



# Assessment of Landscape Effects

Prepared for Porters Ski Area Limited  
By Boffa Miskell Limited • July 2010

PORTERS  
PROPOSED

Ski Area Expansion ■



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PROPOSED PORTERS SKI AREA EXPANSION  
Assessment of Landscape Effects

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## **1.0 INTRODUCTION**

This Assessment of Landscape Effects Report has been prepared as part of the Assessment of Environmental Effects (AEE) for the proposed Porters Ski Area Expansion. It forms part of the documentation associated with a request for a private Plan Change to the Selwyn District Council's District Plan, to provide for the upgrading and expansion of the existing Porters Ski Area and development of a Mountain Village. Currently the land is zoned Rural High Country. The proposal is for the creation of a new Ski Area Sub-Zone. The main elements of the proposal provided for in the Plan Change include redevelopment of the existing Porters Ski Area and its expansion into the adjoining Crystal Basin; a new Mountain Village with accommodation, commercial activities and servicing for staff, permanent residents and visitors, other recreation activities as well as ecological and landscape enhancement.

This report describes the natural character, landscape and amenity values of the site, the ability of the landscape to absorb change and the landscape effects on the environment of the changes provided for in the plan change.

It also identifies a number of landscape controls or assessment matters that should be incorporated into the proposed plan change to ensure that all potential landscape issues are properly addressed. That is to say that not only should all potential adverse landscape effects be appropriately avoided, remedied or mitigated; but also that the landscape aspects of the development including the design and layout of buildings and the public realm, and the mitigation and enhancement planting are responsive to the high country setting in general and the site in particular.

### **1.1 Location**

The Porters Ski Area (Porters) is situated in the upper catchment of the Porter River. It lies in a northeast-facing basin at the south eastern end of the Craigieburn Range in the Canterbury front ranges, bounded by the Porter River to the east and Lake Coleridge Basin to the south.

The Ski Area is accessed off the West Coast Highway (SH 73), which connects the East and West coasts of the South Island, through the Southern Alps and is one of the South Island's main tourist routes. Porters is located 90km from Christchurch, which is approximately a 60 to 90 minute drive from Central Christchurch. The highway crosses Porters Pass, which is

the highest mountain pass in New Zealand (at rl 942). Shortly after the descent from Porters Pass, the Ski Area road turn-off is reached, followed by a 6km gravel access road along the Porter River. At the head of Porter River, which forms the western boundary of the site, Coleridge Pass divides the Waimakariri and Rakaia River catchments.

Figure 1 Location map of development site including the existing Porters ski field

The Ski Area is located on and adjacent to the Porter Heights Conservation Area and the Castle Hill Retirement Area which are managed by the Department of Conservation. This area borders the Korowai- Torlesse Tussocklands Park to the south and Glenthorne Station to the west.

## **1.2 The Landscape Context**

Porters occupies the southern end of the Craigieburn range, with the Craigieburn Ski-field at the northern end of the mountain range. This section of the report addresses the main landscape types and features surrounding the proposed development Area.

Fig 2: Map shows DOC managed land and landscape features of interest that form the landscape context for the development site.

### **1.2.1 Craigieburn Range**

The Craigieburn mountain range forms part of the Canterbury front ranges and is characterised by steep hard rock slopes with scree-dominated faces. It is an important landscape feature on the eastern side of the Southern Alps. Long Spur and Dead Man Spur are prominent spurs, which extend out from the axis of the Craigieburn Range to link down to the terrace that sits above Castle Hill Village to the north. Main ridgelines and faces are largely non-forested with a natural pattern of scree, shrub land and tussock land. Leith Hill is located in front of the Craigieburn Range in proximity to Castle Hill Village. The prominent rounded hill with vegetated slopes contrasts with the rocky range behind.

### **1.2.2 Torlesse Range**

The underlying base rock leads to prominent bluffs and rock outcrops along the ridges of the Torlesse mountain range, which has a more complex visual character than the Craigieburn Range. The Gap is a distinctive landform of the Torlesse Range when viewed from either within the basin, or from the Canterbury Plains.

Tertiary sediment deposits, such as weakly consolidated sandstones and mudstones, have formed the hills above Whitewater Stream and the Porter River. This part of the landscape provides an important landscape linkage from the remote and rugged Craigieburn Range to the flats of the basin. The river terraces are the visual foreground for the slopes rising behind. This part of the basin has high natural character values due to the absence of structures, woodlots and cultivation patterns.

### **1.2.3 Lake Lyndon and Lake Pearson**

Lake Lyndon is a shallow tarn of glacial origin, formed by the build up of post-glacial fans, which blocked small local streams, and is similar to other lakes in the area. Lake Lyndon has ecological and recreational values, and is popular for fishing in summer and ice-skating in winter. Lake Pearson lies in the trough of a former glacial ice stream, which split off from the Waimakariri glacier near Cass. The various alluvial fans around the lake now block drainage and have formed the hourglass shape of the lake.

### **1.2.4 Castle Hill Basin**

Castle Hill Basin is a low depression bounded by fault lines along both the Craigieburn and Torlesse mountain ranges. It extends from the base of Porters Pass to the Craigieburn River and features prominent outcrops of limestone that are scattered throughout the basin and are seen from SH 73. The Castle Hill Basin is considered to be a “classic area of Canterbury geology” (Hayward and Boffa 1972: 67). Spectacular outcrops occur along the lower Porter River and to the northeast of the Cave Stream tributary of Broken River, with the most prominent and unique formations protected within Kura Tawhiti Conservation Area. The protected limestone rock outcrops are considered to be landscape icons of New Zealand with natural features of national, regional and local importance. The conservation area is also of significant cultural value, as it was a part of the Maori trail and campsite network on their food gathering journeys through the area as early as 600 years ago. Kura Tawhiti is considered a treasure (taonga), which was derived from the gods and left by the ancestors to provide and sustain life. The various rock art (estimated at 500 years old) and other archaeological artefacts found on this site contribute to the importance of this site for Ngai Tahu.

Cave Stream Reserve protects a 362m long cave, which sits among spectacular limestone outcrops. The cave is a significant tourist attraction, as it can be easily accessed by the public.

#### **1.2.5 The Site**

The site (refer to ODP figure) is located at the southern end of the Craigieburn Range and its primary focus is the existing Porters Ski Area.

It covers an area of 616.6ha comprised of:

Porters Ski Area – 329a

Porters Village – 21.2ha

Crystal Valley Basin - 232ha

The Northern Terrace – 34.8ha

#### **1.2.6 The Existing Porters Ski Area**

The existing Porters Ski Area was formerly part of Castle Hill Station and was retired from grazing prior to its use as a ski field in 1968.

It operates 7 days a week in the winter ski season which typically runs 90 – 100 days per year from the end of June to early October. It currently operates 5 ski lifts, 3 t-bars, 1 novice's platter lift and a beginners carpet lift. These lifts provide access to 206ha of skiable area within the Porters Basin. The base of the skiable area is at approximately rl1300 and the top of the mountain is at rl1980.

The most well known run is Big Mama which has a vertical drop of 680 metres. This is the largest single descent on a commercial field in the southern hemisphere.

Additional “out of bounds” skiing is undertaken within the adjacent Powder Bowl and Crystal Basin. Powder Bowl is located on Glenthorne Station. The larger Crystal Basin to the north is under the management of DOC and is not grazed.



The current Porters ski facilities have a comfortable carrying capacity of approximately 1,000 skiers per day. Skier day visits reached a high in the 1996 season of 35,000. Last year (2009), numbers reached 32,900.

Access to the current base area is via a winding gravel road which is reasonably comfortable compared to most other ski fields in the South Island but nevertheless is not at a standard that many international visitors find acceptable.

Accommodation on the mountain is limited to a ski club lodge with 42 beds and a separate staff quarters with 16 beds. (Currently Porters employs 3 full time staff and a further 2 full time equivalents throughout the year and 45 casual staff over the winter period.)

### **1.2.7 Geology and Topography**

The Craigieburn Range comprises greywacke and argillite of the Torlese Group. The slopes are steep and weathered as a result of glacial and post glacial erosion. The highest parts of the site are around rl 1980 asl, and the level at the Porters River is approximately rl 900 asl. On this site, the terrain is largely bare rock screes above the 1200m contour line. Both alpine basins – Crystal Basin and Porters Basin provide appropriate terrain and aspect to support a commercial skiing operation.

### **1.2.8 Waterways**

A number of tributaries and small watercourses drain Porters and Crystal Basins. Several are well formed and permanent – Porter Stream and Crystal Stream. Most are ephemeral. The main waterway is the Porter River which rises at Coleridge Pass and drains into Broken River downstream from the site.

### **1.2.9 Vegetation**

The Ecological Report prepared by BML for this project describes and evaluates the ecosystems, habitats and species within the site. The report identifies 11 vegetation and habitat types.

The dominant vegetation type of the Southern Terraces where it is proposed to locate the Village Centre is described as Dracophyllum – tall tussock shrubland. The main species include Dracophyllum acerosum and Chionochloa flavescens and Chionochloa macra.

The dominant vegetation type of the Northern Terrace is *Dracophyllum* – tall tussock where it is proposed to locate the waste water treatment system. The pattern of depressions which appear to be overland flow paths do not contain any different vegetation than other parts of the terrace.

The Ecological Report also covers vegetation patterns over the entire site as well as non-vegetated habitats, terrestrial fauna, birds, invertebrates, reptiles and aquatic habitats.

