opposite the entrance to today's village (see Map 2):

"Fred Harris …in 1871… built a new accommodation house opposite the present Castle Hill Village, and was succeeded by Thomas Douglas. In 1881 W J Cloudsley, who had been manager at Cass, began a 14-year tenure, which included adding a second storey to the building. The coal supply for the hotel was from a seam close by on the banks of the Porter River. In 1903 the Castle Hill Hotel had 20 rooms and had become a popular place for visitors wanting a holiday with plenty of scenery and fresh air, huge log fires and Mrs Cloudsley's famous scones… The stone for the hotel came from blocks 2km from the site and assembled by a stonemason named Davies. The hotel was gutted by fire on September 17, 1904, and never re-established[10]

In 1917 The Upper Waimakariri runs were reorganized, the former Craigieburn Run becoming Flock Hill in the west, occupying the site of the earlier Craigieburn homestead, and the new Craigieburn in the east, on the now-opened Midland Railway line. Castle Hill remained unchanged but xx Milliken shifted the Trelissick house to Flock Hill, the Castle Hill homestead being by then re-established at its present location on SH73. [11]

2.4 Village Description

Boundaries: 'Castle Hill Village' is defined as the area of urban zoning (L1A and B1A), comprising developed residential sections, roads, reserves and vacant residential and commercial land, between Enys Drive in the north, State Highway 73 in the east, the Thomas River embankment in the south, and the Thomas Bush in the west (see Maps 2 and 4). This is one of few areas of freehold residential land in the Waimakariri Basin.

The urban zones include (Maps 2 – 6 refer);

[10] R. Logan, 1987, "*Waimakariri"* p77.

[11] Jenny Abrahamson *John and Charles Enys, Castle Hill Runholders 1864 – 1891*, p209

(i) developed and vacant sections of the original village, on either side of Trelissick Loop (stages 1 & 2);

(ii) a 2006 westwards extension of new sections along Trelissick Loop (stages 3 & 4);

(iii) a 2015 extension of sections westwards along Castle Hill Drive (stages 5 & 6);

(iv) Two lots totalling 4ha west of Stages 5 & 6, one with a small house; and

(v) land north of Castle Hill Drive, some of which is consented for residential development currently under formation, some zoned Business 1A and some in the Enys Homestead area

(vi) zoned 'High Country 'Forestry Exclusion'; (v).

North-west of the urban zone, Map 4A shows an area of 'Forestry Exclusion Zone', comprising mature exotic trees and a single holiday house. This was the site of the Enys homestead, ('Trelissick'), previously referred to. This area does not come within the jurisdiction of the Reserves Management Plan.

State of Development: Until 2008, the developed village comprised only Stages 1 & 2 (Map 3). Since then Stages 3 – 6 have been developed and occupied and by September 2018 these areas contained 133 houses, approximately 10% being permanently occupied and the balance holiday homes. A proportion of owners rent their homes for overnight or longer stays, most demand coming from recreation users and holiday makers from Canterbury and the central West Coast. The Village also attracts day visitors and travellers from SH 73, often as a toilet stop.

As well as the houses, the village also contains approximately 90 vacant sections within stages 1 - 6. Possibly 15 or 20 of these will not see houses built in the foreseeable future, either because an existing house straddles two lots (in 4 cases), or because the lot is owned and kept vacant by an adjacent owner to protect outlook from their house (perhaps 15 sites). Others no doubt are held as a 'land bank'.

Stage 7: at the time of writing, land formation is underway for village development north of Castle Hill Drive. This occupies the area shown as Stage 7 on Map 3, plus the remainnig residential and commercially areas north of Castle Hill Drive. The approved plans for these areas provide for 107 residential sections, 7 commercial sections and new areas of reserve. This will be the first commercial area at Castle Hill. Currently, no lots in Stage 7 are built on.

In the next 10 years further growth in house numbers and reserves usage is certain.

Usage: The numbers of people present in the Village has a distinctly episodic pattern, with peak usage during weekends, school holidays and major statutory holiday weekends. This continues through both summer and winter, with different activities such as mountain biking and skiing available according to the season.

District Plan: The Selwyn District Plan shows xx ha of land zoned residential (L1A) and Commercial (B1A) at Castle Hill Village. This comprises**:**

Residential	(Stages 1 – 2)	6.4 ha	
	(Stages 3 – 6)		
	(Stage 7)		
	TOTAL		xx ha
Reserves	(Stages 1 – 2)	3.8	
	(Stages 3 – 6)		
	(Stage 7)		
	TOTAL		
Commercial (Stage 7)			11.8
Roads			6.2
Total			**36.5**

The District Plan shows no Heritage Buildings, Protected Trees or Scheduled Sites within Castle Hill Village, and also no Statutory Acknowledgement or Wāhi Taonga Management Sites. Nor are any Archaeological sites registered within the Village on the New Zealand Archaeological Assessment Site Record File. Two Designations are shown immediately adjacent to the Village. SDC 136 and SDC 138, in the north near Enys Drive. These are provide for the village water supply pipeline and reservoir. (See Appendix 1B, Plan 050 Sheet 1).

The District Plan classifies the rural land south and west of the village as ‘Outstanding Landscape’ and that to the north and east, including the old Enys site, as ‘High Country, Forestry Exclusion’ zone (Map 4A). The difference is that the latter can comprise developed pastureland, but not forestry land, while the former may comprise only undeveloped grazing land.

East of the village, on the opposite side of SH73, consent has been granted for a golf course and houses, and development is in progress.

Of importance to this Management Plan is the close interrelationship of the village reserves and residential environments. Also with the recreation activities, limestone areas, scenic reserves, climate, views and with the unique alpine setting of the surrounding locality.

MAP 2 | CASTLE HILL VILLAGE AIRPHOTO

Scale: 1:4500 @ A4

VOID

VOID

VOID

2.6 Village Development Concept

The land now comprising the Village remained lightly-developed grazing land from the 1860's until the 1970's. A concept for a village was developed by John Reid/Castle Hill Run Ltd in 1971, to be located among the rocks now comprising the Te Kura Tawhiti Reserve. Following hearings, the application for that village was declined, and the Tussock Grasslands and Mountain Lands Institute then prepared a report identifying the current site as suitable for a village.[12] Based on this site, new hearings were held in 1979, and approval for today's village granted in 1980. Stages 1 and 2 of the Village, containing 130 sections, were completed in 1984 and the first houses occupied in 1985.

The Council's 1979 Hearing Records contain evidence presented on the planning and landscape intentions for the Village and its reserves, upon which approvals were based. Important among these, as background to this RMP, are:

- *The Village was designed as a development to accommodate up to 1,400 persons overnight (400 houses and other accommodation units);*
- *Final approval for the Village provided for an area of 6.46 ha of "public space" out of the total area of 36 ha;*
- *The overall landscape design concept will be based on identifiable clusters of housing set amongst open space defined principally by trees, drifts of shrubs and grassland";*
- *It was recognised that individual sections would be small, but this would be balanced by generous space provisions in the large reserve areas;*
- *"Tree planting throughout the residential area will have a larch/ pine/ beech theme and it is envisaged that a dense forest-like intermix of the three species will be planted throughout the accommodation and reserve area. Houses, roads and access ways will be cut out of the base plantings as and when required."*[13]

The reserves thus were created to form a continuous belt of open space throughout the village, and comprising its structural, environmental and recreational 'backbone'. The village also was intended as a place of distinctive character, adapted to the alpine setting. This regrettably has not been upheld by the Council or the District Plan, which has applied its standard urban-based provisions to the layout and reserves of the most recent extension to the village (Stage 7). It also has preferred reserves contributions to be paid into general Council funds, rather than the provision of distinctive reserves and alpine patterns originally consented. The Plan does however require 'alpine' house styles, which while generally successful, have not been enforced in several cases.

2.7 Village Vegetation

Before Development: At the time the village was established in the early 1980's, the site vegetation comprised:

- *lightly-improved short tussock grazing land of Castle Hill Station. The tussock is now gone but is represented today by various matagouri remnants within the village and reserves.*
- *extensive native beech stands to the west along the Thomas River and in the Thomas Bush. These remain and form a source for the vegetation pattern of today's village.*
- *Mature European Larch, Douglas fir and various pine on the Enys land and Long Spur to the north. These bestow valuable wind shelter, large scale and the autumn colour favoured by many, but also have been a source of the village wilding problems (see s.xx).*

[12] Hayward. J A. & Boffa. E D. *"Recreation in the Waimakariri Basin*" Lincoln Papers in Resource Management No 3 –1972, for Tussock Grasslands and Mountains Lands Institute, published by the Lincoln College Press (1972).

[13] Jackman. A E, 1979. Landscape architectural evidence at the planning consent hearings

Planned Village Planting: Tree plantings throughout the residential area, streets and reserves were envisaged by the planners as integral to the alpine character of Castle Hill Village. Evidence to the planning consent hearings in 1979 stated:

- *The "overall landscape design concept will be based on identifiable clusters of housing set amongst open space defined principally by trees, drifts of shrubs and grassland"*[14]
- *"Tree planting throughout the residential area will have a larch/ pine/ beech theme and it is envisaged that a dense forest-like intermix of the three species will be planted throughout the accommodation and reserve area. Houses roads and access ways will be cut out of the base plantings as and when required."*[15]

The *proposed tree planting was detailed as follows:*

"It is proposed that tree planting be initiated early on in the development. The plantings will be based on forestry techniques and generally spacings will be at 2 metre centres. The overall distribution and density of species will be related to land use, and in addition to the species density will be an identity feature in the development. The following species list is proposed as the basic framework for the site planting:

'Group One:

- *Betula* species - Birch
- *Larix* species - Common larch
- *Larix leptolepis* - Japanese larch

'These deciduous trees will form the principal theme species and they will make up approximately 50% of the total planting. Many self-seeded larch define the northern escarpment of the site. It is anticipated that once planting gets under way and stock are excluded from the site further seedlings within the proposed planting areas will occur.

'Group Two:

- *Chamaecyparis lawsoniana* - Lawsons cypress
- *Pinus ponderosa* - Ponderosa pine
- *Pinus sylvestris* - Scotch pine
- *Sequoia sempervirens* - Redwood
- *Tsuga Canadensis* - Hemlock spruce

'These conifer species would make up approximately 20% of the overall planting. Once the framework planting is established other accent species including deciduous species would be utilised.

- '*Pseudotsuga* menziesii - Oregon pine

'This species would represent approximately 10% of the total planting, thus bringing the total density of coniferous species to 30%'

Group Three:

- *Nothofagus* solandrii var Cliffortoides - NZ Mountain beech

'This native species is found growing along the Thomas River escarpment and in the remnant forests of the basin. It would be used extensively and would eventually make up a significant portion of the planting, however, this planting would not be carried out until sufficient shelter has been provided by the other tree species.'

Group Four:

'In addition to the above species it is envisaged that accent plantings of other species would be introduced as the framework planting was thinned/ or as a suitable microclimate was established. Shrub species would be utilised as barriers, boundary definition or as a general understorey planting. About the village area, public parking areas, the lake and hotel facilities more detailed planting proposals would be developed."[16]

[14] Jackman. A E, (1979). Landscape architectural evidence at the planning consent hearings

[15] Ibid

[16] Jackman. A E, 1979. Landscape architectural evidence at the planning consent hearings

Approved Planting: Planning consent for the village, granted by the Malvern County Council in 1979, contained the following conditions relating to landscaping and planting:

"7. That all landscaping be in close accord with the Landscape Concept Plan included in the application. Prior to the commencement of any works a Landscape Management Plan identifying species location, density and maintenance programme proposed shall be submitted for approval of the County Engineer. Approval of such plan shall constitute the plan as an essential condition of this approval. On the perimeter of the development (other than the specific proposals included in the application for the state highway boundary) planting shall generally be more dense. An estimate of the cost of the landscaping proposals shall be provided, and a satisfactory bond provided to cover the work."

"16. No tree shall be topped, in any circumstances, and no tree otherwise damaged or removed unless absolutely essential, and where it is essential to remove a tree it shall be replaced by another one or more trees in the approximate locality. The authorisation of the County Engineer shall be obtained before any tree over 1.5m in height is removed"[17]

Initial Plantings: After the granting of consent, Castle Hill Run Ltd duly provided the required plan and planting schedule (reproduced as Map 6 herein). The Council actively monitored planting and in July 1986 served notice on the developer that unless landscape planting was completed it would carry out the works itself and deduct the costs from the bonds held.

In 1987 the Council engaged the Ministry of Forestry (MoF) to report on the "amenity plantings". MoF reported that there were approximately 770 living trees out of the original 6070 trees specified. Extensive weed control, additional interplanting and fertilizer application was recommended. It is noted that the schedule in Map 6 provided for 2,418 trees.

It is noted from Map 6 that heavy planting was proposed along the street verges, and that in the reserves most trees were along the south sides, where they would cast maximum shade on neighbours. It also is noted that early residents frequently experienced alarming winds, sleepless nights and damager to their new houses.

State of Trees by 2010: After 25 years growth, the 2010 Reserves Management Plan had the following to say about trees in the village:

the initial tree plantings have matured and radically transformed the village from open grassland to a coniferous alpine forest setting. Trees have grown in reserves, street berms and private sections to an extent that progressive thinning has been necessary over the last 10 years. In many cases this was due to overshadowing or too close proximity to houses. Some species have not thrived in the conditions while others have been prone to wilding spread. Some individual trees have been damaged by winds or unauthorised human 'surgery'. Many probably originated as wildings rather than the original formal plantings

The following is a summary of the main species found:

[17] Malvern County Council, 6 April 1979, Extracts from the 6 page Resolution of the Council relating to the approval of the "Resort Village".

Lodgepole Pine *(Pinus contorta):*
Western Yellow Pine *(Pinus ponderosa):.*
Eastern White Pine, Weymouth Pine *(Pinus strobus):*
European Larch (Larix decidua):
Douglas Fir *(Pseudotsuga menziesii):*
Redwood, Wellingtonia *(Sequoiadendron giganteum):*
Mountain Beech *(Nothofagus solandri var cliffortioides):*
Silver Birch *(Betula pendula):*

Eucalypts: Small numbers of cold-tolerant mountain eucalypts, including some rare species: *Eucalyptus perriniana, E.gunnii, E.dalrympleana and E.delegatensis.*

Other trees noted in 2010 from the original planting schedule are
Red Alder *(Alnus rubra),* which is not in the reserves but on some private sections;
Lawsons Cypress *(Chamaecyparis lawsoniana),* which appears to grow well on 'Enys' at this altitude;
Scots Pine *(Pinus sylvestris),* which has wilding tendencies and should be avoided;
Japanese Larch (Larix leptolepsis), which is not known to have survived at Castle Hill, if ever planted

Village Trees in 2018: The 2010 Reserves Management Plan took first steps towards management of the tree asset as it had developed. Probably, only a minority of the required plantings were in fact carried out after 1986, many trees either not having been planted or not surviving. However by 2010 the village and undeveloped land to the west had heavy stands of larch, Douglas fir and pines. Large proportions of these were wildings, self-seeded from trees to the north-west.