#### **1.2.10 The Proposed Porters Mountain Village**

The proposal is to seek a private plan change to provide for the development of the existing Porters Ski area and the neighbouring Crystal Basin; with accommodation for staff, permanent residents and visitors at an all season mountain village, access from the village to the ski areas other than by road; a mixed use Village Centre; active and passive recreation activities; and ecological and landscape restoration and enhancement.

The proposed village will cater for a mix of visitors ranging from the current Christchurch and Canterbury based visitor mix as well as from New Zealand, Australia and elsewhere.

The proposal includes the upgrading of the existing ski area and the expansion of ski terrain into the adjoining Crystal Basin. In all the plan change contemplates an increase in the lift serviced ski terrain from 188ha to 525ha which equates to an increase in comfortable carrying capacity from 1,000 skiers per day to approximately 5,000 per day.

The plan change also provides for approximately 3,400 visitor beds within a range of accommodation types including serviced apartments, chalets and hotel style bedrooms; and staff units of approximately 214 bed units. Carparks to service day visitors and overnight guests will total approximately 2,033.

The recreation activities enabled in the plan change are not limited to snowboarding and skiing. A range of recreation activities could be undertaken including snow tubing, ice skating, hot pools, tennis, mountain biking, walking trails and a childrens playground.

In summary, the purpose of the proposed new Ski Area Subzone is to provide for:

- 1) The upgrade and continuing use of Porters Ski Area and expansion into the adjoining Crystal Basin;

- 2) A new Mountain Village where visitor accommodation, permanent residences, staff housing and associated commercial activities are to be located;
- 3) Improved access to the ski field by avoiding reliance on the existing access road;
- 4) Upgrading of the existing Access Road and further roads to service the new Village;
- 5) A waste water disposal area and enhancement planting of indigenous vegetation on the Northern Terrace.

The earthworks, buildings, roading, ski field infrastructure, planting and servicing aspects of the proposal could create actual or potential adverse landscape effects on the receiving environment. As part of the iterative landscape assessment and design process for this project a number of landscape issues were identified and considered early in the planning and design process.

#### **1.2.11 Potential Landscape Issues**

From a landscape point of view, when considering the planning and design of the project it is important that:

- 1) Potential views from SH73 and the Midland Railway line are considered;
- 2) Building site coverage is kept to a minimum and where appropriate multilevel structures are considered;
- 3) The layout of the village is kept as compact as possible, and techniques such as clustering of buildings are considered;
- 4) The Village Centre in particular should achieve high densities while providing for a usable and attractive public realm;
- 5) All buildings should be sited and designed to blend in with the High Country landscape;
- 6) Building materials, colours and reflectivity should be restricted to ensure compatibility with the rural high country environment.

- 7) The built components of the development including buildings, fences and roads should project a High Country character and should avoid elements and patterns that are more typical of suburban environments;
- 8) The Village Centre should include a prominent focal building which overlooks a village square of minimum dimensions of 30m x 30m. The town square should be located and designed to ensure that it is attractive in scale, aspect, convenience, character and comfort;
- 9) All areas disturbed by earthworks in the vicinity of the Village should be subject to a restoration plan using indigenous plants suitable for the area;
- 10) The planting pattern and species make up of plants used in restoration should reflect topographical patterns and microclimate suitability;
- 11) Where practical, tussocks that are to be disturbed by earthworks should be set aside and reused in mitigation and restoration planting;
- 12) Existing landscape patterns within the Village and the waste water disposal areas that resemble overland flow paths should as far as practicable be retained and landscaped;
- 13) The masterplan should include walkways through the village area to provide alternative walking routes to any roads;
- 14) Any ski field day lodges should be located within sites that are not prominent;
- 15) Potential views of new roads and ski trails should be considered.

## **2.0 ASSESSMENT METHODOLOGY**

### **2.1 Methodology in brief**

Step 1 - On-site investigations, landscape analysis and division of the development site and surrounding area into distinct landscape character areas; assessment of natural character and landscape and visual amenity values for each landscape character;

Step 2 - Site visibility evaluation using a 3D computer software package (K2Vi) and confirmation of the potential pattern of visibility by on-going observations;

Step 3 - Determination of landscape absorption capability for each part of the site;

Step 4 - Recommendations for:

- a. The layout and design of the proposal; and
- b. For policy, standards and rules, provisions to ensure that the nature and quality of the landscape effects of changes that could result from the proposed plan change are appropriate for both the sustainability of the proposed activities and for the receiving environment.

Step 5 - Assessment of potential landscape effects;

Step 6 - Recommendations.

#### **2.1.1 Existing landscape character and values**

##### **Landscape Character**

Landscape character is the distinct and recognisable pattern of elements and processes that occurs consistently in a particular landscape. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. These combinations create a sense of place for different parts of the landscape.

For this project, a detailed landscape investigation was undertaken to prepare a preliminary resource study document for the proposed development site and its surroundings in 2007. The landscape character descriptions in this report are based on the findings from the

resource study, but refined for the areas relevant to the proposal. Common patterns in the landscape are highlighted and the biophysical, visual and cultural characteristics are described.

## **Value Assessment**

The value assessment was based on findings from the landscape analysis carried out on site. The existing natural character, landscape and visual amenity values of the landscape included in the development area were assessed for each one of the landscape character areas affected by the proposed development.

### **2.1.2 Analysis of visibility**

To assist the analysis and evaluation of visibility a 3D computer model was generated using the K2VI software package. The 3D computer-model was used to identify points in the surrounding land from which proposed buildings and structures may be visible. The software provides the ability to 'fly' around a site and view landscape character units from any selected viewpoint in the model. The results are only as accurate as the data used to construct the model and require careful interpretation. The model is based on 2 to 5 metre contour intervals within the site and the immediate surrounds and 20 metre contour intervals elsewhere. K2VI images are generally used for analysis purposes only because they are not up to the presentation standards of visual simulations. Existing vegetation on site and on surrounding land was not modelled. However, due to the limited extent of screening vegetation in the area the computer generated model is a useful tool to assess actual visibility. The results were interpreted for each part of the preliminary development proposal and the extent of visibility was assessed in detail (high – moderate – low visibility). Aerial photographs and 2 - 5m contour data specifically surveyed for this project (May 2007) were provided to BML by the client. Buildings, roads and lift lines and ski trail areas were modelled.

The results from this analysis were then used to help identify areas for detailed site investigation. Results from the analysis of the 3D model from SH73 viewpoints were checked during on-ground investigations. Photographs from four key viewpoints along SH73 are attached to this report.

Since the majority of public views to the proposed development will be from the West Coast Road (SH73), the analysis of the experience from this route is described in detail (in section 5).

### **2.1.3 Assessment of potential landscape effects**

Natural character, landscape and visual amenity impacts can result from human induced change in the components, character or quality of the landscape. Usually these are the result of landform or vegetation modification or the introduction of new structures, facilities or activities. However, the process of construction itself also has impacts - distinct from those generated by a completed development. These impacts are also assessed to determine their potential effects on natural character and landscape quality and visual amenity.

In this report the assessment of potential effects is based on consideration of a combination of the landscape's sensitivity and visibility and the nature and scale of the development proposal. The character, value and visibility of the landscape are factors that determine the ability of the landscape to absorb change, which has been assessed. The results from the assessment of effects on the landscape lead to a conclusion about the suitability for the site for the proposed development. Cumulative effects of the proposal and existing modifications were also taken into account.

### **2.1.4 Recommendations**

Based on the findings from the landscape assessment and the potential of the landscape to absorb change, advice was given to the project designers and masterplanners about the nature and extent of change appropriate for the site. Landscape issues and design criteria that need to be considered at the design stage were highlighted to assist with development of the rules, standards and provisions to be included in the Proposed Plan Change relating to landscape and visual effects.

The likely effects of the construction and operation of the proposed development on the landscape and natural character values of the site were assessed and recommendations for avoidance of effects and mitigation provided (see section 5).

## **2.2 On-site investigations**

Six site visits were undertaken in 2007 and four for the preparation of this landscape assessment report (in February, April and May 2010). The site investigations included three helicopter flights, which helped to provide an appreciation of the relationship between visually separated mountain basins and ridgelines from an aerial perspective. A full photographic record has been established from the site investigations and viewpoints have been recorded by GPS. Results from the visibility analysis using the 3D model were checked during site visits.



### **3.0 EXISTING LANDSCAPE CHARACTER AND VALUES**

#### **3.1 Wider Landscape Values**

The wider area around surrounding the development site at the south eastern end of the Craigieburn Mountain Range comprises typical landscape features of the Canterbury foothills, such as erosion prone apparently bare scree slopes, alpine basins with distinctive ridgelines and low lying vegetated fans and incised watercourses.

A large area of land around Craigieburn, Torlesse and Big Ben Mountain Ranges has been identified as an Outstanding Natural Landscape in the Selwyn District Plan<sup>1</sup> and in the Canterbury Landscape Study (BML and Lucas, 1993). This includes the entire development site and the existing ski field. The High Country has outstanding landscape values compared to the more intensely farmed and settled plains areas in the Selwyn District. However, it is acknowledged that the High Country landscape has also been modified by human activities, particularly pastoralism and ski field development. The more modified areas contain features such as improved pasture, small-scale earthworks associated with tracks, fence lines, water supplies, huts and ski tows. The site is located in one of the more modified parts of the Outstanding Natural Landscape in the district, as it contains a quarry, lodge buildings, the ski field access road, a water storage reservoir, carparking areas, a cafe and lifts. The earthworks and structures required for the ski field development have also led to a reduction in natural character, but they do not dominate this large-scale landscape or diminish its high aesthetic value.

The Craigieburn Mountain Range forms a relatively homogenous landscape with bare scree slopes along the tops, shrubland on fans and gullies, and mixed tussock grassland on low-lying river terraces. While the dramatic High Country landscape does not provide a high level of visual diversity, the ridgelines and basins form a distinctive pattern. Eroded scree slopes dominate the landscape character, and rocky outcrops along the ridges and variation in vegetation patterns between gullies, fans and terraces add visual interest. The ridgelines are very distinctive and views to skylines are more significant in this bare landscape than in vegetated environments which have more diversity.

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<sup>1</sup> Based on High Country Section- Landscape Recommendations, prepared for Selwyn District Council by Graham Densem (November 2001)

The mountain ranges surrounding Castle Hill Basin provide an impressive backdrop when experienced from State Highway 73. Their appearance changes with the seasons and snow on the tops can be seen as far as the east coast of the South Island. Transient values of the foothills include spectacular weather changes, such as northwesterly clouds and the change of colours in different seasons and light. The area is well recognised by both New Zealanders and tourists passing through the area. Several attractions are located within the Castle Hill Basin, such as Cave Stream and the rock outcrops at Kura Tawhiti/ Castle Hill. The distinctive High Country landscape is recorded in writings, paintings and photographs.

Outdoor recreation activities are popular in the wider area. These activities include hiking, mountain biking, rock climbing, fishing, passive recreation and skiing. Several conservation areas managed by DOC are located in proximity to the project area. Accessibility to these areas varies, since not all of them are located adjacent to public roads.

### **3.2 Existing Porters Ski Area and proposed development site**

Access to the Ski Area is off SH73, south of the crossing of Dry Stream. After the turnoff the gravel road passes an operational limestone quarry before entering the Porter River Valley. The road runs parallel to the river, elevated more than 50m above the river for much of the way. Then it drops down to cross the river bed just before approaching the existing staff accommodation block and the ski club lodge. The river is crossed with a culvert and the road rises to the Southern Terrace, where the existing two buildings are located.

The terraces, which have been built up with coarse fan material are now incised by Crystal Stream, a tributary of the Porter River. On aerial photographs the outline of the former fan originally created by the stream is visible. By cutting into the fan material, steep river terraces have been formed, which now separate the true right and left toe slopes.

From the lodge buildings a gravel access road zig zags up to the existing ski field. The road crosses the lower, north facing slopes of Porters Basin. Below the car park a water storage pond is located for snow making purposes. The ski field is confined to the north-east facing slopes of Porters Basin. It consists of three tow bar lifts and a cluster of buildings at the base of the field. The buildings contain a ticket office, cafe and staff quarters

The slopes of the ski field have been graded in some areas and access tracks are visible on the scree surface.

The proposed development will be located across several landscape character areas, each with distinctively different landscape characteristics and levels of modification. 7 landscape character areas (as shown in Figure 3) have been distinguished and are based on visual catchments and general landscape characteristics. This section provides a description and analysis of landscape character attributes, such as visual and cultural attributes, connections and transitions; and values, such as natural science values, legibility and aesthetics. A photograph of each landscape character area illustrates its characteristic features.

Landscape character and values of the following 7 units are described in detail below:

1. Porters Basin
2. Porters Basin lower slopes
3. Southern Terrace
4. Crystal Basin
5. Crystal Stream
6. Porter River
7. Northern Terrace

Fig 3: The map shows the landscape character units that will be affected by the proposed development. The following sections provide descriptions of these areas.

See photos of each landscape character unit in the graphic attachment

### **3.2.1 Porters Basin**

Porters Basin is the cirque basin which contains the existing Porters ski field. It is located east of the main ridge of the Craigieburn Range (1980masl) and is visually contained by the spurs to its north and south. Similar to other hanging glacier basins in the area, it flattens out along the shoulder of the mountain range at an altitude of approximately 1300masl. The tops of the primary ridges and the upper slopes of the basin are bare, while the lower slopes have low shrub vegetation. Some rock outcrops along secondary ridges of the basin add visual diversity to the otherwise homogenous scree slopes which dominate the landscape character area.

The Basin is accessed via an unsealed ski field road, which zig zags across the slopes below the Basin. The existing ski field facilities are located at the flat bottom of the Upper Basin. These facilities include several small-scale buildings, (the café and ticket office), the

main car park and the base station of the lift. Some slopes of the Basin appear to be partially graded, and a 4 WD track to the top ridge is visible in the scree. In comparison to the earthworks for the ski field access road and the car park, other apparent modifications within the Basin are minor in scale. Currently, three tow bar lifts access the upper slopes of the Porters Basin. One long T bar lift runs from the car park towards the main ridge with the top station located at around 1600masl, as shown in the photo above. From there the bowl below Blue Hill (1946 masl) can be accessed by two shorter T-bars to the south.

In the absence of snow the existing structures visually blend in with the environment due to their design, colour and scale. A water storage lake for snowmaking is situated below the carpark. When viewed from below, the small dam of the lake cannot be distinguished from the surrounding scree slopes, and the contrasting colour of the water surface is highly visible only when viewed from above.

The natural character of the Upper Porters Basin has been modified by the existing ski field facilities. However, they are comparatively small in scale and the distinctive ridges and bare scree slopes of the mountain basin still dominate the landscape. The ski field access road on the lower slopes has affected the visual amenity more than the ski field in the upper basin. Visual diversity of the landscape character area is relatively low and the few rock outcrops between the bare scree slopes are attractive features. The contrast of the major ridges with the skyline is an important visual attribute of this landscape. The extension of the southern ridgeline leads to Coleridge Pass (1134 masl), which forms the boundary to the Rakaia River catchment. This is the main ridge that forms the skyline when viewed from the north on the West Coast Highway (SH73).

The erosion processes are highly legible in this landscape. The expressiveness values of the alpine environment reflect its simplicity. Seasonal changes, snow cover on the tops in particular, are transient values that are an integral part of the landscape character of the Craigieburn Range.

### **3.2.2 Porters Lower slopes**

The slopes below Porters Basin (see previous landscape character area) drop relatively gently towards the Porter River. The slopes are dissected by a secondary ridge which separates two small creeks on either side. The Porter Stream is a tributary to Porter River which flows throughout the year. The stream north of the secondary ridge appears to be

ephemeral. This stream in the north also appears to spread out beyond one channel in its lower section forming what BML ecologists have called a wetland. The southern stream runs parallel to the lower part of the ski field access road.

This secondary ridge forms a landscape feature within the Basin. Below this ridge the lower slopes are flatter and are covered with dense alpine scrub and snow tussock.

The upper slopes are visually contained by spurs dropping from the alpine Porters Basin to the low-lying Porter River. The ridge between the Porters and Crystal Basins flattens out before terminating above the toe slope fans (Southern Terrace), where the existing ski field lodge is situated. The lower part of the Porters Basin is located in a very contained visual catchment. Within the lower part of the Basin the views out towards Castle Hill are very limited due to the prominence of the ridge dividing Crystal and Porters Basins. The southern side of the Basin is defined by broad scree slopes supporting a few patches of vegetation. The ski field access road cuts across the lower part of these scree slopes, which has lead to very obvious scarring.

The visual contrast between the bare scree ridges and the vegetated parts of the inner slopes is significant. This contrast produces a higher level of visual diversity within this landscape character unit than in the more alpine parts of the study area. Porter Stream has been largely unmodified above the ski field road crossing, but the vegetation on the banks contains exotic species. The main visual impact has been caused by the ski field road and associated earthworks. The vegetation and landscape patterns on the slopes below Porters Basin indicate areas of higher soil moisture around gullies where a variety of alpine shrubs can be found. The visual amenity value of the lower slopes is relatively high, but the existing ski field road detracts from the naturalness and visual intactness.

### **3.2.3 Southern Terrace**

This landscape character area lies above the Porter River, which forms its southern boundary. A low-lying ridge separates the Crystal and Porters visual catchments, which are connected by the toe slopes at the base. The Southern Terrace consists of relatively flat land bounded by the deeply incised terraced stream bed of Lower Crystal Creek. On aerial photographs the wide alluvial fans extend across Lower Crystal Basin, which suggests that the fan material has been deposited by Crystal Creek before the channel cut through the deposits.

Two larger buildings are situated on the Southern Terrace. The staff accommodation block is located in the Porters catchment in close proximity to the ski field access road and the guest ski lodge site is located near to the top of the true right bank of Crystal Creek. A short gravel road along the flat top of the fans connects the lodge to the main access road. The elevated nature of the terrace leads to very low visibility of the existing structures in this landscape area from the access road. The fans on the true left of Crystal Stream are currently undeveloped.

Distinctive dense *Dracophyllum*, snow tussock and alpine shrubland vegetation covers most of this landscape character area. Some wetland vegetation has established around the north stream described in the Porters lower slopes character area in para 3.2.2. A few beech trees, planted approximately 20 years ago are located close to the stream draining the Porters Basin. The fans are the most densely vegetated part of the project area.

Similar to the lower Porters slopes, the visual amenity of the Southern Terrace is high, as it provides a contrast to the dry slopes in the backdrop when viewed from the ski field access road. However, the lodge buildings, associated car parks and access road have substantially modified the natural character of this landscape unit.