There was therefore not the planned range of species, particularly the Group 3 native beech, and many trees were in unsuitable locations. However village working bees had, with Committee consent, steadily planted beech and non-wilding conifers in the north-east Central Reserve, east of the hall.

Being free-seeding, the wildings all are on a list of pest species developed by ECAN in 20xx (see Appendix x). Others had attained a size where they shaded houses or blocked views. In the absence of firm plans, residents routinely resorted to the illegal removal and topping of trees and the self-initiated planting of beech, not necessarily in locations approved by the Committee.

The 2010 Reserves Management Plan and the Committee began the process of addressing these issues and a major aim of this 2019 Review is to develop these beginnings to an agreed and orderly system of tree management in Castle Hill Village

Shrub Plantings: In contrast to the trees, the native shrub remnants, notably *matagouri*, and plantings, notably *Hebe* and *Pittosporum*, have proven resilient throughout in the village, although in less numbers. *Matagouri* struggle through competition with weeds and shrub areas generally are not all consistently located to best advantage.

2017-18 Developments: At Labour Weekend **2017** the Committee in cooperation with the Council organized a major removal exercise of wildings, mainly *Pinus contorta*, from the north-west Central Reserve (west of the tennis courts), followed by a well-attended village planting bee. 277 replacement trees were planted, staked and predator shielded, and an irrigation system installed. At that time about 20 mature contorta were retained at the windward corner to provide shelter for 2 – 4 years, then to be removed. The survival rate of the new plantings has been over 95% thanks to the irrigation and volunteer weed removals, notably broom. Although bare for the time being, the north-west of the central reserve is now on the way to a more stable long-term treed state.

In October **2018** the Committee took the bold decision to clear-fell all remaining contorta in the Central Reserve, in order to comply with the Regional Pest Management Strategy as regards the most virulent wilding source. Over 100 contorta were removed from the Central Reserve, north and north-east of the hall, and including those retained in 2017. About a dozen larch were retained. It was however decided not to replant the cleared area this season due to the pending construction by the Council of a public toilet within the area, and also, to difficulties in organising the working bee at that time. The area is startlingly bare but also a reminder of how virulent the contorta have been in colonising the village over the last 25 years. Although a season will have been lost, the area will be replanted in 2019.

Regional Pest Management Strategy: This Environment Canterbury strategy addresses among other things, the widespread problem of wilding spread in rural Canterbury. The strategy document is attached as Appendix x of this Review. Regional and central government, and private, initiatives on wilding control have gained momentum in the last 5 years and is relevant to the village reserves firstly because of the increased action, and secondly because significant numbers of their prominent and liked trees are classified as 'pests' in the Strategy. Their complete removal would decimate the village plantings numerically, and also radically change the alpine character which has developed.

Accordingly, the Committee has undertaken to remove all contorta, as the most problematic species, and retain all others with the intention of managing wildings within the village through regular monitoring and maintenance, and those on neighbouring land, where they originate from the village, through a 'good neighbour' policy of co-operating with those owners on removal. This issue is discussed further in s.4 'vision' and s.5 'Objectives, Policies and Actions'

Public Preferences: Along with the unsuitability of some trees, a divisive polarity has developed between residents who wish to see more or solely native plantings in the village, and those who wish to maintain the exotic and conifer character along with native plantings. This sadly has led to individuals taking action against trees on public land, in some cases against unsuitable or problematic trees, but in others, according to personal preferences rather than Committee approvals. There also has been a random establishment of native plants on public land, generally beech and tussock, not necessarily in suitable places.

In response, the Village Committee have established a system of tree removals requests and also, in preparation for this Management Plan, in 2018 conducted a survey of preferences among village households.

Regarding **removal requests**, the Committee have tried to distinguish between those involving problem trees and those involving preferences for different tree species. Also between trees that genuinely are unstable and those that cause anxiety in those living near them.

The property owners **survey** report is attached in full as Appendix x of this Management Plan. In summary, it elicited 104 responses from the then 133 households, although some may be from owners of the then 90 vacant sections. Only one response per household was accepted. The main findings were:

1. The Council should maximise the areas of reserve land? (92% yes, 3% no);
2. Do you prefer the original developer's vision for trees in the village, or something different? (Appendix x contains the vision): 40% original, 57% different;
3. Would you like to see the larch trees stay, go, or reduce in number? (45% stay, 17% go, 38% reduce);

4. Would you like to see the Douglas fir trees stay, go, or reduce in number? (32% stay, 26% go, 38% reduce);
5. Would you like a Good Neighbour Rule incorporated into the Reserves Management Plan, requiring management of larch and Douglas fir wilding spread on reserves? (Yes 83%, no 15%);
6. If larch and Douglas fir were retained in reserves, would you be willing to take part in wilding control activities outside the village boundary? (Yes 64%, no 35%);
7. Which of the following scenarios would you prefer in the village reserves?

   (a). maintain current mix of natives/exotics (contorta replaced by indigenous and non-seeding exotics)? (40%)

   (b). immediate removal all exotic trees from reserves and replace with indigenous? (3%)

   (c). identify & retain existing exotic landmark trees and clusters, managed for wilding containment, and increase indigenous plantings? (33%)

   (d). transition to only indigenous vegetation over next 10 years? (19%)

   (e). None of the above (4%).

8. In decreasing order, the following are important *(number stated is out of 5, 5 being 'extremely important):*

   (a). Choose the locations for landmark trees: (4);

   (b). Define reasonable access to winter sun: (3.75)

   (c). Adopt some form of Recession Plane Rule for trees: (3.5);

   (d). Encourage 'Adopt-a-Reserve' management: (3.25);

   (e). Use deciduous vs evergreen trees: (3.20).

9. There has been good participation in weed and wilding control activities in the past (75% active vs 22% not), moderate participation in planting days (42% active, 55% not), but less take up of 'adopt-a-reserve' so far (20% take up vs 80% not).

The Committee has placed importance in these results as a guide to the tree policies in this Review.

Management principles: The following tree management principles are taken from this survey:

- With the proviso of removing all *contorta* and managing other wildings, a mix of exotic and native trees is preferred, with an increase in the proportion of native, especially beech, and other natives to be detailed;
- Future changes (removals/replacements) should be progressive over 5 – 10 years, not sudden;
- A proportion of Larch should be maintained;
- Douglas fir should be maintained in defined, agreed Landmark areas;
- The Council should seek to comply with the Regional Pest Management Strategy by immediately removing all *contorta*, maintaining a wilding removals programme within the village, and through a 'Good Neighbour' policy which agrees to control future wilding growth on neighbouring land where it originates from within the village;
- Areas for Landmark Trees should be defined in the Reserves Management Plan;
- The Reserves Management Plan should contain a definition of recession planes relating to the shading of houses by reserves trees, and of access to winter sun;

- Many village residents are generally willing to support periodic working bees as a means of maintenance and development, but appear wary of a greater commitment, at least until the adopt-a-reserve scheme may prove itself.

The Costs and Benefits of Trees in The Village: The growth of trees and shrubs in the village since 1984, planned and unplanned, has had both positive and adverse impacts on the surroundings. This section seeks to identify costs and benefits that should be avoided or promoted in the Reserves Management Plan.

A: Positive Impacts:

- **Aesthetics:** The mix of cold tolerant exotic and indigenous alpine trees is one of the unique features of the Village. Combined with the built character arising from the District Plan Rules, the trees create the alpine aesthetic. They soften and partially hide the buildings and create a setting distinctively different from urban and lowland Canterbury. Trees create winter character when snow or frost covered, deciduous, or looming against fog or low cloud. Larch add particularly vivid seasonal colours in the cold climate.
- **Shelter:** Tree growth has dramatically reduced the wind damage suffered in the early years of the Village. Residents who built in the first 5 years have vivid stories of buffeting and damage to partly-constructed buildings, and even the difficulty of lighting a log burner during strong winds, because of down-draughts. The benefit from this aspect of the tree environment in the Village cannot be overstated.
- **Frost and Snow Retention:** Another asset of trees to the Village is the retention of snow and frosted areas creating a winter playground for tobogganing, slides, learning to ski, building of snow structures and snow fights, all part of the alpine experience.
- **Bird Life:** A significant environmental amenity of the Village is the quality of its bird life, particularly the presence of native birds with their distinctive bird song. Trees are essential to providing habitat for birds throughout the Village, noting that native birds are equally attracted to the flowers and seeds of exotic trees as to those of native trees. (See Section 2.4, p.22 above).
- **Recreation & Play:** The Village provides opportunities for safe, unsupervised outdoor play by children, something which is often seen around the Village. Tree areas in the public reserves provide opportunities for children's imaginative games and simple constructions such as tree huts, forts or 'mud pies'.

B: Negative Impacts:

- **Frosting and Blocking of Sun:** Trees, particularly those on the north side of dwellings, can cause undesirable shading of houses. Many tree removals have already been undertaken for this reason, but as trees grow taller and more houses are built, further shading of houses can be expected. Many residents are relaxed about partial shading as evidenced by the number of trees on private properties. These often are carefully considered in relation to windows and the house generally, bearing in mind the beneficial shading and cooling also to be gained in summer. Blocking of sun, particularly low angle winter sun, can be mitigated to some extent by thinning and pruning of trees. The mixing of deciduous trees in Reserve plantings can assist and also the planting of smaller trees. The initial tree proposals for the village envisaged a process of removals and replanting as the tree mass matured. A principle to be taken up in Section

4 is that of dynamic tree maintenance, as trees mature and are replaced. This management review also seeks to identify problem areas through public consultation and define shading recession planes where necessary.

- **Obstruction of Views:** Trees, together with surrounding houses, can obstruct the vivid mountain views the village offers. This is a very diverse issue, considering the range of viewpoints and view directions that exist throughout the village. It was not the original intention to have unobstructed views in all directions from any house, but rather to establish a balance between openness and enclosure while retaining reasonable outlook, and avoiding claustrophobia. The difficulty for planning is that as well as the complexity of views, people's preferences for or against trees are widely divergent and subjective. To date, thinning and selective removal of reserve and street trees has sought to maintain identified views, on a case by case basis. The retaining of views can be achieved to some extent by pruning the lower branches of trees ('limbing up'), and including deciduous trees for winter views. Through consultation, this management review seeks to establish the agreed view corridors and tree areas shown on the plans in Section 4.
- **Wind Damage:** Compared with earlier years before the growth of trees in the Village, winds are now generally reduced in intensity, but scope remains for tree groups to funnel winds and cause localised damage. In exposed areas, thinning tree crowns and pruning lower branches will allow stands to have a wind filtering effect, allowing some wind penetration while lessening wind speeds.
- **Tree Damage to Buildings:** This has not been an issue to date, but potential exists in occasional very high winds for trees to topple or large branches to blow out and damage dwellings. Damage is most likely to occur from north-west winds and from species that are not wind-firm, but risk assessments should be based on technical inspections not emotive fears, although these latter may trigger a request for an inspection. Where potential danger may exist, this management review proposes periodic stability assessments by the Council arborist.
- **Fire:** This also has not been an issue to date but the potential exists for loss of buildings, infrastructure or lives if fire were to gain hold within the reserves or private trees. Fire could originate from natural occurrence such as lightning, accident, carelessness, or malicious acts. It could spread from grass into tree crowns and thereby into residential areas. Several protections should be taken minimise this risk:
  - limit the spread of any fire by physically separating tree groupings with firebreaks;
  - avoiding fire-accelerant species and planting fire-retardant species at fire breaks and near houses;
  - regularly clearing flammable grass and underbrush;
  - maintaining efficient volunteer fire skills, so any outbreak is quickly limited; and
  - maintaining fire awareness among owners and visitors.

  Fire-related measures are proposed in Section 4.
- **Wildings:** The spread of wilding trees is a significant issue for the village and the wider Castle Hill – Craigieburn - Flock Hill area generally. The village tree resource as it existed 10 years ago probably owed as much to wilding growth as plantings. During the lifetime of the existing Reserves Management Plan, i.e. since 2010, Environment Canterbury have published their Regional Pest Management Strategy and they, DOC and property owners begun strong action throughout Canterbury, and including the Upper Waimakariri Basin, on wilding clearance. The ECAN list of pest species is attached as Appendix X.

In the village reserves, the Committee have removed all *Pinus contorta*, the most free-seeding wilding, but in the interim are seeking to retain less-virulent wilding-prone trees, notably larch and Douglas Fir, for their positive attributes. To this end a 'Good Neighbour' policy is proposed, whereby the Committee undertakes to remove wildings from the village and neighbouring land, where these are proven to originate from the village reserves. Periodic inspections of the village reserves will be scheduled, and new seedlings removed. As not all wilding sources are within the reserves it will be necessary to continue these for the foreseeable future. Additionally, no new plantings of species on the ECAN list will occur.

Recent Management of Trees in Reserves

Tree Removal Requests: The procedure for tree removals from Reserves in recent years has been as follows:

- *A person wanting trees removed from a reserve or street puts a request to the CHCA in writing.*
- *The Reserves Committee considers the request (including consultation with neighbours) and puts their recommendation to the CHCA main committee for endorsement.*
- *The main Committee then notifies Selwyn District Council of their decision, for SDC to confirm it is in line with Council requirements.*
- *Following approval, the applicant, Committee members and certified residents provide the labour to remove approved trees. Generally, 50% of any felled wood is donated as firewood for the Village hall, and the balance shared between those providing labour.*

Removal requests mostly concern shading or the blocking of views and the general approach of the CHCA has been the creating of smaller clumps or 'wedges' of trees with "view corridors" between, rather than clear cutting of whole stands. Other responses have been to prune side branches up to (say) a third of tree height in some stands. Topping of conifers is not accepted as they do now regrow. Preference is normally given to clearing *Pinus contorta* trees first, with Douglas fir, ponderosa pines and larch generally retained for longer term growth and later thinning, unless in unsuitable locations regarding houses. Where replacements may be required, these have generally been mountain beech, depending on the location. Not all requests are approved and some have been controversial, because of the diversity of views in the village.

2017 & 18 Plantings: In the last two years the Committee has undertaken clearance of all *Pinus contorta* from all village reserves, and at Labour Weekend 2017 conducted a working bee to replant the north-west part of the Main Reserve, around the tennis court. XX contorta and other trees were removed and in 2017 new xx trees planted, all work funded by the Council. No replanting took place in 2018 because of the planned construction of a toilet block near the village hall, but will take place once that disruption is past. A list of the 2017 and planned 2018 species planted is found in Figure x.

2.8 Birdlife in the Village

The Castle Hill area is an important habitat for a wide number of bird species. Features of the village are the relative abundance of birds, the loud "dawn chorus", and the frequency with which birdsong is heard generally throughout the day. The Reserves of the Village and the trees generally undoubtedly play a large part

in attracting and maintaining birds in the Village. Birds recorded on the Castle Hill Station as part of the LINZ 2001 study[18] are shown in Table 1.

A perhaps regrettable but probably fortunate absence is the extinct Haast Eagle *Hieraaetus moorei* (originally *Harpagornis moorei)* that formerly inhabited the Castle Hill area. Reputedly the heaviest of any known raptor, it became extinct around 1400AD, in parallel with extinction of its main prey, the Moa, and as the forests were progressively burned. Fortunate probably for today's farmers and villagers, as they would have been capable of carrying away a sheep or a child, and killing a 140kg Moa.

Some exotic species in the village are attractive to birds, notably the Eucalypts. A conundrum is that in some cases the berries and seeds attractive to birds will lead to wilding spread of species not listed in the ECAN Pest Management Strategy. Therefore, some care is required in selecting new exotic species for the village.

TABLE 1: BIRDS RECORDED IN 2001 LINZ FIELD STUDY OF CASTLE HILL STATION

SPECIES	ABUNDANCE	LOCATION
Australian harrier	Common	Open country
Bellbird	Common	Forest, scrub
Black-backed gull	Uncommon	Open country
Blackbird	Common	Forest, scrub
Chaffinch	Abundant	Forest, scrub
Grey warbler	Common	Forest, scrub
Karearea (NZ Falcon)	Uncommon	Open country
Kea	Uncommon	Open country
Magpie	Common	Open country
Paradise shelduck	Common	Open country, riverbeds
Pipit	Common	Open country
Redpoll	Common	Forest
Rifleman	Common	Forest
Silvereye	Common	Forest, scrub
Skylark	Common	Open country
Song thrush	Common	Forest, scrub
South Island pied oyster catcher	Common	Riverbeds
Spur-winged plover	Uncommon	Open country
Yellow hammer	Uncommon	Open country

[18] LINZ 2001 *"Crown Pastoral Lease Tenure Review: Castle Hill Pastoral Lease: Conservation Resources Report",* p24

2.9 Village Character

2.9.1 Village Context: The character of the village is inseparable from that of the Castle Hill Basin surrounding it, comprising:

- The encircling hard-rock mountains and their variable weather, snow, cloud and light patterns;
- The bracing air quality and dramatic weather patterns of hot, and cold, wind and calm, skies clear, calm or enlivened by cloud patterns, mists, rain, frosts and snow.
- The vivid bright night skies, star patterns and moon;
- The landform patterns of descending spurs (e.g. Long, Hogsback Spurs), separated by mountain rivers (Thomas and Porter Rivers, Hogsback Creek);
- The limestone geology, strata, landforms, caves, and associated rare vegetation;
- The vegetation history generally, including short tussock and modified grasslands and remnant beech forests;
- The associated bird, animal and insect life;
- The Tangata Whenua histories of the rocks, rivers, cave, mahinga kai and trails;
- The European history of high country grazing runs and the Bealey Road;
- The modern recreation context of skiing, walking, mountain biking and outdoor activities, and its accessibility from Christchurch.

These elements together create an exhilarating place that arouses strong aesthetic and emotional responses in all seasons and weathers, highly natural yet an hour's drive from the city. It is the distinctive, unique, memorable and natural high country landscape character that the village benefits from, and which should be maintained as the village develops.

The three landscape areas surrounding Castle Hill village – the Torlesse Range, the Waimakariri Basin and Castle Hill/Kura Tawhiti – are each identified in the Canterbury Regional Landscape Study Review (2010) as Regionally Outstanding Natural Landscapes[19]. The reasons vary slightly but comprise:

- **Waimakariri Basin:** 'very high' Natural Science, Legibility, Aesthetic, Tangata Whenua and 'Shared and Recognised' values and 'high' Historic values
- **Torlesse Range:** 'high' Aesthetic, Historic and Tangata Whenua values;
- **Castle Hill/Kura Tawhiti**: 'very high' Legibility, Aesthetic, 'Shared and Recognised' and Tangata Whenua values and 'high' Natural Science values.

The technical categories in capital letters above can be summarised as arising from the limestone and hard rock landforms, the natural state of the landscapes, the ecosystems, particularly plant life, the scenic beauty, the Maori and European histories, and the general agreement between technical and popular opinions as to those values ('Shared and Recognised'). In landscape terms, this is a long list of high values, leading to a particularly conclusive assessment.

In the Operative Selwyn District Plan the entire Upper Waimakariri Basin is classified as an 'Outstanding Landscape Zone', (OLZ), but with sub-areas of that zone called 'Forestry Exclusion Areas' (FEA) allowing for farming on lower flats and fans, including the Castle Hill Station area, but not forestry. The former (OLZ) border the village on the west and south sides and the latter (FEA) on the north and east sides.

[19] Environment Canterbury, *Canterbury Regional Landscape Study Review*, 2010, pp. 124 – 129.

2.9.2 Village Character: The original design for the village sought to capitalise on the landscape assets through a series of design techniques and provisions, relating to the following elements of village character:

i) Alpine Character**:** This is distinguished by the combinations of materials, colours, structures and built characteristics, plus spaces, places and trees that relate to the landforms, weather, atmosphere, vegetation, environment, views, lifestyles and outdoor activities of the high-country basin and mountains. There is a sense of adaptation to, and living with, the natural forces and aesthetics. The natural character is thereby accentuated rather than lessened, and its distinctiveness from Canterbury's lowland character maintained.

ii) Rural Character: This is distinguished by spaciousness, low developed densities, dominance of natural landforms, vegetation, soils and groundwater processes, and low density of buildings, roads, fences, structures and earthworks, all of which characterise the countryside, and distinguish it from towns and cities.

'Rural' and 'natural' exist on a continuum from pristine conservation areas, through lightly modified extensive high country grazing lands, traditional lowland farmlands, to the most-modified intensive horticultural or rural/residential areas near the cities. Castle Hill Village falls within the area of high country extensive character and is therefore relatively high on the continuum.

iii) Village Character: Villages generally are characterised by smallness of size and scale, informality of activities, closeness of personal contacts and simplicity of surroundings. Development is not intense and the townscape not unduly divided up by fences or barriers. Vehicular traffic will be low in volumes and slow in speeds, comprising a background to village activities and not dominating them. Roads will be lightly developed, with a lack of kerbing and concrete gutters and a greater degree of multiple use. The social atmosphere is one of friendliness and collective cooperation, as evidenced at Castle Hill village by the Village Hall, the formal and informal village events, the working bees, the frequent calling on friends and neighbours, and the ability for children to range about in safety.

'Alpine village' models in New Zealand were derived from park and recreation lands in the mountain regions of North America, and adapted to New Zealand's national parks in the 1950's, notably at Arthurs Pass village, the Arthurs Pass Chapel being an example.. It involves houses with walls of natural materials, notably stone and timber, naturally coloured, steeper roofs to shed snow, generous eaves and porches between the hostile outside climate and snug in winter or cool in summer indoors environment. These elements are incorporated in the District Plan Rules. Concerning structures within the reserves, this built character (materials, style of shelters, signs etc) will be continued in both new constructions and the maintenance of existing ones.

iv) Differentness from City Character: The approved village design sought to maintain the character naturally inherent in the Upper Waimakariri Basin and to avoid standard suburban practises that would lessen that character. The intention was to maximise the Village as a place of difference from the city, maximising its value as a place of recourse, relaxation and 'healing' for city dwellers. The elements of differentness from the city and responsiveness to alpine character should be maintained in the future development and maintenance of the village and its reserves.

v) Village Layout: The road system at Castle Hill village, comprising a simple circular road (Trelissick Loop) feeding local neighbourhood roads, seeks to minimise vehicular influences and promote neighbourhood identity and interaction. Combined

with the reserve patterns of the village, (see v below), non-vehicular circulation occurs spontaneously.

Other features of the village layout are the avoidance of tight driveways to rear sections, minimising the number of rear sections, and creation of link-strip reserves (see vi below). While there are rear sections in Stages 1 – 6, they remain small in number and relatively open to the streets, thereby avoiding community isolation. However the layout for Stage 7 has not maintained this village characteristic, with numerous back sections.

vi) Link Strip Reserves: A related technique for keeping vehicles in the background of village activities, was the system of 'link strips' further described in 3.1 below. These, along residential street frontages, are retained in Council ownership, requiring vehicle access to houses to be at set places, and thereby, largely from rear lanes. Thereby the village streets, residential frontages and the public character of the village is less cluttered by driveways, vehicles and the associated paraphernalia. It was intended that Link Strip reserves be included in all village extensions but the Council failed to require them in the Stage 7 layout.

Generally, link strips are not visible on the ground, and some owners may be unaware of their existence. To maintain their effectiveness, all strips and their purpose are identified through this Management Plan Review, and where misuses may occur, can be dealt with by the Committee on an individual basis.

vii) Open Space Quantities: The original Village development was based on a philosophy of small residential sections, generally about 350 to 450 m^2, set within the open space of generous reserves. The sense of rural alpine character and spaciousness was intended to be maintained mostly by the trees and spaces of the reserves, minimising the need for owners to maintain large areas of their land on weekend and holiday visits.

It is central to maintaining the future character of the village that the balance of private and public land and the envisaged quantities of reserve be maintained in future developments and expansions. This is stated in the village approvals documents as *'6.46ha of "public space" out of the total area of 36ha'*, which equates to 17.95% of the village (see Section 2.6, p.28 above). This may seem high, but the specific reasons for it should be kept in mind. It would have been hoped later village expansions would maintain these original proportion of reserve but unfortunately, in both the stage 3 – 6 and stage 7 expansions, the Council has opted for lesser proportions, and taking the remainder as monetary reserves contributions. From p.20, the amounts of open space now existing, or proposed in stage 7, are:

	Total Area	Reserve Area	Proportion
Stages 1 & 2			
Stages 3 – 6			
Stage 7*			
Overall			

(the stage 7 figure includes commercial land)*

viii) Form of the Reserves: The village reserves up to stage 6 are unique in forming a continuous spine throughout the residential area, allowing access from all localities and a connectivity of unbuilt land in which the village environment (trees) can establish, and where most houses have close access to them. Additionally, at three places this spine widens to form recreation areas, around the village hall/green, the playground, and the south-west reserve. Unfortunately, this concept was not continued in stage 7 where isolated urban-type reserves have been created, without connectivity or immediate access for the majority of the planned lots. These are not as conducive to

creating alpine character in this section of the village as were the earlier stages.

With the access and connectivity benefits of the spine-type reserve layout also comes an issue of proximity of reserve trees to houses. In general, the trees are an asset, but with the ad-hoc nature of their establishment and growth, some have caused undue shading due to size or species vs location. The Committee has worked hard to establish a removals request process but this Management Plan Review also seeks to establish, through public consultation, general principles of size, recession planes and species, towards this end.

ix) Plantings: The reserves and street plantings have been discussed extensively in s.2.7 above. It just need be stated here that the plantings are critical to creating the alpine environment, and that a large part of this Management Plan Review will concern analysis of existing problems with the plantings, and proposals for improved future tree management.

x) Houses: The part played by house design and materials in maintaining alpine character has been discussed in iii) above, and its central importance is emphasised. A few houses have not conformed either through metal walls, white-painted walls, insufficient roof pitch or xx roof form rather than gable ends. Houses suited to Avonhead or Rolleston do not generally fit into the Castle Hill environment. Architectural styles have diversified since the houses of stages 1 & 2 were built and many modern forms have successfully adopted the environmental ethic, and fitted into the environment.

xi) Fences and boundaries**:** An issue in maintaining rural alpine character is the avoiding or minimising of obvious fencing, property demarcations or the sense of the village ownership being 'divided up' too much into exclusive land parcels and lots. It is the continuous flow, openness and low-key management of the land that gives a sense of freedom of a village environment. The Plan Rules state xxx, but there is a tendency for owners to (a) deposit surplus excavations from house construction as mounding along their boundaries, and (b) plant their boundaries in a linear manner. Sometimes this is for privacy, but in time can assume the form of a hedge.

To this end, the designs for reserves established through this Review will maintain, as far as possible, the sense of openness, naturalness and informality, and will avoid fences and plantings that take the form of linear hedging or boundary demarcations. This includes Road, Link Strip and Recreation Reserve boundaries and as far as possible, the boundaries between reserves and private sections. There needs however to be a balance in this matter, and where some barrier may be desirable, it should be established as informal 'drifts' or varied shrubs and small trees. As has occurred in several p-laces throughout the village, these in time will assume the charm of natural places, as in the surrounding mountains.

xii) Character of the Street Reserves**:** The streets of Castle Hill Village are the primary means of arrival and circulation and thus, central to the sense of village environment. The street layout within the village was arranged to create continuous housing, reserves and walking areas bisected as little as possible by vehicular traffic. Street cross-sections were designed to maximise the extent of grassed surfaces on verges and frontages and to avoid or downplay concrete infrastructure such as kerbs and drains wherever possible. Street margins, where suitable, were set aside for tree plantings and kept open to surrounding open spaces adjacent, such as the playground, thus combining to maximise the sense of openness and integration of the village surrounds.