#### **3.2.4 Crystal Basin**

Crystal Basin contains two separate hanging glacier basins (North Bowl and South Bowl). The Basin flattens above the steep slopes that drop towards deeply incised Crystal Stream. Below this flat shoulder steep scree slopes contain the small stream and frame the Basin when looking upstream from the toe slope fans which make up the north and south terraces. A distinctive rock knob is located at the bottom of the rocky ridge dissecting the Upper Basin into two separate bowls.

The ridge, which forms the skyline at the head of valley, is rockier than in the adjacent Porters Basin. The scree slopes around the cirque basin are smooth and contrast with the rocky outcrops on the skyline that form interesting features when viewed from below. Some flatter parts of the basin retain humidity in the soil and patchy vegetation in these areas adds visual diversity. The biophysical, aesthetic and natural character values of this landscape character area are considered to be higher than the more modified Porters Basin.

### **3.2.5 Crystal Stream**

Crystal Stream forms below the Crystal Basin, at the confluence of two minor streams that drain the two bowls of the basin. After the steep drop off from the shoulder of Crystal Basin, the stream flows at a gentler gradient towards the Porter River. The boundary to Lower Crystal Creek is defined by the true left ridge dropping down to the stream level. The direction of flow changes around the landform towards Porter River. Similar to Porters Basin the ridges along the sides of the valley drop abruptly towards the low lying sloping fans.

The slopes on both sides of the stream show signs of ongoing erosion. These impressive steep scree slopes form a homogenous visual boundary to Crystal Stream and contrast with the more intimate meandering stream at the base of the Valley. The visual diversity of the upper reaches of Crystal Stream is considered to be high. The main ridge around the head of Crystal Basin forms the backdrop and adds to the visual amenity of the catchment. No human change is apparent in Crystal Basin and Upper Crystal Stream, which leads to high natural character.

Crystal Stream bends around the landform created by the spur on the true left. Below the bend the stream bed widens into a terraced valley. The creek cuts through fan material, which has been deposited on the toe slopes of Crystal Basin before the creek incised the terraced stream bed. The banks of the stream show visible signs of erosion and the terraces now separate the formerly connected toe slopes into two distinct flat areas on either side of Lower Crystal Stream. The stream, which is the main tributary in this upper section of the Porter River, has relatively high legibility and aesthetic values. At the confluence with the Porter River the shifting channel has formed a small fan. Abundant exotic vegetation such as lotus grows adjacent to the lower reaches of Crystal Stream, whereas its upper reaches mainly contain native species.

The winding channel of Lower Crystal Stream provides visual contrast in the dry and harsh environment and high aesthetic values. However, the stream's lower reaches contain more exotic species and two small-scale buildings (pump sheds). This has led to a reduction of natural character. The steep terraced ravine shows signs of its formative processes and above the confluence with Porter River several channels cut through the small fan. These characteristics of the creek bed display high legibility values.

### **3.2.6 Porter River**

The main tributaries to Porter River are below where the river is crossed by the ski field access road. Stream size increases below the confluence with the creeks draining Porters and Crystal Basins. The Porter River is crossed by a road culvert and the access road runs parallel to the river. The access road is situated along the true right slopes at a relatively constant level, while Porter River drops in elevation. This incrementally increases the distance between the road and the river. The river has cut an incised gorge and terraces have been created along the banks. The road follows the top of the true right terrace, which reduces its visual impact on the riverbed. Within the incised riverbed the channel is meandering between the steep banks. In the lower reaches of the Porter River distinctive rock outcrops and limestone formations can be found in the faces above the riverbed, which adds to legibility values of the river.

The eroded limestone and steeply folded greywacke layers provide high aesthetic values when viewed from the riverbed. These features are similar to other limestone formations in the Basin, for which the area is renowned. Porter River and Broken River have created a distinctive terraced landscape within Castle Hill Basin. As the Porter River enters the Basin near the study area boundary, the valley floor widens.

The vegetation in the riverbed of the Lower Porter River is predominantly exotic. A limestone quarry at the entry to Porter Valley and the access road have left visible scars above the true right banks. Hence, natural character along the lower reaches of the river is considerably lower than closer to its source. However, the rock outcrops along the terrace faces are notable landscape features.

### **3.2.7 Northern Terrace**

The Northern Terrace is located on the true left of Crystal Stream and is currently part of the Castle Hill Retirement Area. It has a high level of naturalness. The predominant landcover on the top of the terrace is a *Dracophyllum* / tall tussock community. On the steeper terrace slopes of the true left banks of the Porter River and the Crystal Stream, the vegetation type is classified in the Ecology Report as a tall tussock / *Dracophyllum* community. The land on the top of the terrace gently slopes to the east. The terrace is dissected by a number of apparent overland flow paths which fall towards the Porter River. These depressions appear



to be dry most of the time and do not contain any different vegetation to the remainder of the terrace. A number of young kanuka and manuka are present.

Exotic species present include some pasture grasses at low levels of abundance. Wilding Pinus contorta and Douglas Fir are also present.

***Key Landscape components of the existing environment***

*The site is located in what is currently described as an Outstanding Natural Landscape in the District Plan which encompasses the Craigieburn, Torlesse and Big Ben Ranges.(The proposed plan change provides for the site to be removed from the ONC.)*

*Natural character value is high in Crystal Basin, Crystal Stream/Valley and the upper reaches of Porter River.*

*Modifications (for existing ski area activity) reduce the natural character of Porters Basin, Porters lower slopes and the Southern terrace*

*Aesthetic values are high in Crystal Basin, Crystal Stream/Valley and Porter River*

*Amenity values are high or relatively high in Porters lower slopes, Southern terrace, and Crystal Basin*

*Visual diversity is highest in Porters lower slopes and Crystal Stream/Valley*

*The visibility of the entire project area is comparatively low*

## **4.0 ANALYSIS OF VISIBILITY**

### **4.1 Assessment**

It is acknowledged that the proposed Plan Change is to create a Sub-Zone with associated objectives, policies and rules and although based upon the indicative Masterplan it does not seek to implement the exact built development shown on the Masterplan. The Masterplan represents a maximum built outcome and for this reason has been used as the basis for assessment of effects. Accordingly, it is possible that an alternative built development may eventuate, however the effects of that built development are not expected to exceed or be worse than the effects identified in this study. For reference this assessment refers to buildings shown on the Masterplan and on the Trails Plan prepared by Eliot Sinclair.

### **4.2 Identification of public viewpoints**

This visibility analysis is based on a computer generated 3D model (K2Vi Software), using 2 to 5m contour data, of the plan change site and the immediately adjacent land. The wider landscape context was modelled at 20 m contour intervals. The existing vegetation has not been modelled, but high resolution georeferenced aerial photos show vegetation in aerial view. Several site investigations were undertaken to compare the potential visibility as shown in the 3D model to actual views as gained from various viewpoints described below. Screening vegetation in and around the study area is almost non-existent and the computer model proved to be representative of actual views on site.

The West Coast Road (SH 73) provides the major public access through the area. The journey between Castle Hill Village and Porters Pass is described from both directions, highlighting views into the project area. The significance of representative views is assessed. The main viewpoints for this analysis are public places located along West Coast Road, adjacent DOC conservation areas and more distant elevated viewpoints, such as mountain peaks located on public land. The key viewpoints are highlighted and numbered in Figure 4. The visibility for the two key components of the proposed development, the mountain village and Crystal Basin Ski Area expansion, have been assessed separately for each viewpoint.

Fig 4: The map shows viewpoints described in the visibility assessment and indicative viewing distances.

### **4.3 Description of visibility from key locations**

#### **4.3.1 State Highway 73 –West Coast Road**

##### Existing view:

Most people experience views of Castle Hill Basin and the Craigieburn Mountain Range while travelling along State Highway 73, which connects the East and West coasts of the South Island. From Porters Pass (VP 1) the top ridge of Porters Basin and Crystal Basin forms the skyline behind Mt Lyndon and Cloudy Hill when travelling on SH73 from Christchurch. The road then drops down from Porters Pass to Lake Lyndon and any views to the project area are blocked by the intervening mountain range between Red Hill, Mt Lyndon and Cloudy Hill. Views into the Porter Valley continue to be blocked by landform until passing Dry Stream (VP 2) north of the ski field road turn-off.

When approaching from the West Coast, the prominent ridge that forms the northern boundary of Crystal Basin first blocks views to the existing Porters ski field. The straight section of road between Castle Hill village and Porter River bridge does not provide any views into the development area, other than to the prominent ridge between Porters Basin and Coleridge Pass. The outer north-facing slopes of Porters Basin are perceived as part of this ridge, which forms the skyline. Where SH73 drops down to Porter River bridge (VP 3a and b), the river terrace escarpments block views to the lower areas and the perpendicular ridgelines partially obscure the Upper Basin areas. This means that only the ridge tops and north-facing upper slopes are visible, while the basins and low-lying fans are hidden by landform.

Fleeting glimpse of the view described above are the most that people will see of the existing ski field area when travelling at permitted speeds along SH 73 from the West Coast in clear conditions. The partially rocky ridges on the skyline are the most important landscape features, which are perceived together with the homogenous, north-facing scree slopes below. Some of the graded slopes, roads and one of the T-bar lifts can be detected on the upper Porter Basin slopes at a viewing distance of about 5km. A short section of ski field road is discernable on the lower slopes, as it cuts across the scree slopes. The existing lodge buildings and the base of the ski field are not visible from viewpoints along the road, as river terraces and protruding ridgelines block views.