The village streets thus do double duty as traffic areas and as open spaces which maintain the natural character of the village. It is intended that these attributes will be maintained in future maintenance and extensions of the street system, while noting

that apart from integral link strips, their management and maintenance does not fall within the provisions of this management plan, but a different department of the Council.

xiii) Signage & Services**:** An integrated system of street and other signage and services (e.g. light poles) was adopted throughout the original village development and continued up to stage 6. These are not standard industrial products but units purpose-built for the alpine character of the surroundings. This policy should be maintained in all future Road, Link Strip and Recreation Reserves maintenance and extensions, and in other Council signage such as toilets, parking and directories. It is accepted that regulatory requirements for signage also must be met, but should be done so within the particular environmental standards adopted in the village.

xiv) Drainage: To maintain natural character and minimise hard surfacing and structures, a system of natural drainage and naturalised drain infrastructure has been established throughout the streets and reserves of the village. As far as possible, this avoids roadside kerbs and channels, and visible engineering infrastructure, while managing runoff through a combined system of naturally-shaped open swales and out-of-sight gully traps and underground pipework. Engineering infrastructure is necessary for establishing a drainage system and does exist within the village, but is built in natural forms, buried or located in such ways that the open rural character is maintained. These natural systems should be maintained and extended in all maintenance and future developments of the village.

Summary, Village Character: after 35 years of development and extension, the village has established and generally maintained a character that drew on its surrounding environment and was uniquely different from urban character. Maintaining this has proven a challenge as successive expansions have brought new residents with different models for their house, curtilage and property. It also has been a challenge that the Council has failed to provide for or enforce many of the characteristics discussed when consenting successive expansions and buildings. Despite such watering down, the original vision for an alpine village remains successful through the maturity of its original visions in Stages 1 & 2, continuation of most provisions except reserve quantities in Stages 3 – 6, and the overriding influence of the surrounding landscapes.

The elements of ‘alpine character’ originally established at Castle Hill Village should be rigorously maintained in future reserves and tree management, and co-ordinated with other open space throughout the village, referring to Road, Link Strip and Recreation Reserves, and as far as possible to streets and private developments. To this end, this Review has presented the above factors in some detail.

The Village Reserves and their trees pose a conflict between the maintaining of views to the surrounding landscape and the shelter and character they provide. The management of Reserve trees also therefore forms a significant portion of the discussion in later sections of this Plan.

While the reserves will continue to provide for recreation and circulation, they also will continue to provide for the alpine village character sought by the original development, defined in s.xx of this Plan.

MAP 3 | VILLAGE RESERVES

Scale: 1:3500 @ A4

3. Village Reserves, The Resource

SECTION IN PREPARATION

DELETED FOR AGM PURPOSES

4. Vision for the Reserves

This vision statement incorporates aspirations and intended futures for the Castle Hill Village Reserves. It is based on the analysis in sections 2 & 3 above, Village Committee and Council experience of the issues and management, and from residents' feedback on the draft Review documents and plans. Sections of this chapter are sub-numbered for ease of reference.

4.1 RESERVES TYPES

4.1.1 Castle Hill Village shall continue to provide for the three types of reserves and their purposes, described in sections 1.1 and 3.1 above:

(i) **Recreation Reserves:** These open spaces shall continue to provide for recreation and environmental purposes. They thread throughout the village and form the backbone of its open space pattern, useable areas and tree mass. They are the focus of this RMP through the management principles discussed in s.4, along with the other two reserve types below.

(ii) **Local Purpose (South Reserve):** This undifferentiated, narrow belt of Council-controlled land shall continue in its purpose of maintaining separation of houses on the south margin of the village from the Thomas River embankment for reasons of land stability. At the western end they also include an Access Reserve from Trelissick Loop to the South Reserve, comprising two adjacent land parcels, where the Memorial Reserve is now planned to be located.

(iii) **Local Purpose (Link Strip Reserves):** These narrow strips of Council reserve, where they exist, shall continue to be managed for their purpose of maintaining alpine character by channelling vehicle access, parking and garaging to the sides and rear of private lots. The rationale was described in section 3.1 and their locations are shown in Appendix 2D.

4.1.2 Road Reserves: The legal roads of the village provide for vehicular and pedestrian circulation and underground services, and public rights of access exists in these areas. While generally beyond the scope of this Management Plan, the roads are of particular importance in the alpine character of Castle Hill Village in that they contain significantly large and continuous areas of land formed with naturalised verges, swale drainage systems, underground reticulation, signage and lighting. They also physically encompass the Local Purpose Link Strips where these occur, and contain trees significant to village character.

This Management Plan proposes coordination within the Council in managing road, recreation and local purpose reserves, and that in coordination with the Council, trees in the road reserve will be managed by the Village Committee on a day-to-day basis.

4.1.3 Ownership: The village reserves shall continue to be owned and managed by the Council under the provisions of the Reserves Act, for the public benefits described in that Act and throughout this document.

4.2 RESERVES CHARACTER

4.2.1 The alpine character of Castle Hill Village was described in s.2.9 above, and it is intended the reserves continue to play a main role in maintaining that character. This will be achieved by:

- Maintaining tree numbers sufficient to form the bulk of the tree mass for the village, and comprising trees and shrubs suited to the alpine conditions, as in 4.xx below;
- Laying out and maintaining the reserves in informal patterns, without fences or significant barriers, and with vegetation in natural forms and groupings;
- Maintaining openness and naturalness of the reserve margins, access routes and internal layouts, as befits a village or rural area.

4.3 RESERVES ACTIVITIES

4.3.1 Informal Activities. It is intended that informal activities continue to form the bulk of activities occurring within the reserves. These include:

(i) **Walking and jogging**, generally throughout the reserves as well as on purpose-formed pathways where they exist;

(ii) **Mountain Biking**, in a manner that respects other users, public and private property and the environment, and complies with mountain bike best practise;

(iii) **Children's Play,** informally throughout the reserves and particularly at (i) the playground with its dedicated play equipment and (ii) the slide/toboggan area;

(iv) **Tennis, petanque, barbeques, social gatherings** and other community-organised sports and activities at or based at the community hall/village green vicinity;

(v) **Low-level organised team sports and events, and low-level spontaneous activities** such as (but not limited to) ball sports, touch, frisbees, kite-flying, etc, so long as occurring in an appropriate area and

without nuisance to other reserves users and neighbours;

(vi) **Tobogganing, skating, water slide, cross-country skiing and other winter activities**, at the water slide, Ice Rink, and generally throughout the reserves in winter;

(vii) **BMX riding** at the circuit in the Central Reserve, and on purpose-built tracks in the surrounding countryside.

(viii) **Exercising and walking of Dogs** so long as attended by their owner, properly under control, and not a nuisance to other reserves users or neighbours, according to the Village Committee and Council rules. Around the main Children's Playground, the Slide-Toboggan area, and the climbing frame south of the petanque courts Dogs shall be on a leash and otherwise comply with Council by-laws. All dog litter should immediately be collected and taken away by the attendant dog owner.

4.3.2 **Formal Sports**. The reserves are not intended for regular formal team sports, outdoor events and happenings, or for hire, except as they may fit in with the activities and atmosphere described in 4.1-4.4 and do not result in damage to the reserves or nuisance to neighbours and other reserve users. All such usage shall be by prior formal agreement of the Committee.

4.3.3 **One-Off Village Events** organised or sponsored by the Committee, such as Sports Day, Mid-Winter Dinner, Art Auction, working bee, and other future as yet unforeseen community events, are intended as on-going uses within the reserves, and will be carried out within the provisions of this Plan.

It is intended such events would generally occur within the hours of 9am – 10pm unless specifically agreed by the Committee, and would not involve outdoor amplified sound unless similarly agreed.

4.3.4 **One-off Private Events** organised by village residents or outsiders, such as outdoor weddings, reunions, theatre, bands or entertainment shall be by prior formal agreement of the Committee. Such events shall be conducted within the spirit of this Management Plan, and will avoid damage to plantings, surfaces, structures and facilities of the reserves and nuisance to other residents.

Such events shall not normally be conducted by commercial interests except at the discretion of the Committee. It is intended they would occur within the hours of 9am – 10pm, would not involve outdoor amplified sound unless likewise agreed, and would be conducted so as not to be a nuisance to other reserves users and village residents.

It is intended the Village Hall may be used for private indoor activities from time to time, within the same requirements regarding effects on the reserves and other residents, within the other provisions of section 4.3.

4.3.5 **Motor vehicles, motorbikes, motorised conveyances and vehicles such as go-carts or quad bikes** are in general not permitted within the reserves except for bona fide service vehicles authorised by the Committee, and so long as they do not damage the ground surface (e.g. in muddy areas), do not affect public or private property, trees or landscaping, and do not cause noise nuisance or danger to neighbours or other users. The reserves are not to be used for access or short cuts by vehicles except for one-off deliveries of heavy loads, and so long as these do not damage the reserve.

4.3.6 **Motorised Models and Drones:** The flying or running of model aeroplanes, helicopters, drones, wheeled models and the like shall be permitted so long as they constitute minor activities, are conducted in locations and a manner to not cause noise, nuisance or danger to other reserve users and residents, and are in accordance with all laws, including aviation regulations regarding drones. In no cases will drones be operated over or near residential areas. Organised gatherings for such activities, such as by a club, may be conducted with prior agreement of the Committee, and shall be conducted within similar parameters to informal gatherings, with particular regard to noise, danger to others, damage, and compliance with all laws and regulations.

4.3.7 **Dogs.** Further to 4.1.viii, while the management of dogs in the unfenced village surroundings poses issues, and despite occasional problems, the reserves generally offer a happy environment for informal activities of families including their dogs. Within the limits of the Council Dog Control Bylaw 2006, to be found on the Council website, dogs generally are permitted within the reserves so long as they are attended by their owner (as defined in the bylaw), are properly under control, and are not a nuisance to other reserves users or neighbours. Dogs should not be permitted to roam free.

4.3.8 Generally, dogs need not be on a leash unless necessary for their control. However, they must be on a leash near the main children's playground, the slide-toboggan area, and the climbing frame near the petanque courts. The bylaws prohibit dogs within 10 metres of any children's public play equipment, but the Castle Hill Village reserves are not listed in that bylaw as one of the public reserves where dogs are prohibited generally.

4.3.9 It is expected that all faeces deposited by dogs will be removed immediately from the reserves by the person having control of the dog, and that they shall not urinate in places that are unreasonable, offensive or unhealthy to other reserve users or neighbours. Dog owners will respect the fact that not all reserves users will welcome the attentions of their dog.

4.3.10 Problems can arise from dogs brought by weekend visitors who may be unprepared for, or uncooperative with, the open conditions of the Castle Hill Village reserves. It is expected that owners who rent or loan their houses will clearly identify these dog protocols to tenants when making the arrangements, and will display a notice setting out these dog protocols in their house.

4.3.11 **Cats.** Because of their potential effects on birdlife all cats, domestic or feral, are banned from the reserves and will be treated as pests.

4.3.12 **Respect for other users.** All activities and uses are required to occur in a manner which respects other reserves users, neighbours and the public, public and private property, trees, the environment and the alpine character of the village.

4.4 PATHWAYS, CIRCULATION & VEHICLES

4.4.1 **Informal Network:** The reserves will continue to provide for a wide range of undifferentiated walking and cycling routes, short cuts and connections within the village. In some cases, such routes may be maintained as short-mown grass corridors under the village mowing plan.

4.4.2 **Village Pathway:** In addition to the undifferentiated routes, a formed and gravelled village pathway circuit

exists and will be maintained as an all-weather walking and family cycling circuit within the reserves. This proposed route is shown on Plan 4, p.62. It is intended for use on a 'share the footpath' basis and is not envisaged for 'hard-out' BMX or mountain biking usage. In general, the pathways will be unlit except in places of particular need such as the approaches to the Village Hall.

4.4.3 **Links to Forest Park and Mountain Bike routes**: The pathway system and roads will maintain links to various walking and mountain bike tracks beyond the village, notably those leading to the swimming hole, Thomas Forest, Long Spur and the Hogs Back Track.

4.4.4 **East of SH73:** Private recreation facilities comprising a golf course and horse-riding areas are currently being established east of State Highway 73, opposite the village. With the current low levels of usage, no particular footpaths or crossings from the village to these are envisaged at present. Should usage levels grow in the future, this issue will need to be taken up with Land Transport New Zealand as it will entail the crossing of State Highway 73.

4.4.5 Further to 4.3.6 above, motor vehicles including motor bikes, quad bikes, go-carts and similar are not to use the walking/cycle routes or footpaths or the reserves generally.

4.4.6 **Accessibility Standards**: Due to their natural character, the reserves are unlikely to provide fully for special access needs such as wheelchairs. However, it is intended that such users be provided for through all reasonable means and in particular as provided for under the Human Rights Act 1993, the Building Act 1991, and New Zealand Standard NZS 4121:2001 Design for Access and Mobility.

4.5 FENCES AND BOUNDARIES

4.5.1 Except in rare circumstances there will be no fences or hedges in or bordering the village reserves. An exception, for example, would be the fence around the tennis court. Where barriers may be required for privacy or the channelling of circulation, these should be established as informal drifts of shrubs and neither unduly linear or extensive.

4.5.2 This intention does not refer to fences surrounding the village where they may coincide with reserves boundaries, which are necessary for stock control or highway safety.

4.6 SIGNAGE, LIGHTING & MEMORIALS

4.6.1 **Signs and Lighting:** Where required within the reserves, these will conform to the designs constructed from natural materials as initially established throughout the Village. Where signs or lighting may be required to conform to statutory or other standards, these will be adapted so they also conform with the village designs.

4.6.2 Although outside the scope of this Plan, the Committee hopes that coordination may occur within Council departments, so that road reserve signage also conforms with 4.6.1.

4.6.3 Where signs or lights may approach the end of their lifespan or otherwise require replacing, they will be replaced by new items of similar design.

4.6.4 The Committee will undertake a review to establish what additional signage may be required throughout the reserves and will establish an action plan towards this. See Objective 16. It also will consider whether solar or

other environmental techniques might be adopted for any reserves lighting or services.

4.6.5 **Memorials:** An area providing for remembrance former village residents and events will be established in the south of the village on Trelissick Loop, as shown on the Map 4. Ad hoc memorials are not to be established elsewhere in the reserves, including street reserves, although the Committee may consider utility objects such as benches elsewhere, on a case-by-case basis. These must conform to the styles and standards required in the reserves. Excluding benches, existing ad hoc memorials will be removed to the designated area.

4.7 DRAINS & WETLANDS

4.7.1 Small surface channels drain the Village Central Reserve, Playground and Highway Frontage Reserve, collecting in the South East Reserve before discharging to the Thomas River. These are seasonally dry but carry flows in winter and during rainfall and have occasionally caused minor flooding.

4.7.2 It is proposed that a small area of the South East Reserve, shown on Map 4, be formed, lined and maintained as a wetland conservation area as far as may be appropriate within the flow regimes. It is envisaged that minor earthworks may be required to enlarge an existing natural basin, line it with waterproof materials, and form a weir for water level management. Native wetland shrubs would be planted around the margin, capable of withstanding dry periods, and seating provided. If appropriate other rare and endangered species from the Castle Hill area shall be established around the margins

4.7.3 Water safety shall be provided for by maintaining the edges of all water bodies at gentle gradients, so that young children and the incapacitated can exit them readily.

4.8 CRIME PREVENTION

4.8.1 Criminal activities have occurred in the village in the past, while violence and unsavoury behaviour are constant threats in local authority reserves generally. For this reason, crime prevention measures are not just a tick-box exercise but a live management activity in the village reserves.

4.8.2 The Selwyn District Council has endorsed the principles and guidelines of CPTED (Crime Prevention Through Environmental Design) found in the *Safer Canterbury – Creating Safer Communities* document (SDC Policy Manual C602). The document can be found on the Christchurch City Council website, www.ccc.govt.nz.

4.8.3 The principle is to use environmental design and management techniques to make streets, parks and public areas less susceptible to crime, and to enable people to feel comfortable in using them.

4.8.4 Although the techniques are myriad and dependant on the specifics of a place, the following typical list is gleaned from the Guidelines:

- **Natural Surveillance:** less personal assaults, vandalism and robberies occur where perpetrators think they may be watched. Conversely, people feel safer in a public place where someone is likely to be ‘looking out for them’, even informally.
- **Clear Sightlines:** less crime occurs where there is a lack of fences and barriers, and where vegetation is

maintained to ensure it does not provide hiding places for offenders;

- **Lighting:** users feel safer and less crime occurs on lighted pedestrian routes and where shadows near pathways are avoided;
- **Activity:** less crime occurs on pedestrian routes in well-used areas, where there is a chance of perpetrators being discovered. As far as possible, isolated places and culs-de-sac should be avoided;
- **Entrapment:** long narrow spaces and alleyways without alternative exit points should be avoided, leaving no means of retreat if a threatening person may appear;
- **Maintenance:** places feel better if well looked after. Neglect suggests that nobody cares, encouraging opportunists;
- **Ownership:** places feel better if it is clear who is in charge, and there is effective management.

4.8.5 The Castle Hill reserves are generally, but not entirely, open and 'owned' by the community, and have a high feeling of security for users. Nevertheless, the potential for crime exists and a policy of ongoing monitoring for CPTED is proposed by Objective 6 on p.73 of this Management **Plan.**

4.9 NATURAL HAZARDS

4.9.1 The chief natural hazards foreseen in the village reserves arise from earthquake, wind and fire.

4.9.2 **Earthquake hazards** are general to the village and no more so to the reserves. Conceivably, trees or branches could fall during a shake but there is no way of predicting this beyond ensuring by regular inspections that trees are in good conditions, and removing suspect ones. Land subsidence could occur along the bank above the Thomas River and was the reason for the Southern Margin Utility Reserve being establishing (Map x), to ensure development is set back from the terrace top.

4.9.3 **Wind hazards** are a constant threat to the reserves and their users. Strong winds are frequent and storm force winds periodically occur. Regular inspections and removal of unstable reserves trees should occur, with particular attention to permeability and wind flow of exposed forest edges. Species prone to wind-throw should be avoided and reserves structures should be robust to withstand storm winds. Warnings to stay away from trees in high winds should be prominently displayed.

4.9.3 **Fire hazards** are significant in summer, in the village generally, the reserves, village surrounds and state highway corridor. Likely fire sources are human activity, house fires, accident, rubbish including glass, malicious intent and possible lightning strike. Cutting of long grass and clearing of forest litter is significant in reducing spread at ground level, and removal of lower branches where possible, lessens transmission from ground (grass fires) to tree crowns. Tree Management Plans (see s.10) show tree areas generally divided into separated groups, although the risk of fire spread from grass to shrub areas to trees cannot be fully avoided.

Further planting of fire-prone species, notably eucalypt, conifer and fine-leaved trees such as manuka, should be avoided for their resinous content, although many already

exist. Fire-retardant species, particularly broadleaf trees, should be favoured.

The village fire trailer and volunteer network should remain organised and prepared at all times, to minimise the development of any fire for the hour or so until outside services can arrive. Seasonal fire bans should be prominently displayed in the village.

4.10 TREES

4.10.1 Trees in the reserves will be managed according to the principles set out below.

4.10.2 Balance of Treed and Open Areas

(i) The public reserves of Castle Hill Village will remain the places where much of the tree volume of the village is maintained.

(ii) A central purpose of the reserves trees is to create natural contrast with the village's built areas, and maintain a treed skyline above the rooflines.

(iii) The amounts of tree area within the reserves will be balanced against the need to also maintain useable open spaces.

(iv) Tree areas are to be located and maintained in a manner that retains reasonable views within and beyond the village

(v) Tree areas are to be located and maintained so they provide reasonable wind shelter and summer shade while not unduly shading houses in winter.

4.10.3. Tree Management Within Reserves:

(i) Reserves Management Plan (Village): A draft management plan for the reserves village-wide is included as Map 5 of this document. It shows the outline of all tree and open space areas at a village-wide village scale and, in association with those in 4.10.3 (ii) below, will be the basis on which all tree plantings, maintenance and removals will be undertaken. The Plan may be developed and updated periodically.

(ii) Reserves Management Plans (Sectors): Tree and open space areas within each reserve are shown in greater detail in Maps 6.1 - 6.5 of this document. These show tree locations, types and any specific requirements for that reserve. In their present form these plans result from residents' consultation and the Committee's recent experiences with management, removals and wildings. They may be developed over time as decisions are made by the Committee and Council on management, new species, pest control measures and policies generally.

(iii) Tree areas in any section of reserve will be suitable for the intentions, reserve purposes and characters described in sections 2.3, 2.4, 2.6, 2.7 and 2.9 above, and in the current Section 4 generally. All plantings, removals and maintenance within any reserve area will be in accord with the relevant Tree Management Plan (Reserves) administered by the Committee.

4.10.4 Open Areas:

(i) In balance with the 'Tree Areas', significant portions of the reserves will be maintained as 'Open Areas', being those shown without tree planting on the Tree Management Plans. Most recreation and activity will occur in the Open Areas, which also allow views and sun and maintain fire

separation. Open Areas will be more exposed to winds than treed and residential areas.

(ii) Open Areas will comprise mainly exotic rural grasses such as browntop, which maintain rural character yet are capable of accommodating the summer and winter uses and climatic conditions that occur. Open areas will be mown periodically under the Council's mowing contracts, cleared periodically of wildings and weeds such as broom or gorse, and will be maintained as free as possible of pests such as rabbits and wasps.

(iii) Open Areas may contain small amounts of amenity shrubs and small trees around their margins to provide shelter, privacy or visual amenity. These will be in the form of minor 'drifts', laid out and maintained as befits a natural area.

(iv) Trees surrounding open areas will be of suitable size and character and capable of withstanding wind and snow damage that will be concentrated there. The treed margins will be maintained in a tidy state as regards wind fall or other damage and usually their lower branches will be 'limbed up' to maintain visual openness and wind filtering.

4.10.5 Tree Categories:

(i) This Management Plan classifies the trees and shrubs of the village in the following categories, relating to their mature height:

(a) Landmark Trees: Small areas of large trees, 25 to 50m+, creating large-scale grandeur and scale above the village skyline, at specified places where they will not cause nuisance;

(b) Signature Trees: 10 – 25m tall, forming the main tree mass of the reserves, some deciduous for seasonal variety;

(c) Small Trees: 2.5 – 10m tall, some deciduous, to avoid shading of houses or create human scale in small areas and walkways. These, along with category (d) below, will achieve the recession planes discussed elsewhere;

(d) Tall Shrubs: Shrubs and small trees 1.5 - 2.5m, at edges of tree areas and where visual screening, visual amenity or low-height wind shelter is appropriate;

(e) Small Shrubs: Those below 1.5m (eye level), creating low barriers and visual amenity while maintaining general visual openness, particularly along footpaths, edges, and reserve/ residential boundaries.

(ii) The **Tree Species List** in Table xx shows maximum heights, by which trees can be fitted to their appropriate categories and locations on the Tree Management Plans. Some latitude may be exercised in this according to individual resident's tolerance of shading within a recession plane, and the planting of deciduous trees.

4.10.6 Tree Character: The trees of the reserves will retain Alpine Character, as defined in s.2.6, 2.7 and 2.9.2 above, by the following means:

(i) establishing and maintaining a small range of species within any Tree Area, set out in simple patterns as opposed to detailed 'landscape designs';

(ii) including mainly tree species typical to rural and alpine areas, with limited use of feature or focal-point trees;

(iii) establishing native trees appropriate to this alpine area while maintaining a balance between native and exotic trees. This refers particularly to mountain beech, but also other native species identified on the Tree list in Table XX;

(iv) establishing and maintaining tree groupings of informal layout, shapes and edges, as befits a rural area.

(v) maintaining a balance between conifer and broadleaf trees and between evergreen and deciduous trees;

(vi) Establishing a longer-term rotation system whereby individual trees are routinely removed and replaced as they become problematic, diseased, or too large. It is important to ensure that replacement also occurs, to maintain tree numbers within the village.

4.10.7 View Corridors:

(1) Views from the village to surrounding mountains will be maintained by a policy of 'planted wedges' and 'view corridors', as shown on the Tree Management Plans (Reserves). Views can thereby be maintained by a careful balance of planted area shapes and edges (creating the 'wedges'), with between them, open corridors from identified areas towards the views.

(2) Views cannot be guaranteed from all locations, particularly many internal to the village, due to complexity, and to plantings on private sections, which cannot be controlled under this Plan. However, they should be defined and maintained where reasonably possible.

(3) It is not feasible that all views will be panoramic within the treed environment of the Village. However, a balance of open and treed areas will be maintained wherever possible, to ensure all houses have a reasonable view corridor or outlook in at least one direction.

(4) In some cases it may be appropriate to maintain views through pruning ('limbing up') the lower branch of trees. This would enable views underneath the tree canopy, as opposed to the full removal of the tree, but may lessen wind shelter at ground level. It is noted that coniferous trees should not be topped and also that the opening up of views will also allow more wind penetration within the village.

4.10.8 Tree Monitoring & Maintenance

(i) A **Monitoring and Maintenance Programme** will be established by the Committee in conjunction with the Council arborist, whereby at least annually the condition of all reserve trees is surveyed and where necessary trimmed, shaped, or removed and replaced, and any other necessary maintenance carried out. The intention is to formalise and regularise the work currently done by the Committee. See Policies 9.2 & 9.5, p.74.

(ii) The Monitoring and Maintenance Programme shall note the establishment of any **wildings** from the ECAN list within the village and its surroundings and, within the village, arrange for their removal. Outside the village, the Committee shall liaise with the relevant

owner for removal where they originate from within the village.

(iii) Areas of **weed infestation**, particularly broom, shall be notified to the committee by residents, and actioned for removal, either by the Council contractor or by the relevant Care Group with Council support. Broom shall not be managed solely by mowing.

(iv) Further to s.4.9.3, a **Fire Risk Management Programme** will be implemented as part of the Monitoring and Maintenance Programme. Tree areas will be maintained in accordance with the principles in 4.9.3, to minimise the spread of any fire. The programme should include regular publicity through the Newsletter and signage, to ensure an awareness of fire risk is maintained among village owners and reserve users, and that the first response services are prepared at all times. See Policy 9.4, p.74.

(v) A policy of succession planting shall be introduced whereby any tree felled is replaced by an appropriate new tree.

4.10.9 TREE SPECIES

(1) The tree species make-up of the village has been a contentious issue between residents. This Management Plan aims at a balance, based on the factors below.

(2) The existing species range in Castle Hill village derives from the following components:

- The approved concept and tree list of 1979, much of which was either never planted, or has disappeared. See 2.6 & 2.7 above;
- The planted and wilding exotic trees which grew in an ad hoc fashion and today either exist as maturing and admirable trees, or have been removed due to inappropriate location or wilding potential. Many residents enjoy the existing exotic tree environment, autumn colours and grand scale that has developed;
- The ECAN Pest Management Strategy, which identifies several tree species prominent in the village as wilding-prone. See xx and Appendix x;
- The preference of many residents for more native species but to also retain appropriate exotics.

(3) Accordingly, this Management Plan bases the proposed reserves planting species on the following principles:

a. A greater proportion of native trees and shrubs shall be established, in combination with appropriate existing and new exotic trees and shrubs;

b. Existing exotic trees shall be retained unless accepted as inappropriate by the Committee and ratified by the Council;

c. Tree removals shall continue to be only by request to the Committee, and only for safety or shading reasons, not personal preference. All Committee decisions shall be forwarded for Council ratification before being actioned;

d. All contorta have been removed (2018) but existing less-virulent wilding-prone species, notably Douglas Fir and European Larch, shall be retained, with any wildings managed through regular maintenance within the village and ‘Good Neighbour’ protocols outside the village;

e. Reserve trees shall be located, planted and managed within the height categories set out in xx, particularly as regards Landmark Trees and the shading of residential neighbours;

f. Reserve plantings shall maintain the View Corridors shown on the Sector Management Plans in s. xxx;

g. A rotation policy shall be introduced whereby trees removed for inappropriateness or tree health reasons shall be replaced within 1 season by other appropriate trees.

(4) **Wildings:** The ECAN Pest Management Strategy is set out in Appendix x and discussed in s.xx. Removal of all species listed would decimate the village's tree stock and deprive residents of particularly favoured trees, notably European larch for its deciduous properties and autumn colours, and Douglas fir, for its good growth rates and height. Also other pine species that appear to cause few problems. On the other hand, the wilding issue is acknowledged.

(5) The Committee has undertaken to retain existing examples of those two species and good specimens of other wilding-list pines and to manage wilding spread through the maintenance programme within the village, and by a Good Neighbour protocols on land neighbouring the village, where spread originates from village trees. There will be no further plantings of species on the ECAN list, and alternative species not on list are proposed.

(6) Where they exist, replanting will be of sterile clones of the species listed.