Visibility of proposed development:

From SH73 the majority of the proposed development will be hidden from view. The low lying area around the proposed Village Centre and the north facing structures on Slopeside will be out of sight from the highway and completely screened by landform. The proposed hotel near the existing ski lodge and the lower half of the Crystal Chalets will be also completely screened by landform when viewed from the highway. However, the upper parts of the Crystal Chalets and the proposed Porters Chalets area will be intermittently visible from an approximately 2 km long stretch of the highway when travelling towards the East Coast (see VP 3 a-b and 4). This section of highway starts about a kilometre north of the Porter River Bridge, where the road starts to descend down the river terraces, and extends about a kilometre south of Porter River bridge. Viewing distances to the proposed mountain village from this section of the highway are about 5- 6 kilometres. Along a short (about 300m long) section of SH73 north of Porter River Bridge glimpses of parts of the Porters Chalets will also be visible.

The vast bulk of Ski Area expansion within Crystal Basin, the Day Lodge and the regraded scree surface necessary to create the new ski trails will be substantially screened by intervening ridgelines. The orientation of the northern part of Crystal Basin, where the majority of the new ski trails are going to be located is similar to the McNulty Basin in the existing ski field, which faces away from Castle Hill Basin. This leads to very low visibility of the proposed Ski Area expansion. A 500m long section of the new access track to Crystal Basin from Porters, which crosses the lower part of the ridgeline to the south of the Basin, will be visible as a cut in scree and rock when visible from SH73. The new track will appear adjacent to the existing Porters ski field access road and will read as an extension of this existing road. The new track will be located on a ridge which is backdropped by the Porters slopes and will not appear on the skyline from any viewpoint beyond Crystal Stream. While part of the alignment of the gondola from the village to Crystal Basin, will be visible, it will not protrude onto the skyline either. The proposed top lift station for the chair lift connecting Crystal to Porters Basin will be located on the top of the ridgeline (near point 1842m) separating the two basins. Depending on the exact location of the top station structures, the lift may appear on the skyline when viewed from SH73, including Porters Pass.

#### **4.3.2 Korowai-Torlesse Tussocklands Park**

Existing view:

The northern part of the Korowai-Torlesse Tussocklands Park is located east of the project area. Some of the points along the mountain range adjacent to the project area, extending from Cloudy Hill to Red Hill, provide elevated views into Porter River Valley and Porter and Crystal Basins at a distance of 3 to 4 km. From Cloudy Hill the elevated nature of these viewpoints allows for clear views of the entire Ski Area and lodge sites, while a protruding ridge blocks views from Mt Lyndon to the lower access road and lodge site. The existing ski field access road would visually dominate the upper part of the Porters Basin slopes from this viewing angle.

From Red Hill and Coleridge Pass at the south eastern end of the Conservation Area Porters Basin is out of sight and views are only possible into the northern part of Crystal Basin, while the southern part is out of view. From Red Hill the Basins are generally out of view behind protruding ridges and the lodge sites can only be partially seen at an oblique angle.

The Torlesse Mountain Range on the eastern side of SH 73 forms part of the Conservation Area. This part of the conservation land is considerably more accessible and more frequently used by the public. However, it is located at a distance of around 8km from the site. Foggy Peak provides views to the existing ski trails and is in the line of sight to proposed lifts in Crystal Basin. Views to the lodge site and access road are blocked by the mountain range in the foreground. From Castle Hill Peak the northern and western parts of Porters Basin are visible, while the top of the ski field is partially obscured by an intervening ridge. The northern part of Crystal Basin is hidden by the ridge to its north.

From the Rakaia-Lake Coleridge visual catchment neither the existing Porters ski field nor the proposed development will be visible. When viewed from this visual catchment, the main feature visible within the site is the top ridge between Porters and Ryton Basins, which forms the skyline for views from Coleridge Pass.

Visibility of proposed development:

The peak of Cloudy Hill on the north western end of the mountain range adjacent to the project area will provide views across almost the entirety of the proposal. Views from here will include the proposed mountain village and all the proposed structures and earthworks in Crystal Basin. From other viewpoints along the range only parts of the development will be visible due to intervening ridges and oblique viewing angles. Red Hill on the eastern end of

the range only allows for views down to part of the mountain village and the upper ridges around Crystal Basin. The lower part of Crystal Basin, where the ski trails, the lift base stations and the Day Lodge will be located, will not be visible from Red Hill.

From Cloudy Hill and Castle Hill Peak the access road into Crystal Basin and parts of the earthworks in the basin will be visible. From this north eastern aspect the cut may even be detectable at a distance of over 8km. However, the mountain village site is hidden by intervening ranges from this viewing angle.

#### **4.4 Summary of visibility assessment of development**

Due to extensive viewing distances and surrounding mountain ranges, the visibility of the entire project area is comparatively low. SH 73 is the most frequented public view point in the area. However, views into the project area from this key tourist route are very limited. The Porters Ski Area is surrounded by public conservation land. In these conservation areas visitor infrastructure, such as tracks or huts, are rare and user numbers are relatively low.

The table below indicates relative visibility of various parts of the proposed development, as well as assumptions about the population likely to view the area. The summary lists viewpoints and describes the significance of visibility. Visual effects of parts of the development with low visibility and a relatively low viewing population are less likely to be significant. For highly frequented places, such as SH73, visibility is considered more significant than from inaccessible and rarely visited places, such as the Korowai-Torlesse Tussocklands Park adjacent to the east of the project area. The categories are defined by applying the following rating scale:

- High: Readily visible from SH73 with a viewing distance of less than 6 km and a variety of viewpoints on public conservation land.<sup>2</sup>
- Moderate: Intermittently visible from SH73 with a viewing distance of more than 6 km and few viewpoints on public conservation land \*
- Low: Not visible from any viewpoints outside the project area with a viewing distance of less than 10 km \*

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<sup>2</sup> Most areas are to some extent visible at a viewing distance of around 4 km from elevated viewpoints located in the northern part of Korowai – Torlesse Tussockland conservation area adjacent to the east (Cloudy Hill, Mt Lyndon and Red Hill). Visibility from these points would be expected due to their elevated nature. The potential viewing population is assumed to be very low, as access is not formalised and no walking tracks are provided.

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Table 1 provides a summary of the visibility of each component of the proposed development

View point	Development area	Viewing distance	Visibility	Comments
<p>SH73</p> <p>About 2km long section east of Porter River bridge to ski field turn off</p> <p>See VP 1 to 3b</p>	Mountain Village	6.5- 7km	Low/ moderate	<p>Low: The lower toe slopes southwest of Crystal Stream, where the Village Centre, Slopeside and Hotel and Visitor Accommodation will be located, are hidden by landform from views along SH73. The visibility of the low lying parts of the ridgeline separating Porters and Crystal Basins and all south facing slopes is low. This means that the multi-storey buildings in the lower part of the mountain village will not be visible from SH73.</p> <p>Low / Moderate: The higher lying Crystal Chalets on the north facing slopes above Crystal Stream and parts of the Porters Chalets will be in the line of sight from the highway at long viewing distances. These buildings will have a landform backdrop.</p>
	Crystal Basin	6km – 7km	Low/ moderate	<p>Low: The south facing slopes of Crystal Basin are hidden from view from SH73.</p> <p>Moderate: The northeast facing slopes of the Basin are visible above an elevation of about 1300masl, this includes the areas where the proposed access track crosses the slopes and the ridge between the Porters and Crystal Basins. A 500m long section of the access track will be visible on the lower north facing slopes, but will not appear on the skyline, as it is backdropped by the slopes between Porters Basin and Coleridge Pass. Due to the incised shape of the riverbed, views into Lower Crystal Stream are very limited, but parts of the gondola alignment into the basin will visible from SH 73.</p> <p>Moderate: The top station of the chair lift connecting the Basins may appear on the skyline from several viewpoints along the highway.</p>
Korowai/ Torlesse Park	Mountain Village	2km – 5km	Moderate	<p>Moderate (high visibility, but low viewing population): The existing lodge buildings are only visible from within Porters Basin and from the southeastern side of Porter Valley (Cloudy Hill, Mt Lyndon, Red Hill). Similarly, the</p>

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Cloudy Hill				proposed development in this area will be visible from elevated viewpoints on the eastern side of Porter River Valley, such as Cloudy Hill. However, from more distant ranges, such as Castle Hill Peak or Porters Pass, the village site is hidden from view.
Red Hill				
Mt Lyndon	Crystal Basin	4km – 10km	Moderate	<p>The east and south facing slopes of Crystal Basin are only visible from elevated viewpoints to the southeast, such as peaks in the Korowai-Torlesse Tussocklands Park and Porters Pass.</p> <p>Similar to Porters Basin, the ridgelines and top parts of the east facing basin are visible from viewpoints to the east. Unobstructed views into the Basin are only possible from Cloudy Hill. The top of the Basin (main ridge of the Craigieburn Range) forms the skyline when viewed from Porters Pass. Views into Crystal Basin vary along the range dependent on intervening ridgelines and viewing angles. The access track to Crystal Basin will be visible from peaks to the east, such as Castle Hill Peak.</p>
Foggy Peak				
Castle Hill				
Peak				

#### 4.5 Conclusions from visibility analysis of development

Due to the confined visual catchment around Porters Basin and Crystal Basin, the number of potential viewpoints from where the proposed development will be visible is limited. Very rarely will the development be able to be viewed in its entirety. The two key public places where parts of the development will be seen from selected viewpoints are (1) sections of State Highway 73 and (2) elevated areas of the Korowai Tussockland Park, which lies adjacent to Porters Ski Area. The State Highway is an important tourist and transport route which means that there is a large potential viewing population who could view parts of the project. The Park is less accessible and very few people will access the potential viewpoints, since no visitor infrastructure is provided in these areas.