(7) **Natives Only:** While a 95% of residents want more native plants in the village [categories a – d in survey question 7], only a smaller number (22%) want only native (categories b and d). A natives-only policy is not adopted by the Committee because:

- while complete removal of exotics was supported by 22%, it was not supported by 73% (categories a and c);
- the village is a culturally-changed place, not a conservation area;
- there is no particular reason for natives only in the village;
- there would be a narrower range of trees available, particularly larger trees;
- village character would be significantly different without exotics, and residents have not requested a change to that;
- the removal of large numbers of good existing exotic trees and shelter is not necessary;
- people have bought into a village based on exotic trees, albeit with some problems.

(8) **Increased Natives**: Increase in the proportion of natives is particularly achievable in the Signature Tree category through native beech, in the Small Tree category through several appropriate species (see tree List), and in the Shrub Category through a large range of appropriate native shrubs. It is not proposed these categories exclude new exotic plants but the Shrub category in particular is likely to become largely native.

(9) **Shading:** Reserve trees cast shade on neighbouring houses when within the houses northern arc. Some people don't mind, particularly for summer shade, but most do not want their winter sun blocked. Shading is a function of tree height, distance, numbers and direction

from the house, ground slope, and tree type, for instance, deciduous.

(10) This Management Plan establishes a policy of a defined **recession plane and light corridor** system for houses shaded by reserve trees in winter. It does not guarantee all day winter sun to houses, but is intended:

- to maintain winter sun and light to houses by a 'wedge and corridor' system, similar to view corridors, whereby reserve trees to the north of houses are planted in wedge patterns, with corridors of lower planting between, allowing light to houses; and
- to maintain reserve trees defined distances from the north side of houses according to their height, by establishing a recession plane system

(11) The system takes the ground floor level of a house as its basis and does not guarantee sun to the surrounding land. It does not guarantee that shade will not fall on a house at some times on a winter's day, but seeks to rule out blanket shade on the house. It is applied to trees due north of a house. For houses with reserve on their east or west sides, a more generalised recession plane is established to ensure morning or afternoon light, but not sun at those low angles.

(12) Recession plane distances are based on Diagram X, showing a mid-winter midday sun angle of 23^{o} in Christchurch (43.5 S).

(13) From Diagram x, the following setback distances are derived, based on the height range for each tree category.

(14) From the middle column, the setback range of (for example) Small Trees is 5.5 – 22m, which from the right column averages to 14m. The average figure is taken as the setback for that category on the south side of a reserve where bounded by houses, and is marked as a scale on each Precinct Map.

DIAGRAM TO COME

TREE SETBACK BY HEIGHT (m), HOUSES SOUTH OF RESERVES			
tree category	***height range (m)***	***setback from house (m)***	***Average for category (rounded)***
Large Shrub	***min 1.5***	***min 3.0***	***4.0***
	max 2.5	***max 5.5***	
Small Tree	***min 2.5***	***min 5.5***	***14.0***
	max 10	***max 22***	
Signature	***min 10***	***min 22***	***40.0***
	max 25	***max 58***	
Landmark	***min 25***	***min 58***	***87.0***
	max 50	***max 116***	

(15) These figures are a guide only. Single or small groups of trees may be closer if open ground exists on either side. Deciduous trees may be closer, but not in large stands. In cases where summer shade may be beneficial, trees may be limbed up so winter sun comes under the canopy.

(16) Given that many houses have large trees within their own lots on their north side, many owners apparently are not troubled by the shade. However others are, and the recession guidelines are intended to assist those for whom an issue may exist.

(17) **Species List:** Table x contains a list of tree and shrub species that provide for the issues in this Management Plan, namely:

(i) a greater proportion of native species;
(ii) robust in the Castle Hill environment;
(iii) attractive and serviceable in reserves usage;
(iv) not on the ECAN pest list;
(v) not fire-prone or liable to snow breakage;
(vi) wind stable; and
(vii) lacking bad habits such as disease prone, die back, creating pollen allergies or sticky seeds or exudations.

The species list is not intended as final, and is expected to be developed over time.

(18) The list is not rich in native trees in the Landmark category, but is adequate in the Signature category because of native beech, and has many options in the Small Tree and Shrub categories. However, it also contains exotic trees that either have proven suitable or appear they might do so. A particular concern has been to identify new conifers without the bad habits, which can partly maintain the existing village character.

(19) Table x contains a statement of mature height and is arranged by plant category. In seeking reserves vegetation that is sustainable in the long-term, future trees need to be suitably located as to height, to avoid the need for removal of fine trees which have become unexpectedly large for their location. Several trees are naturally slow-growing and others short-lived, and the intention is to balance these (nurse crop), in the interests of developing a magnificent tree bank in the long term.

(20) By balancing tree height and category from Table x with the layouts in the Reserves Precinct Plans, it is intended the planting and maintenance of any reserve tree should be clear to the Committee, Care Groups and residents

(21) It is recommended that separate from this Management Plan, the above list, with other possible species, be published on the Village Website, with notes on the culture of each, and a photograph, for the use of property owners.

(22) **Rare Plants:** Table x shows a list of rare plants of importance to the Castle Hill area. A Policy is included to work with DOC to establish a new colony of appropriate species from the list in the South-East Reserve and thereby increase their diversity.

RECOMMENDED TREE & SHRUB SPECIES

LANDMARK TREES *25 – 50+ m*

Wellingtonia	*Sequoiadendron giganteum*	50+x10	Ee
Weymouth pine	*Pinus strobus*	40 x 8	Ee
Japanese cedar	*Cryptomeria japonica*	30 x 6	Ee
White spruce	*Picea glauca*	30 x 6	Ee
Japanese larch	Larix kaempferi	30 x 7	Ed

[Further Douglas Fir and European larch not to be planted but existing retained, and managed for wildings.]

SIGNATURE TREES *10 – 25m*

Mountain beech	*Fuscospora cliffiortioides*	15 x 5	Ne
	(formerly Nothofagus solandrii var cliffiortioides)		
Pahautea	*Libocedrus bidwillii*	20 x 8	Ne
Halls totara	*Podocarpus cunninghamii* (formerly P. Hallii)	20 x 8	Ne slow
Southern rata	*Metrosideros umbellata*	10 x 5	Ne
Ribbonwood	*Plagianthus regius*	15 x 6	Nd
Antarctic beech	*Nothofagus Antarctica*	15 x 5	Ed
English beech	*Fagus sylvatica*	25 x 15	Ed
Serbian spruce	*Picea omorika*	20 x 4	Ee
Japanese Umbrella Pine	*Sciadopitys verticicillata*	15 x 6	Ee *slow*

SMALL TREES *2.5 – 10m*

Cabbage tree	*Cordyline australis*	8 x 4	Ne
Mountain Neinei	*Dracophyllum traversii*	8 x 2	Ne
Mountain Toatoa	*Phyllocladus asplenifolius var alpinus*	9 x 5	Ne *slow*
Kowhai	*Sophora microphylla*	10 x 6	Ne
Kohuhu	*Pittosporum tenuifolium*	10 x 6	Ne
Lancewood	*Pseudopanax crassifolius*	7 x 4	Ne
Yoshino Cherry	*Prunus x yedoensis*	5 x 5	Ed
Wild Cherry	*Prunus avium*	10 x 6	Ed
Coliseum maple	*Acer cappadocium*	8 x 5	Ed
Kousa dogwood	*Cornus kousa*	6 x 6	Ed

TALL SHRUBS *1.5 – 2.5m*

Matagouri	*Discaria toumatou*
Karamu	*Coprosma lucida*
Leafy Coprosma	*Coprosma parviflora*`
Inaga	*Dracophyllum longifolium*
Hebe spp. (select from):	*Hebe albicans*
	H. buchananii
	H. cupressioides (whipcord)
	H. hulkiana
	H. Odora
	H. pimelioides
	H. propinqua (whipcord)
	H. salicifolia
	H. subalpina
	H. vericosa
Heketara, Tree Daisy	*Olearia rani*
Common Tree Daisy	*Olearia arborescens*
Hakeke	*Olearia ilicifolia*
Rhododendron	to come
European cranberry	*Viburnum opulus*

SMALL SHRUBS *less than 1.5m*

Porcupine Shrub	*Melicitus alpinus*
Mountain flax	*Phormium cookianum*
Prostrate Totara	*Podocarpus nivalis*
Dwarf Hinoki cypress	*Chamycyparis obtuse 'Nana'* 0.5 x 1
Dwarf Albert Spruce	*Picea Glauca Albertiana 'conica'*
Azalea evergreen dwarf	to come
Smoke bush	*Cotinus coggygria*

N/E *native/exotic*
e/d *Evergreen/Deciduous*

List to be finalised

RARE PLANTS OF THE LIMESTONE AND RELATED ROCKS OF CASTLE HILL		
Botanical Name	***Significance*** ***1 = Found only at Castle Hill*** ***2. = Found elsewhere in NZ, but a very restricted distribution***	***Common Name***
Ranunculus crithmifolius sub-species *paucifolius*	1	Castle Hill buttercup
Wahlenbergia brockiei	1	Brockie's harebell
Myosotis colensoi	1	Castle Hill forget-me-not
Myosotis traversii, var *cinerascens*	1	
Gingidium enysii	2	Enys angelica
Hebe cupressoides	2	Cypress whipcord hebe
Picris heracioides	2	
Source: Hayward. J A. & Boffa. E D. "Recreation in the Waimakariri Basin"		

4.11 NON-RESERVE AREAS

4.11.6 Although not formally subject to this Management Plan, areas continuous with, but not part of the formal reserves, are also of importance to the character, public amenities, recreation and management of the village. This refers for example to the form of, structures, vegetation and activities in areas flanking the village entrance, and the road verges.

4.11.7 These areas are maintained by the Council directly and not the Reserves Department. Being contiguous with the village reserves, it is proposed these non-reserve areas be maintained in accord with the precepts of village character stated in this Management Plan, and that this be achieved by departmental liaison within the Council, principally through the Council's grass mowing contract, which covers both areas, but also when structures and services need extending or maintaining.

4.12 RESERVES DEVELOPMENT AND MANAGEMENT

4.12.1 All **reserves** will be developed and managed in accordance with the Reserve Management Plans. Map 5 shows the Reserve Management Plan (Village) for the village as a whole and Maps 6A – 6H Reserves Management Plan (Sectors) the detailed layouts, area by area. For Maps 6A – 6H an accompanying written description is found in s.4.14.3 below.

4.12.2 **Management** will continue to be overseen by the Castle Hill Community Association under the delegated authority of the Council. The Council however retains overall authority and the right to being consulted on decisions, as the Committee or Council may see fit. Certain functions such as grass mowing and services provision will continue to be by the Council directly, in communication with the Association, or by the Council-appointed contractor.

4.12.3 **Care Groups:** To aid day-to-day management and details, the Association has established a series of Reserves Care Groups, comprising volunteer property owners and residents from that part of the village. Care Group volunteers will undertake maintenance such as weed and wilding removal, and small developments such as planting

of trees and shrubs, grassing and general reserve improvements. They also will be a conduit of feedback to the Association regarding problems, dangers and issues they may find in their area. Volunteers will not be paid but the Council will bear reasonable and pre-agreed costs for their projects.

4.12.4 The Care Group areas and the reserves they contain are shown in Plan xx, and are as follows, noting the changed numbering from the Committee's original map:

- **Group 1** (Area 4 originally)
  South-West Reserve *(Management Plan 1 & s.4.15.3);*
  SH73 Reserve South *(Management Plan 2 & s.4.15.4);*
  Thomas Embankment Reserve *(4.15.5).*

- **Group 2** (Area 3 originally)
  Playground Reserve *(Management Plan 3 & 4.15.6*);
  Trelissick Loop Road Reserve East Side, Frizzell Court to Torlesse Place *(s.4.15.7).*

- **Group 3** (Area 2 originally)
  Central Spine East *(Management Plan 4 & s.4.15.8).*

- **Group 4** (Area 1 originally)
  Central Spine Mid *(Management Plan 5 and s.4.15.9);*
  Village Green South *(Management Plan 5 & 4.15.10;*
  Waterslide Reserve *(Management Plan 5 & 4.15.11);*
  Central Spine West *(Management Plan 6 & 4.15.12).*

- **Group 5** (Area 5 originally)
  SH73 Reserve Mid *(Management Plan 7 & s.4.15.13);*
  SH73 Reserve North *(Management Plan 8 & s.4.15.14);*
  Castle Hill Drive Road Reserve south side, SH73 to Trelissick Loop *(s.4.15.15);*
  Trelissick Loop Road Reserve east side, Castle Hill Drive to Porter Place *(s.4.15.16).*

4.12.5 The Village Central Reserve and Village Green North Reserve (see Map x) are not allocated to a Care Group. Their care and development will continue to be by village-wide working bees, organised by the Association from time to time.

4.12.6 The 'Memorial Reserve' is not at this stage allocated to a care group.

4.12.7 All Care Group activities will be with the assent of the Association and will be according to the Management Plan for that area, as set out in s.4.15 below.

4.12.8 Care Group responsibilities do not override Council authority for trees, services, safety, management or the reserves generally, but it is intended the three parties – property owners, Association and Council – shall work cooperatively with each other.

4.12.9 All developments proposed will be subject to availability of Council funds

4.13 RESERVES MANAGEMENT PLANS & DESCRIPTIONS

4.13.1 The Management Plans are grouped in the Care Group areas itemised in 4.12.4 (Plan x.).

4.13.2 SOUTH-EAST RESERVE (Plan 1):

- Existing trees to be retained except removals identified either for shading or to establish the open corridors identified in Plan 1;
- Existing rare Eucalypt species noted;
- Existing tree areas to be supplemented with new plantings, to form the forest wedges shown in Plan 1;
- Reserve size allows numerous Landmark Trees, south of houses but well clear of houses to the west;

- Existing Douglas Fir in the very south-east corner will be retained, the ground beneath cleared, and the Good Neighbour policy carefully maintained on neighbouring land.
- Small trees will be planted in the north and west, near to houses;
- Shrubs facing SH73 will be maintained, thickened by additional plantings, and broom infestations removed;
- Surface drains which converge on this area carry peripheral flows and are frequently dry. Small weirs will be installed to form semi-wetland areas, as the core of an area of conservation plantings of native shrubland. Two matagouri areas will be developed and an area for rare plants area investigated, as in s.xx. Subject to Council funding;
- After consultation with the Council, part of the south boundary will be refenced to include village-owned land above the Thomas River escarpment, currently outside the fence.
- The Village Walkway route will be maintained;
- Broom, gorse, wildings and other weeds will be eradicated;
- Improvements to public access from Torlesse Place to the South-East Reserve will be investigated;

4.13.3 SH73 RESERVE, SOUTH (Plan 2):

- Existing Signature Trees will be retained except for removals agreed by the Committee/Council;
- A balance between screening of the village from SH73 and allowing glimpses into the village is to be maintained;
- Open corridors will be maintained through the trees where shown, to maintain light to neighbours;
- Shrub areas on the SH73 mound will be thickened with new plantings, and extended;
- Grass on the mounds will be kept short to lessen the spread of any fire that might develop;
- The accessway from Frizzell Court will be maintained in a mown and open state;
- The Village Walkway through this area will be maintained in a mown and open state;
- The open drains through the reserve will be maintained in an open and unimpeded state.;
- Request for ‘no engine braking’ signs on SH73 (all SH73 reserves)

4.13.4 PLAYGROUND RESERVE (Plan 3):

- dedicated play equipment and surrounds will be maintained according to the standards in NZS 5828:2004 ‘Playground equipment and Surfacing’ and be progressively improved as funds permit;
- CPED will be maintained especially within this area;
- Existing large trees will be removed in south and north-west as agreed by Committee, to lessen shading of neighbours;
- Landmark Trees will be retained in west and new trees planted as shown, to form planted wedges with view corridors between;
- Small Tree and Shrub plantings will be intensified in south, along scarp slope, and around playground;
- Shrub and small tree plantings will be intensified in south-east, as shown;
- Village Walkway will continue to be provided for;
- Existing peripheral drains will continue to be provided for, with naturalistic flood-protection mounding and tree/shrub plantings in south-east;

- New matagouri will be established on the escarpment.

4.13.5 CENTRAL SPINE RESERVE, EAST (Plan 4):

- Existing trees will generally be retained and this reserve maintained as part of the central treed core of the village;
- Landmark Trees will be maintained and supplemented with new trees and open corridors as shown;
- A thickly-planted belt of riparian shrubs and small trees will be established adjacent to the drain along the south/west sides, and existing weeds and wildings removed.
- The peripheral drain along the reserve/residential boundary will be maintained as a landscape feature, including its sump and footbridge at Trelissick Loop;
- New shrubs and small trees will be planted to enhance the walkway entrance to the reserve at the south-west corner, near the drain and foot bridge on Trelissick Loop.
- Shading of lots to the south will be managed by:
  (i) restricting taller trees to the north half of the spine (above the embankment) except where they already exist, and establishing smaller trees and shrubs on the southern half (slopes):
  (ii) maintaining open corridors where necessary within existing larger trees above the escarpment, allowing northerly light to penetrate to houses;
- This important section of the Village Walkway will be maintained;
- Wind safety of large trees close to houses on the north side of the reserve will be regularly monitored;
- An accessible Fire Trailer location will be maintained given the pending development of its existing site.

4.13.6 CENTRAL SPINE RESERVE, MID (Plan 5):

- Existing trees will be maintained as part of the core treed area of the village;
- Existing Landmark Trees will be retained and new ones planted in northern parts facing the Village Green, with open corridors as shown, allowing northerly light to penetrate to lots on the south side, noting this issue is heightened by the 6m escarpment;
- Smaller trees and thickly-planted shrubs will be established and maintained on the escarpment as shown, and weed infestations cleared;
- Small shade trees and shrubs will be planted, encircling the south side of village green and along the residential boundary (Olympus Terrace) to the west;
- Existing matagouri areas will be cleared of weeds, notably broom, and new matagouri established;
- The Village Walkway will be maintained including various offshoot linkages;

4.13.7 WATERSLIDE RESERVE (Plan 5);

- The waterslide will be maintained and its surrounds tidied and regrassed;
- Existing steps will be rebuilt and widened to provide better Walkway linkage, and their margins tidied;
- Tree areas at the top of the escarpment will be maintained as wedges, providing tree mass for the village and shade for users, while allowing northerly light to lots in the south;
- Small Trees and shrubs will be thickened along the residential boundaries, to buffer potential nuisance from waterslide users;
- The Village Walkway will be maintained through this area;
- Shrubs near Trelissick Loop will be maintained, and further shade trees planted, as shown.

4.13.8 CENTRAL SPINE RESERVE, WEST (Plan 6):

- New plantings of Signature and isolated Landmark Trees will be established in wedges, generally on upper slopes, to extend the central tree belt in this newer part of the village;
- Open corridors allowing light northerly to houses on the south will be maintained where shown, and established in Shrubs and Small Trees;
- The Village Walkway will be maintained as far as Trelissick Loop in the west;
- Periodic Shrub and Small tree blocks will be planted along the north side of the Walkway, to maintain separation from private lots to north (Olympus Terrace);
- The western entrance to the Walkway from Trelissick Loop be established with two diverging pathways under tree canopy, with signage;
- A winter toboggan area will be maintained where shown, as a grassed slope.

4.13.9 VILLAGE GREEN RESERVE (Plan 5):

- To be maintained as a grassed bowl-shaped area for occasional community sports and informal activities, surrounded by sloped terraces for spectators;
- Signature and occasional Landmark Trees to be planted around the south side where shown, the terraces to south and west to be backed by smaller shade trees, limbed up for people to sit under;
- The north (Central Reserve) side to be replanted in large shade trees following the curve of the green, also limbed up for spectators, picnics etc under.
- The east side to be grassed and with extended shrub areas, particularly matagouri, encircling the Green;
- Sections of the village Walkway pass the east, south and west sides of the Green.

4.13.10 CENTRAL RESERVE (Plan x):

- To be replanted and maintained as the major treed area of the Village, to maintain alpine character, provide recreation environments, and as a general windbreak for the village;
- This area contains the Village Hall, including public toilets, parking area, tennis and petanque courts among surrounding trees, and is to continue as the village focus and the most-developed part of the village reserves;
- New facilities will be added as appropriate, with surrounding trees and connecting paths maintained and enhanced;
- A new toilet block is about to be constructed by the Council, north of the Village Hall;
- The facilities will continue to provide for use by villagers and outsiders as regards the parking area, hall, toilets and courts, both informally and for functions approved by the Committee;
- Signage will be monitored by the Committee as regards both condition and effectiveness, to be maintained, amended or replaced as necessary;
- A pond for winter skating exists in a moribund state, and lacking in shade since the tree removals of 2018. The Committee should decide whether to retain or remove the facility and if retaining it, ensure tree shade is quickly re-established on its north side;
- Apart from previously replanted areas in the south-east of the Central Reserve, previous forests, *mostly Pinus*

contorta, were cleared in 2017 and 2018. The north-west part was replanted but the north-east part held over until the toilet construction is completed. This area will be replanted as soon as feasible;

4.13.11 SH73 RESERVE, MID (Plan 7):

- Mounded areas facing SH73 will continue to have the central purpose of separating the village from passing traffic (noise and privacy buffer), while maintaining glimpses of the village from the road, and providing general recreation and walking areas for the village;
- Existing Signature Trees will be retained except for removals agreed by the Committee/Council;
- A balance between screening of the village from SH73 and allowing glimpses into the village will be maintained;
- Open corridors will be maintained through the trees where shown, to maintain light to neighbours;
- Shrub areas on the SH73 mound will be thickened with new plantings, and extended;
- Grass on the mounds will be kept short to lessen the spread of any fire that might develop;
- The accessway from Frizzell Court will be maintained in a mown and open state;
- The Village Walkway through this area will be maintained in a mown and open state;
- The open drain through the reserve will be maintained in an open and unimpeded state.;
- Request will be made for 'no engine braking' signs on SH73 (all SH73 reserves)

4.13.12 SH73 RESERVE, NORTH (Plan 8):

- Existing Signature Trees on the highway frontage will be retained and new individuals planted where shown;
- At the request of the owner, existing Landmark Trees facing Castle Hill Drive at the main entrance, will be retained;
- A balance between screening of the village from SH73 and allowing glimpses into the village will be maintained;
- Open corridors will be maintained through the trees where shown, to maintain views and light to neighbours;
- Existing mounding on the SH73 frontage will be extended north and around the corner into Castle Hill Drive, as shown;
- Shrub areas on the SH73 mound will be thickened with new plantings, and extended around the corner into Castle Hill Drive as shown;
- Grass on the mounds will be kept short to lessen the spread of any fire that might develop;
- The Village Walkway through this area will be reconnected to the Castle Hill Drive footpath, and maintained in a mown and open state;
- The open drain through the reserve will be slightly re-routed beside the village entrance and maintained in an open and unimpeded state.;
- A request will be made for 'no engine braking' signs on SH73 (all SH73 reserves)

4.13.13 THOMAS RIVER EMBANKMENT RESERVE (SOUTH RESERVE) (Plan x):

- The purpose of this linear Local Purpose Utility Reserve, to keep residential structures back from the edge of the Thomas River embankment for stability purposes, is to be maintained;

- The top of the embankment is fenced to keep farm stock out of the village and there is no public access along the reserve strip;
- The incorporation of parts of this strip into the rear gardens of some residential back gardens is noted. Unless some development may be contemplated, no action on this fencing is needed but to ensure ownership remains with the Council, formal written agreements should be made between the Council and any neighbour occupying reserve land, , acknowledging Council ownership;
- A suggestion exists to form a walkway along this reserve strip, which the Committee should investigate, including legal rights, costs, purpose, and effects on neighbours.

4.13.14 MEMORIAL RESERVE

- This reserve comprises two adjacent lots, allowing foot access from Trelissick Loop to the top of the Thomas River embankment at the boundary between former Stages 2 and 3.
- It also contains underground drainage utilities and amenity trees;
- Currently it is being investigated as the site for Village memorials. Accordingly, no further proposals are made in this Review, until such time as the intentions come to fruition.

4.13.15 THOMAS FOREST ACCESS RESERVE

- In the Stage 4 development a linear access lane was formed between Trelissick Loop, towards its western end, and DOC land along the Thomas River (Thomas Forest). The area has traditionally been used as a swimming hole;
- This will continue to be maintained in a tidy and weed-free state, with minor plantings of native shrubs suited to the DOC reserve margins, where appropriate;
- This lane passes close to houses and the Committee will continue to monitor it for potential nuisance to neighbours, damage or criminal activity
- Direction signage will be maintained at the Trelissick Loop entrance.

4.13.16 LINK STRIP RESERVES:

- For reasons of scale these strips are not itemised on Map x, but their locations are shown on Map 3 and Appendix 2D;
- Their purpose of managing vehicle access to private sections, in accordance with ‘alpine village’ character, is endorsed, and included in Policy 7.5 of this Management Plan;
- It is intended that Link Strip areas be identified through inclusion in this Management Plan and their functioning publicised amongst villagers;
- They should continue to be managed by the Council in conjunction with their adjacent road reserves.

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4.13.17 STAGE 7 RESERVES:

- While a subdivision plan has been approved, no formation works have occurred in this area as of February 2019;
- A management plan for the new reserves in Stage 7 will not be developed until they have been formed and legally established by the Council;

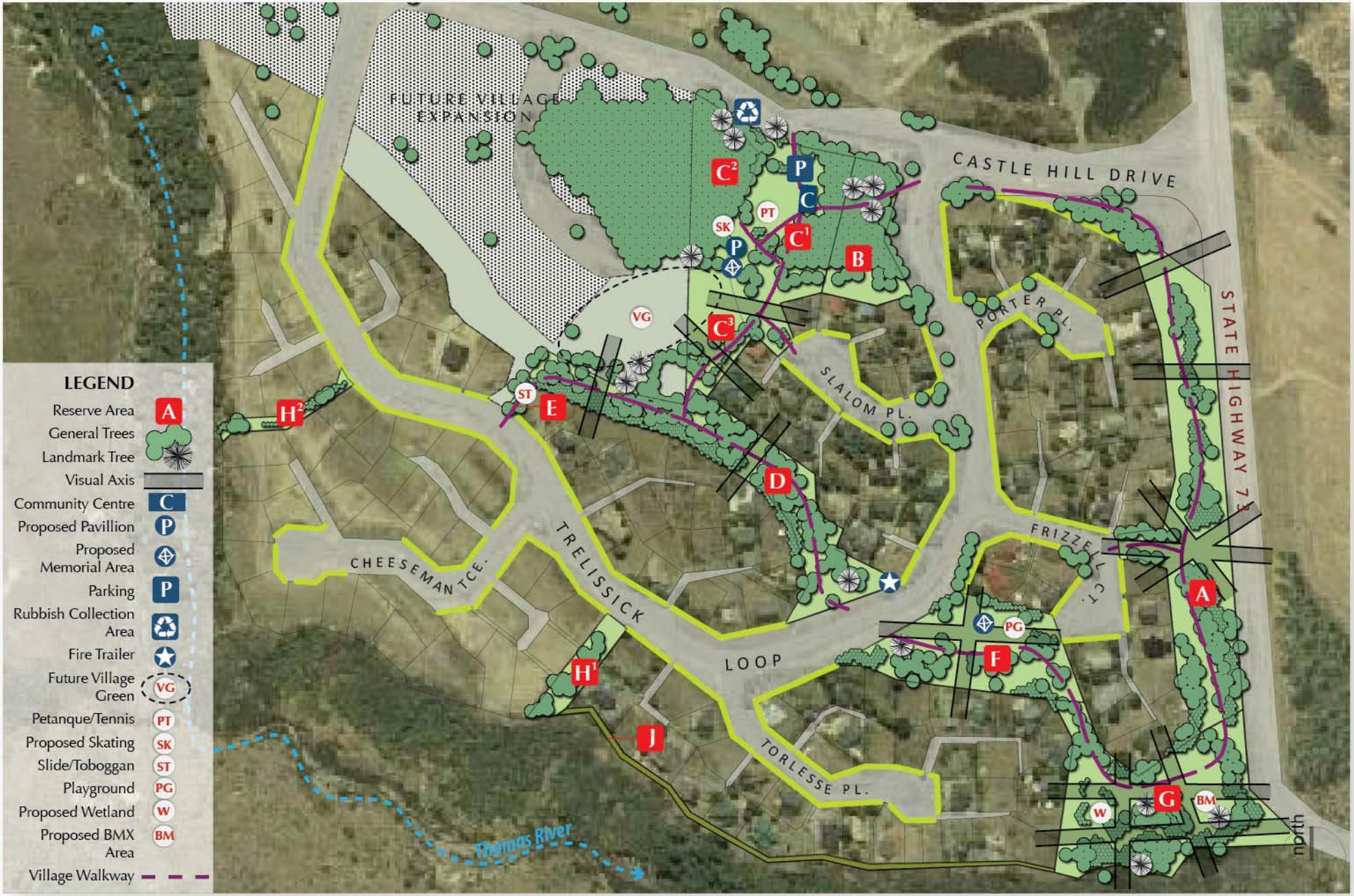
- Although not of linear (spine) form as in the older village, the Stage 7 reserves will as far as possible be formed and managed under similar principles to those of the old village:
- As in Stages 1 – 6, these reserves will be intended for informal uses and not organised sports;
- They will be intended to have significant tree plantings, as far as possible creating alpine character for Stage 7 on the same basis as elsewhere in the village. This however will be constrained by the housing which will surround them on all sides;
- The intention will be to establish wind shelter and alpine character while maintaining views to the surroundings, on the same principles as stages 1 – 6 reserves;
- Tree sizes will be in keeping with distances to surrounding houses;
- Wilding and weed management will be as for the village reserves as a whole, noting the area in its current state is heavily infested with broom;
- The Committee will in due course seek to establish a Care Group for the Stage 7 reserves.