From the highway views to the proposed mountain village are limited to a 2 km long stretch of highway, where the higher lying Crystal Chalets and parts of the Porters Chalets, will be in the line of sight. Views to the proposed access track and gondola into Crystal Basin could also be gained from these viewpoints. The mountain village centre, the hotel and the Slopeside buildings will be completely screened by intervening landform. The visible part of



the development will be visible in the context of the existing ski field road at a viewing distance of about 6 kilometres. At this distance visibility of the buildings is considered to be low and the large-scale High Country landscape, which already contains a ski field, will be able to visually absorb the change without compromising its scenic qualities.

The large Korowai Tussockland Park extends across several mountain ranges, including the range east of Porter River opposite the existing ski field. While most views from the conservation land into the proposed mountain village are blocked through intervening hills and ridgelines, some elevated area south of Cloudy Hill will allow for direct views onto the development. The visual connection to the existing Ski Area will be evident from these elevated viewpoints, as the layout including access tracks will read as a whole from above. From these few, rarely visited peaks along the range the apparent landscape change resulting from the proposal will be significant and the impacts during construction will adversely affect the landscape values. However, long term the new part of the development will visually integrate with the existing ski field and structures that are already found in the area. From other viewpoints located on more distant mountain ranges, such as Castle Hill peak, only the Crystal Basin access track and gondola will be visible, while the south facing slopes and most of the Basin floor are hidden from view.

From the visibility analysis it can be concluded that the visual effects of the proposed development from surrounding public viewpoints will be low due to the secluded location of the existing ski field and the area of proposed expansion. Direct views onto the development as a whole can only be gained from rarely visited elevated viewpoints. Visual effects from the State Highway are insignificant and will be perceived as part of the existing Ski Area.

## **5.0 ASSESSMENT OF POTENTIAL EFFECTS OF THE PROPOSAL ON NATURAL CHARACTER, LANDSCAPE AND VISUAL AMENITY VALUES**

### **5.1 Potential of the landscape to absorb development**

The table (see Table 2) below summarises the degree to which the landscape at and around the proposed development site can potentially accommodate change. Generally, the higher the visual prominence of an area, the lower the ability of the landscape to visually absorb development while still maintaining its existing visual character.

The following characteristics have been considered:

- Existing land use/ cover (Naturalness and level of modification)
- Values of the existing landscape
- Patterns and scale of the landscape (Visual diversity and character)
- Visual absorption capability:
  - Slope and susceptibility to erosion (Protection structures needed)<sup>3</sup>
  - Visual enclosure/openness of views (Visibility)<sup>4</sup>
  - Accessibility and viewpoints;
- Scope for mitigation which is in character with the existing landscape

Table 2 provides a summary of the ability to absorb change for each landscape character unit. If absorption capability varies within the area, the reasons are explained in the comments section.

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<sup>3</sup> The need for extensive earthworks and protection structures on steep slopes increases their sensitivity to development.

<sup>4</sup> Ridgelines are generally sensitive to development, in particular where structures could break the skyline.

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Landscape character unit	Ability to absorb change	Comments
1. Porters Basin	High/Low	Low: Ridgeline and north facing slopes are sensitive to further change, despite existing modifications.  High: enclosed south facing slopes are modified and can absorb further change
2. Porters Lower slopes	High/Low	Low: Ridgeline and upper north facing slopes are sensitive to change, avoid or minimise further cuts across slopes.  High: low-lying south facing slopes are vegetated and not visible from outside Porter River Valley, the potential to mitigate and absorb change is high.
3. Southern Terrace	High	Landform blocks views to the true right bank of Crystal Stream, flat area has been modified and provides high ability to absorb change, vegetation provides mitigation potential. Removal of native vegetation should be kept to a minimum.
4. Crystal Basin	Medium/High	Floor of the basin is flat and hidden from most viewpoints. Natural character value is high, but landform could visually absorb some change. High visibility of top ridgeline which confines basin. Development would have high impact on this ridge.
5. Crystal Stream	Low	Steep erosion prone scree slopes have relatively low visual absorption capability; on north facing slopes cuts would be conspicuous from long distance viewpoints, such as SH73. Ridgeline between Porters and Crystal Streams is backdropped by ridge to the south and does not form skyline from SH73. Dynamic riverbed provides high visual amenity values and development would have to be set back appropriately.
6. Porter River	Low	Riverbed is deeply incised in lower section of river, and erosion prone banks would need sensitive engineering solutions to be integrated in landscape. Lower natural character and higher potential to absorb change in vicinity of lodge, where road crosses the river. Highly natural environment, where human modification would have adverse effects on landscape values
7. Northern Terrace	High / Low	This terrace is visible from the existing Ski Field Access Road but is not prominent from the State Highway. It is desirable to avoid built development from sprawling onto this side of Crystal Stream. The site has the capacity to support mitigation and enhancement planting and to absorb a waste water disposal system.

## **5.2 Effects on natural character and landscape values**

The existing ski field in Porters Basin is partially visible from a variety of viewpoints and existing trails across the top slopes have reduced the naturalness and the landscape values of the Basin when visible. The proposed development, in particular the Crystal Basin access track and gondola, will be seen in relation to the existing ski field structures, which have already altered the landscape character of this area. The proposed new access track into Crystal Basin will be located around rocky outcrops on the north-facing slopes above Crystal Stream, which will reduce the erosion potential and height of cuts. The proposed access track and gondola will be visible at a similar elevation to the existing road. The road will be of similar appearance and it will be clear that the modification relates to the existing Porters ski field. So while the new access track and gondola would introduce an additional unnatural line, the modification will not detract from the landscape values and naturalness anymore than the existing ski field. The proposal as a whole will only represent a small, intense node of modification in a large-scale, vast landscape with relatively low levels of development.

Crystal Basin has existing high natural character values and displays higher visual diversity than the Porters Basin. The undulating floor of the Basin shows legible signs of its glacial formative processes. There will be some loss of the natural landform and land cover characteristics resulting from the re-shaping and earthworks required for the creation of additional ski trails and lifts. Other modifications, including the northern chairlift, the snow making pond and Day Lodge, will not be visible from outside the project area. However, the inherent landscape and natural character values of Crystal Basin will be changed by the proposed Ski Area expansion. In a local site scale these changes will be significantly adverse. Several ski fields, including Porters, Broken River, Cheeseman and Craigieburn have long been established along the Craigieburn Mountain Range. The modifications associated with these ski fields have become part of the High Country landscape and most of them go unnoticed by the majority of visitors to the area due to the scale of the landscape in this context. The proposed ski field extension into Crystal Basin should not detract from the outstanding landscape values of the wider area.

The landscape patterns around the proposed mountain village are distinctively different to the rest of the project area due to the vegetation cover on the toe slopes fans and terraces. While the alpine basins contain exposed gravel, the lower toe slopes are vegetated by low native shrubs and tussocks. This generally enhances the mitigation potential and the ability

to blend in development. However, vegetation clearance during construction will temporarily lead to significant effects on the land cover. The centre of the mountain village will be located in an area that has been modified by the existing ski lodge and staff accommodation block. However, the proposal will be significantly larger in scale and will introduce a type of development that has not been implemented elsewhere along the Craigieburn Range. The high density village with multi-storey structures will be new and different to other existing ski fields in the area. Within the mountain village the landscape change and effects on the existing level of natural character will be significant. Earthworks will remove much of the native vegetation in the Village Base Area and scar the landscape during construction. The careful design of the development, including location and orientation of buildings and carparks, and the careful choice of building materials and colours, should help to integrate the structures into the landscape and to contain the modification within a small, visually confined area. The location and quality of the design should ensure that the development does not detract from the large-scale landforms and patterns occurring in the landscape. Once vegetation has established, the scars from construction will disappear and the comprehensive development will provide a homogenous, high quality appearance.

The dynamic, terraced Crystal Stream locally provides amenity values, both visual and aural in this otherwise dry landscape, even though the natural character of the lower stream has been modified to some degree by pump shed structures and exotic vegetation. The hotel and Crystal Chalets, should not affect the channel and bank characteristics. The waste water pipe to the disposal area on the Northern Terrace will cross Crystal Stream at a yet to be confirmed location. It is likely that the pipe will be underground and under water. It is also possible that the alignment at the stream crossing may coincide with a weir to prevent exotic fish passage from moving upstream. Landscape effects on the natural character are likely to be low.

Compared to the Upper Porter River the lower stretch (downstream from the ski field road crossing) is lower in natural character due to the presence of exotic vegetation and the ski field road. It shows clear signs of built modification where the road drops into the riverbed near the lodge site. The proposed Visitor Accommodation will be located on the terrace above the river and no direct adverse effects on the natural character of the river channel and banks are expected.

The area surrounding Porter Stream will be subject to a significant level of modification, as the Slopeside buildings and the snowplay area are proposed in relatively close proximity.

The proposed Slopeside buildings will be set back at least 5 metres from the stream edge. Earthworks for the Snowplay area will not encroach any closer than 5 metres to Porters stream edge.

The earthworks for the snow play area will result in the complete removal of the ephemeral wetland located north of Porter Stream, although this wetland is not highly visible from localised viewpoints there will be a consequent loss in natural character.

The proposed Porters mountain village will represent a further landscape change in an area that has been modified by existing ski field infrastructure. The scale and character of the proposed village will be distinctively different to the existing accommodation. The ski field extension into Crystal Basin will lead to a reduction of natural character and landscape values in the local context. However, the proposed Village and Ski Area expansion occur around a node of existing modification where further development in association with an existing ski field is considered appropriate development. The effects of the proposed development on landscape values will be so well contained that they will be primarily experienced from within the Ski Area. This means that the modifications will not detract from the wider landscape and its outstanding values.

### **5.3 Effects on visual amenity and openness of the landscape**

The ridge between Coleridge Pass and Porters Basin forms the skyline for SH73 views from the Castle Hill Basin 5 – 9km away. The lower ridgeline separating Porters and Crystal Basins is less noticeable, because it is viewed against the more prominent ridgeline in the back. This means that the proposed ski field access track and gondola into Crystal Basin, while visible along parts of its alignment, will not be seen against the skyline or interrupt the open views to the wider landscape. The upper parts of the north facing Crystal Basin slopes are in the line of sight from some viewpoints along SH73. The upper part of the ridge forms the skyline from some distant viewpoints. Therefore, any chairlift (connecting the Basin to Porters) and its top station will be visible. The remainder of Crystal Basin is visually very contained by ridgelines and direct views to the proposed Ski Area expansion are only possible from elevated viewpoints, including long distance views to the top of the basin from Porters Pass. The cirque basin has a relatively flat floor that cannot be seen from the pass or Porter River Valley, which will help to absorb the proposed Day Lodge and lift stations in this area. The south facing, visually enclosed slopes of Crystal Basin can absorb development much better than the north facing slopes. The majority of new ski trails will be in these

visually contained parts of Crystal Basin. Due to their location in the upper Porter Valley, Porters and Crystal Basins are visually more contained relative to SH73 than most parts of the Craigieburn Range.

The lower lying parts of Porters Basin and its slopes are hidden from outside views by intervening ridgelines which means that visual effects in this area are very localised. The proposed chairlift connecting the mountain village with Porters Basin will be located in this low-lying part of the valley, which will minimise the potential visual effects of the lift from external viewpoints.

The fans between Crystal Stream and the existing ski field access road, where the village centre and several apartment buildings and a hotel will be located, are hidden from views from SH73 due to their location near the head of the Porter Valley. The ridgeline between Crystal and Porters Basins and the escarpment along Porter River provide screening to the north and east.

The proposed mountain village is of a size and scale that will change the existing landscape character of this area significantly, when experienced from within. The development is well sited to be able to be successfully integrated into the landscape. The modification proposed will be of a scale that cannot be easily compared to the status quo. Earthworks will temporarily lead to significant adverse visual effects, but the potential to mitigate these effects through planting and restoration of vegetation cover is high.

Generally, the visibility and natural character of the terrace on the true left of Crystal Stream is higher than on the true right banks, where the two existing ski field lodges and access roads are located. The waste water disposal area is proposed on the terrace above the true left bank of Crystal Stream. Only one very small structure is required to be situated on this side of the stream. This building will house the control equipment for the waste water disposal system. If necessary it can be buried underground, but there are gullies and depressions in this area that could accommodate a small building without disrupting the naturalness of this area.

The High Country landscape surrounding Castle Hill Basin is a large scale landscape with clear forms and patterns that are perceived as a whole. The uninterrupted long distance views are a key attribute of this landscape. Hence, the design, and location of the

development aims to contain most structures in basins and valleys where they will not change the openness of the wider landscape.

#### **5.4 Cumulative effects on landscape values**

Cumulative effects between the existing Porters ski field, including its structures and roads, and the proposed development are greatest when they are seen together from one viewpoint.

The Crystal Basin parts of the proposal will occur in a separate visual catchment to the existing Porters ski field, and both parts of the Ski Area will only be perceived together when viewed from the proposed village or from selected viewpoints along the mountain range east of the Porter River. Due to the low visibility of the proposed structures and the trails in Crystal Basin in views from SH73 and the visual separation of the Basins, minimal cumulative effects will arise.

The existing ski field accommodation will be either replaced or incorporated into the proposed development. There will be a cumulative effect resulting from the proposed buildings within the village, which will substantially modify the existing landscape character of this confined development area. However, it is considered appropriate to contain the proposal within a cluster area, where effects of the development would be predominantly experienced from within. The existing level of development has already reduced the landscape's sensitivity to change compared to other High Country areas which are in a more pristine state. In a landscape like this it is preferable to cluster development and to locate it in visually contained areas.

There is a significant distance between Porters ski field and the other ski fields along Craigieburn Range, such as Cheeseman, Broken River and Craigieburn club fields. The visual separation of the Upper Porter River Valley to the other ski fields, which are located on the east facing slopes above Castle Hill Basin, avoids cumulative effects from the proposed expansion.

#### **5.5 Assessment against statutory documents**

The project site is situated within the Selwyn District. The surrounding landscape contains several identified landscapes and features that are considered to be of national, regional and local significance. Large parts of the foothills have been identified as Outstanding Natural



Landscapes in the district plan<sup>5</sup> and the Canterbury Regional Landscape Study (BML and Lucas, 1993). This means that any development has to be appropriate and undertaken in a careful and sensitive manner to ensure the landscape values are not compromised. Notwithstanding the careful way this development has been conceived, the proposed Plan Change provides for removing the site from the ONL area within the District Plan. It is agreed that this is an appropriate step.

#### **5.5.1 Selwyn District Plan**

The Selwyn District Plan refers to the High Country and its values in the Rural Volume (Part B – Natural Resources). It acknowledges that there are pristine landscapes, such as Arthurs Pass National Park and other areas that contain human modification, in particular related to farming and outdoor recreation. These activities are accommodated within these landscapes and are considered appropriate uses within the Outstanding Landscapes. The High Country section of the Selwyn District Plan lists relevant rules and objectives for these Outstanding Natural Landscapes.

The Plan emphasises in its policies that large structures and buildings have the potential to alter the sense of remoteness of Outstanding Natural Landscapes. Policy B1.4.23 outlines that large buildings, structures or utilities should be avoided unless it is associated with an activity in the ONL, which is the case with the expansion of the existing Porters Ski Area.

The following policy (B1.4.24) then emphasises that if a structure has to be located in an ONL it should be designed and sited to blend in with the landscape and be as visually unobtrusive as possible. This study has concluded that the visually contained location of Porters Ski Area makes it a suitable location for development, because it would not detract from the wider landscape and open space values of the High Country landscape. The panoramic views of the Upper Waimakariri Basin from SH73 are considered a key attribute in the Plan (Policy B1.4.31). This also applies to Castle Hill Basin which is framed by views to the surrounding mountain ranges, including the Craigieburn Range. The views from the highway were a key consideration in the visibility analysis of the development carried out for the preparation of this report. Both the Ski Area expansion into Crystal Basin and the mountain village are located in areas of low visibility from the highway. The plan encourages

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<sup>5</sup> which has been based on the findings in High Country Section- Landscape Recommendations, prepared for Selwyn District Council by Graham Densem (November 2001)

new buildings to be located in existing clusters (B1.4.30), which has been taken into account for the design of a contained mountain village around the existing ski field accommodation. Generally the proposed plan change is consistent with much of the existing policy framework for management of land within an ONL despite the proposal to remove the subzone from ONL status. A number of controls included within Appendix 25 in the proposed Plan Change provide for:

1. clustering of buildings,
2. consideration of landscape values,
3. avoiding, remedying and mitigating adverse effects of earthworks,
4. controlling building materials, colours and reflectance values of cladding,
5. restoration planting outline development plan; and
6. generally confining development to low visibility locations.

## **6.0 RECOMMENDATIONS**

The following standards and provisions are considered necessary to ensure that the landscape changes provided for in the proposed Plan Change will result in appropriate development in this High Country Environment. These provisions are incorporated into Appendix 25 of the Plan Change proposal.

### **1) Fencing (25.2.1.6)**

No suburban type of boundary fences will be permitted in Village Base areas 1 to 5. Stone walls up to 1.2m high following the natural ground contour made from greywacke boulders will be permitted.

### **2) Building Setbacks from Porters Stream (25.2.1.7)**

All buildings will be setback a minimum of 5m from Porters stream. This standard does not apply to bridges.

### **3) Outline Development Plan (25.2.2)**

Activities in the Porters Ski Area shall be located generally in accordance with the Porters Ski Area Outline Development Plan.

### **4) Roding (25.2.6)**

The fill batters resulting from earthworks for roads in the Village areas shall be planted with native alpine species in the first planting season following the completion of the earthworks.