4.14 OBJECTIVES, POLICIES AND PLANS

14.14.1 The principles and intentions of Sections 2, 3 & 4 are gathered in a series of Objectives, Policies and Actions presented as Section 5 of this Plan, and the Summary Action Plan preceding Section 1 of this Plan.

4.14.2 The proposed physical layout and contents of the reserves are shown in the Reserves Management Plans and their descriptions, in s.4.14 following.

NOTE: PLANS FOLLOWING NOT YET UPDATED FROM 2010



MAP 4 | RESERVES DEVELOPMENT PLAN

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5. Objectives, Policies & Actions

The decision-making process of the CHCA Management Committee ('the Committee') is a blend of reviewing historic information and forward planning. The Committee is aware of changes in demand and usage within the reserves. Its intentions and aspirations are incorporated in this Draft Reserves Management Plan (RMP or 'Plan'), which will be subject to public consultation.

5.2 Management Goals

The general management goals for the reserves are:

(1) To maintain the alpine character, visual structure and landscape values of Castle Hill Village in the managing of the reserves and their tree framework;

(2) To provide areas for informal and community recreation which are compatible with the environmental values of the reserves;

(3) To protect and enhance the environmental values of the reserves' unique landscapes.

5.3 Administration

OBJECTIVE 1: To provide efficient and appropriate management and administration of Castle Hill Village reserves for the health and well-being of all users.

Policy 1.1: Castle Hill Village reserves shall be administered under the daily control of the Committee, under the delegated responsibility of the Selwyn District Council.

Policy 1.2 Representation of elected members to the Committee shall be as per the CHCA Constitution, as in Appendix 3B of this Plan.

Policy 1.3: A review of the RMP shall be undertaken by the Committee every seven years, to ensure it remains current and responsive to changing needs.

Policy 1.4: Community consultation processes will be utilised when planning developments, to ensure that expenditure and community views are well supported.

Policy 1.5: Capital and development works and associated expenditure programmes identified in this Plan shall be incorporated into Council Activity Management Plans where appropriate and submitted for consideration as part of the Annual Plan and Long-Term Council Community Plan (LTCCP) process of Selwyn District Council (SDC).

Policy 1.6: The annual reserve rate set by SDC shall fairly reflect the cost of maintaining and improving facilities which the community desires and the Council approves.

Policy 1.7: The SDC recognises the expenditure programmed in the Castle Hill Village Asset Management Plan and aspirations of the RMP when assessing contributions from developers within Castle Hill Village.

Policy 1.8: That the Committee and SDC protect and ensure the preservation of local historical information on the village and reserves, for example original minute books, plans and photographs.

Policy 1.9: That the Committee and SDC ensure coordination of maintenance between reserves and adjacent non-reserve land.

Policy 1.10: That the Committee and SDC ensure Local Purpose Link Strip Reserves are publicly identified and their purpose maintained.

OBJECTIVE 2: Users requiring exclusive use of a building or area of village reserve shall be recognised through a formal lease or licence agreement.

Policy 2.1: Use agreements will include conditions to ensure the recreational, cultural and aesthetic values of the reserves, their character, and the RMP, are recognised, protected and maintained.

Policy 2.2: The type and number of users will be managed to ensure maximum enjoyment of the reserves whilst protecting existing values and minimizing conflict with other users.

Policy 2.3: The Committee will monitor community activities on an ongoing basis to ensure lease/licence conditions are adhered to.

5.4 Reserves Use

OBJECTIVE 3: To provide for a variety of informal recreation activities in the reserves and identify opportunities for improving or expanding activities in response to changing community needs and recreation trends.

Policy 3.1: To maintain, enhance and develop the range of informal and organised recreation opportunities within the reserves.

Policy 3.2: To provide for a variety of recreational activities while respecting the needs and values of all reserve users and neighbours.

Policy 3.3: To continue to investigate and provide for appropriate additional recreational opportunities within the reserve.

Policy 3.4: To permit the exercising of dogs according to the SDC Dog Control Bylaws 2006 and the particular conditions of Castle Hill Village, stated in s.4.3.7 – 4.3.10 of this Management Plan.

Policy 3.5: Encourage short term village events such as temporary carnivals and sports days subject to the Committee's discretion, where:

- significant activities are conducted according to a formal use agreement for the event, including provisions for ablutions, health and safety, traffic management, car parking, noise, refuse and reinstatement of damage; and

- there is full compliance with all use agreement conditions allowing the short-term special event.

Policy 3.6: Activities and developments will occur in accordance with Map 4 'Reserves Development Plan' of this RMP, and with the RMP generally.

Action: (not yet updated)

Initiate funding and establish an all-weather gravelled footpath circuit within the reserves, as on Map 4 of this RMP;

Provide a BMX bike area in the South-East reserve;

Provide a Pond/Skating Area in the Village Forest reserve.

OBJECTIVE 4: Ensure levels of service for existing recreational facilities for informal users are maintained.

Policy 4.1: The Committee shall conduct an annual audit of levels of service for informal users to ensure these are being maintained.

OBJECTIVE 5: Ensure developments planned for the reserves give consideration particularly to village recreation needs while also considering wider district and regional users.

Policy 5.1: That reserve developments are appropriate for village patterns and needs and district and regional needs also are provided for.

OBJECTIVE 6: Ensure that crime prevention through environmental design (CPTED) principles are applied within the reserves while also ensuring maintenance of village environmental character remains the primary objective.

Policy 6.1: The Committee shall continue monitoring all usage, maintenance and developments for CPTED compliance, within the stated character aims of the reserves.

5.5 Landscape

OBJECTIVE 7: Maintain the alpine character and visual structure of the village in all reserves.

Policy 7.1: As far as possible to extend the amounts of reserve created during village expansions so they comprise 17.95% of village land as provided for in the original village approvals.

Policy 7.2: To plant, create, maintain and enhance trees, open areas and facilities in reserves which reflect the alpine character envisaged by the village founders and are suitable for today's needs.

Policy 7.4: To ensure alpine character throughout the village by coordinating reserves management with that of adjacent streets and open areas.

Policy 7.5: To maintain and publicise the system of Link Strip Reserves in the village and extend them in all future village expansions.

OBJECTIVE 8: Manage, protect and enhance the natural and cultural values of the reserves for users, neighbours and village residents.

Policy 8.1: To maintain and develop treed and open areas in the reserves with consideration to function, site conditions and landscape character, including:

- providing sufficient shade and shelter for reserve users;

- ensuring neighbouring houses are not unduly shaded in winter;

- maintaining defined open areas and visual corridors as recreation spaces;

- enhancing wildlife habitat and biodiversity

Policy 8.2: To maintain a programme to control plant and animal pests listed in the Canterbury Regional Pest Management Strategy 2005-2015, (Environment Canterbury), including:

- immediately removing all *Pinus contorta* trees from reserves and streets in the village and retaining European larch, Douglas fir and other pines until replacement species are planted and grown;

- surveillance for and removal of wilding seedlings on the ECAN list within village reserves and streets;

- surveillance for and requiring the removal of wilding seedlings on the ECAN list from private land within the village;

- Maintaining a 'Good Neighbour' programme to monitor spread of wilding seedlings from the ECAN list on properties neighbouring the village, and where they originate from village trees to cooperate with the owner in their removal;

- Cooperation with SDC on identifying and removing broom and gorse from reserves, streets and private land in the village.

Policy 8.3: To enhance the numbers and range of indigenous flora and fauna in the reserves by:

- Increasing the proportion of indigenous plants in reserves and streets;

- Increasing the numbers of trees that provide food sources for birds in the village, and retaining large trees that provide nesting sites;

- investigating and if appropriate, establishing an area to increase the numbers of rare plants listed in Appendix 4 in reserves plantings;

Policy 8.4: To plant future reserves trees and shrubs according to the recommended Species List in s.4.10.9, and to develop and upgrade that list from time to time;

Policy 8.5: For the benefit of property owners, to maintain on the village website a more-extensive list of plants suitable to the village, including cultural and size information and illustrative pictures.

Action: (not yet updated)

- Establish funding to create a wetland in the South West Reserve
- Establish and maintain a Weed & Pest Management programme and coordinate with ECAN & DOC in its implementation.

OBJECTIVE 9: Implement a strategy for tree and shrub maintenance and replacement in the reserves.

Policy 9.1: To maintain and develop the tree stocks of the reserves with a view to long-term stability and the development of magnificent trees appropriate to their locations, while equally, providing for replacements, appropriate to their location, for all trees removed;

Policy 9.2: In association with village and SDC arborists, to maintain regular surveillance of village trees, to ensure their health and stability;

Policy 9.3: To maintain the Committee's Tree Removals application system for considering individual applications to remove or replace trees in the reserves, including reference of all decisions to SDC for approval, before actioning;

Policy 9.4: To maintain and replant reserves trees and shrubs in locations and of types shown on the Reserves Management Plan (Sectors) for that area, found in s.4.13 of this Management Plan;

Policy 9.4: To maintain a system of Recession Planes, Tree categories and Light Corridors for managing the shading of houses by reserves trees, as in s.4.10.9 of this Management Plan;

Policy 9.5: As far as possible, to maintain views and outlook from residential areas by maintaining a system of planted wedges and View Corridors among reserves trees, as shown on the Reserves Management Plans (Sectors) in s.4.12 of this Management plan, while not guaranteeing panoramic views, or any particular view, for some houses;

Policy 9.6: To plant, monitor and maintain trees, shrubs and open areas appropriate to the Fire Risk Management Programme for the reserves, in Objective 10 below.

Action: (not yet updated)

Provide funding for a tree assessment to industry standards by a qualified arborist that:

- Undertakes an arboricultural assessment of reserves trees
- Undertakes in the short term removal of deadwood, broken limbs and defects through remedial pruning.
- Undertakes a fire risk review, prepares a **Fire Risk Management Programme** and makes this available for tree maintenance programme planning.
- Co-operates with Environment Canterbury, DOC and neighbours on management and removal of wildings and pests.
- Establishes a programme of tree maintenance and replacement plantings (**Tree Maintenance Programme**) that is integrated with the Reserves Development Plan (Map 4 of this RMP), Reserves Tree Plan (Map 5) and Tree Area Plans (Maps 6.1 – 6.4);
- Develops a **Castle Hill Village Plant Species** List of indigenous and exotic plant species ecologically and historically appropriate to the reserves.
- ;

OBJECTIVE 10: Ensure public safety by maintaining the trees, shrubs and open areas of the reserves to minimise risks.

Policy 10.1: Avoid tree species prone to breakage from wind or snow, aggravating of pollen allergies or liable to cause injury from thorns or poisonous properties;

Policy 10.2: Maintain tree and open areas free of litter and long grass, minimise fire-accelerant species and promote fire-retardant species, to minimise fire spread;

Policy 10.3: Establish tree groups and open spaces patterns to as far as possible contain any fires that may occur;

Policy 10.4: Maintain fire equipment and personnel capable of fire-response to any reserves fire.

5.6 Services, Structures & Facilities

Objective 11: Enhance informal recreation within the reserves by providing appropriate facilities, structures and services.

Policy 11.1: Maintain existing facilities and provide further facilities where appropriate to enhance informal recreational areas – for example picnic tables and seating;

Action (not yet updated)

- Establish a BBQ area near the tennis courts;
- Establish a Pond/Skating Rink near the tennis Courts;

Objective 12: Ensure the scale, design, siting and maintenance of reserves services, structures and facilities are appropriate for village activities and the alpine character.

Policy 12.1: The Committee to consider all development proposals and monitor all activities to ensure they are appropriate to neighbours, the visions for the reserves, and the alpine character;

Policy 12.2.: Maintain and develop signage according to the style developed for the village;

Policy 12.3: That no fences be erected in the reserves except as necessary for safety;

Policy 12.3: Memorials to be located in the proposed Memorial reserve, except seating, which may be in other appropriate areas, with the approval of the Committee.

Action: (not yet updated)

- Establish memorial structures in the Village Centre and Playground.

Objective 13: Ensure the reserves are accessible to and enjoyable for users with a range of mobility and physical capacities

Policy 13.1: To ensure the reserves do not inadvertently exclude or detract from the enjoyment of disabled users;

Policy 13.2: That improvements be undertaken to provide for disabled access, within the limitations of the alpine character of the village.

Action:

- SDC to coordinate with the Committee in arranging for a disability audit and its periodic monitoring.

Objective 14: Ensure the reserves remain free of motor vehicles and their effects.

Policy 14.1: Motorised vehicles including motor bikes, quad bikes, motorised snow vehicles and electric vehicles shall be excluded from the reserves except for bona fide service and emergency vehicles;

Policy 14.2: Motorised toys including drones be permitted in reserves so long as operated according to all laws, including aviation laws, and without nuisance or damage to reserves users or neighbours'

Action:

- SDC to audit problem areas and add discrete barriers if necessary.

Objective 15: Provide and maintain play equipment catering for a range of ages and compliant with NZ Standard 5828:2004, "Playground Equipment and Surfacing", and continue to monitor and maintain equipment to the standard that related to the date of its installation.

Policy 15.1: Existing playground equipment shall comply with NZS 5828:2004 and ongoing inspections will be undertaken to ensure any required maintenance is completed to achieve ongoing compliance.

Policy 15.2: Maintain plantings around playground areas to retain openness and clear visibility while also maintaining shade and shelter.

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APPENDICES YET TO BE UPDATED.

OMITTED FOR AGM