### **5) Tree, Shrub and Tussock Planting (25.2.8)**

All planting whether it be for enhancement, mitigation or revegetation of disturbed areas shall be limited to the following species:

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**Plant List**

Botanical Name	Maori Name	Common Name
<b>Tussocks</b>		
<i>Chionochloa macra</i>		
<i>Chionochloa flavescens</i>		snow tussock
<i>Chionochloa rubra</i>		red tussock
<i>Festuca novae-zelandiae</i>		short tussock
<i>Poa colensoi</i>		blue tussock
<b>Low ground covers for bare ground or stony areas</b>		
<i>Acaena</i> sp		
<i>Anaphalioides bellidioides</i>		
<i>Astelia nervosa</i>		
<i>Blechnum penna marina</i>		
<i>Brachyglottis bellidioides</i>		
<i>Carmichaelia monroi</i>		
<i>Celmisia angustifolia</i>		
<i>Celmisia gracilentia</i>		
<i>Celmisia lyallii</i>		
<i>Celmisia spectabilis</i>		
<i>Muehlenbeckia axillaris</i>		
<i>Parahebe odora</i>		
<i>Pimelea oreophila</i>		
<i>Polystichum richardii</i>		
<i>Raoulia subsericea</i>		
<i>Scleranthus uniflorus</i>		
<b>Shrubs and trees</b>		
<i>Discaria toumatou</i>		matagouri
<i>Dracophyllum acerosum</i>		
<i>Hebe odora</i>		
<i>Kunzea ericoides</i>		
<i>Ozothamnus leptophyllus</i>		
<i>Podocarpus nivalis</i>		
<i>Notofagus solandrii</i> var <i>cliffortioides</i>		mountain beech
<i>Carmichaelia australis</i>		native broom
<i>Coprosma cheesemanii</i>		
<i>Dracophyllum uniflora</i>		
<i>Dracophyllum prunum</i>		

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<i>Gaultheria crassa</i>		
<i>Gaultheria depressa</i> var. <i>novae-zelandaie</i>		
<i>Acrothamnus colensoi</i> (prev. <i>Leucopogon colensoi</i> )		
<i>Leptosperma scoparium</i>		manuka
<i>Melicytus alpinus</i>		
<i>Pimelia traversii</i>		
<i>Olearia avicenniifolia</i>		

- 6) All planting shall generally comply with the Outline Planting Concept. The Outline Planting Concept provides for six plant mixes. The relative proportions of the dominant species in each planting mix shall be as follows:

I. Mountain Beech;

Mountain Beech mix	% by number of plants
<i>Notofagus solandrii</i> var <i>Cliffortioides</i>	30%
<i>Dracophyllum acerosum</i>	30%
<i>Chionochloa flavescens</i>	30%
<i>Hebe odora</i>	10%

II. Mountain Beech / Kanuka mix

Mountain Beech / Kanuka mix	% by number of plants
<i>Notofagus solandrii</i> var <i>Cliffortioides</i>	30%
<i>Kunzea ericoides</i>	20%
<i>Dracophyllum acerosum</i>	25%
<i>Chionochloa flavescens</i>	20%
<i>Chionochloa macra</i>	5%

III. Kanuka / Mountain Beech mix

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<b>Kanuka / Mountain beech mix</b>	<b>% by number of plants</b>
<i>Kunzea ericoides</i>	40%
<i>Notofagus solandrii</i> var <i>cliffortioides</i>	10%
<i>Dracophyllum acerosum</i>	15%
<i>Chionochloa flavescens</i>	15%
<i>Chionochloa macra</i>	5%
From list	15%

IV. Dracophyllum mix

<b>Dracophyllum Mix</b>	<b>% by number of plants</b>
<i>Dracophyllum acerosum</i>	50%
<i>Chionochloa flavescens</i>	30%
<i>Chionochloa macra</i>	10%
From list	10%

V. Red tussock mix

<b>Red Tussock</b>	<b>% by number of plants</b>
<i>Chionochloa rubra</i>	70%
<i>Chionochloa flavescens</i>	20%
<i>Chionochloa macra</i>	10%

VI. Short tussock / blue tussock mix

<b>Short tussock / Blue tussock mix</b>	<b>% by number of plants</b>
<i>Poa colensoi</i>	60%

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<i>Festuca novae-zelandiae</i>	25%
<i>Acaena sp</i>	15%

## 7) Planting patterns

The planting patterns of shrubs, tussocks and trees in areas outside the Village Centre should have a natural appearance and arrangement.

- 8) The planting patterns of trees on the waste water disposal area, the ridge between the snow play area and Crystal Chalets should reflect and harmonise with the landform patterns.

## Buildings

- 9) Buildings that are visible from SH73 should be sited and designed to blend in with the colour and textures of the High Country environment.
- 10) All exterior building materials, colours and reflectances should be appropriate for the High Country environment when viewed in the summer months in the absence of snow.
- 11) Cladding materials considered appropriate include:
- I. Concrete;
  - II. Local stone;
  - III. Stained timber;
  - IV. Naturally weathered timber;
  - V. Corten steel
  - VI. Glass.
- 12) Roofing materials and fixtures shall exclude copper, zinc, zincalume, lead and clay tiles.
- 13) Metal roofs shall be finished in matt, low reflectivity tones and hues.

- 14) Colours for roofing and cladding materials shall be restricted to a muted colour palette of browns, greens, greys or black.
- 15) Brighter colours can be used to accent building elements such as doors, window frames, trim and other architectural details.
- 16) All buildings should be designed by registered architects.
- 17) Where possible, building proportions should reflect the vertical dimensions rather than flat horizontal dimension.
- 18) A variation in the number of floors on each building as well as on adjacent buildings is encouraged.

#### **Public Realm**

- 19) The buildings in the compact Village Centre should be arranged to create legible, comfortable and useable spaces for circulation and gathering.
- 20) The Village Centre should provide one focal building with an active edge which is located to the south of a Village Square.
- 21) The Village Square should be an attractive space with dimensions of at least 30m x 30m and should have active edges on at least three sides.
- 22) The height and location of the buildings enclosed in the Village Square should provide for maximising solar access at the south half of the Square in particular.
- 23) A network of formed “natural looking” paths linked to but not parallel to roads should provide alternative pedestrian routes.

#### **Roading Standards**

- 24) The design of roads in the Village should promote a rural character and avoid an appearance of typical suburban streets.

#### **Overland Flow Paths**



- 25)** There are a number of depressions in the Village area landscape that resemble overland flow paths. Where possible, these features should be retained and enhanced with landscaping.
- 26)** In the event that these features are disturbed by earthworks, roads or buildings, they should be recreated as close as possible to the original feature.

## 7.0 CONCLUSIONS

The Craigieburn Mountain Range, is an impressive landscape, valued for its High Country character, its visual quality and recreational opportunities. The landscape character and values of the site, where the proposed extension to the existing Porters Ski Area and mountain village proposal are to be located, have been assessed in detail in this report. The proposed mountain village will be located around the existing ski field accommodation at the base of the slopes below both Porters and Crystal Basins. The ski field would be extended into Crystal Basin with a proposed gondola access from the mountain village and an access track linking it to the existing lifts in Porters Basin.

The landscape values assessment identifies the qualities of the Craigieburn High Country landscape. This is a special place, which has been recognised by the District Plan as an Outstanding Natural Landscape. While some parts of the proposed development site, in particular Crystal Basin, are highly natural, the existing roads, car parks and buildings have modified the natural character of other parts of the site.

The visibility of the development provided for in the proposed plan change has been analysed from public viewpoints along State Highway 73 and from surrounding land managed by the Department of Conservation. The State Highway is a highly frequented tourist and transport route which means that there is a large potential viewing population who could experience the view. The Conservation Area is less popular and only very few people will access the potential viewpoints, since no visitor infrastructure is provided in these areas. The analysis is based on both computer 3D modelling and site investigations for the highly accessible public areas and computer 3D modelling for the DOC areas that are less accessible.

Due to extensive viewing distances and the visually contained location of the proposed project site in the upper Porter Valley, the visibility of the entire project area is comparatively low. Very rarely will the development be viewed in its entirety. From the highway views to the mountain village are limited to a 2 km long stretch of road, where the higher lying Crystal Chalets and parts of the Porters Chalets, will be visible. Views to the proposed access track and gondola into Crystal Basin could also be gained from these viewpoints. The mountain Village Centre and multi-storey hotel, Riverside and Slopeside buildings will be completely screened by landform. While most views from the conservation land into the proposed

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mountain village area are blocked through intervening hills and ridgelines, some elevated areas south of Cloudy Hill will allow for direct views into the Village development area.

In my opinion from a landscape point of view this is an appropriate site for this project because it is located in a visually contained area, and it expands on existing area of human modification, rather than occurring in a more publically visible area or in a pristine and unmodified environment.

## **8.0 GRAPHIC ATTACHMENT**

Figure 1 Location map of development site adjacent to the existing Porters ski field

Figure 2: Map shows DOC managed land and landscape features of interest that form the landscape context for the development site.

Figure 3: The map shows the landscape character units that will be affected by the proposed development. The following sections provide descriptions of these areas.

Figure 4: The map shows viewpoints described in the visibility assessment and indicative viewing distances. The major ridges in the study area are outlined.

Photos of each landscape character unit to illustrate characteristics

Photographic record and comparative K2VI screenshots

## 9.0 REFERENCES

Boffa Miskell & Lucas Associates (1993) Canterbury regional landscape study for Canterbury Regional Council (CRC)

Department of Conservation (2000) Canterbury Conservation Management Strategy, Planning Series No 10, Christchurch.

Hayward J.A. and Boffa F.D. (1972) Recreation in the Waimakariri Basin: an introductory study with special reference to the Broken River Region. Lincoln Papers in Resource Management No. 3 –1972, Tussock Grasslands and Mountain Lands Institute, Lincoln College, New Zealand.

Leppens J. (2003a) Review of the Multiple Values of Kura Tawhiti / Castle Hill and the Surrounding Area. Unpublished Report for Department of Conservation, Science and Research Unit, Wellington, New Zealand.

LINZ, Crown Pastoral Land Tenure Review Conservation Resources Report Part 1- 4, April 2007

Ralph D (2007) From tussocks to tourists : the story of the central Canterbury high country, Canterbury University Press, Christchurch.

Shanks A. et al. (1990) Coleridge, Craigieburn and Cass Ecological Districts, Survey Report for the Protected Natural Areas Programme, Department of Conservation, Wellington.