

**AEE**  
**APPENDIX A**

Lakes Environmental Ltd and Queenstown Lakes District Council:  
Queenstown Height Study: Landscape and Urban  
Design Assessment, 2009

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Queenstown Height Study

# LANDSCAPE & URBAN DESIGN ASSESSMENT

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*Prepared for* Queenstown Lakes District Council

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*Prepared by:* Helen Mellsop, landscape architect, Lakes Environmental Limited

Nick Karlovsky, urban designer, QLDC

*Reviewed by:* Dr Marion Read, landscape architect, Lakes Environmental Limited

Scott Figenshow, senior policy planner, QLDC

*GIS model:* Grant Herbert, QLDC

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## 1.0 Executive Summary

Queenstown Lakes District Council (QLDC) is investigating the implications of increasing maximum allowable building heights in high density residential-zoned land adjoining Bob's Peak/Ben Lomond. This landscape and urban design assessment has been commissioned as part of this work. It evaluates the existing urban landscape character and the potential outcomes of allowing additional height.

The methodology for the assessment involved site visits to the study area and to significant vantage points and view shafts in vicinity, followed by assessment of the landscape character using a modified version of the 'Pigeon Bay' criteria set out in Part 5 of the District Plan. A three-dimensional GIS model was used to confirm appropriate viewpoints and to help evaluate the visual and landscape effects of increased building height.

The key characteristic of central Queenstown is its location at the confluence of mountains and lake. These features visually dominate the town, making the urban form subservient to the wider natural environment. The underlying topography of the township is clearly legible, as a result of relatively consistent low rise built form and large areas of open space.

The study area along the base of Bob's Peak/Ben Lomond can be divided into five distinct subareas: Thompson Street/Lomond Crescent; Lakeview Park; Brecon Street surrounds; Hamilton Road/Huff Street; and Bowen Street. Of these areas, it is considered that Lakeview Park has the greatest potential to absorb taller buildings without adverse effects on the urban or landscape character. Opportunity for increased height is also recognized in the Brecon Street area, but the potential increase is limited by the presence of Queenstown cemetery and the prominence of the area in important view shafts and vistas. In other parts of the study area, it is considered that any increase in height should be limited to one or in places two additional storeys.

It is recommended that any increase in building heights within the study areas should follow the broad form of the surrounding mountains, stepping gradually up to the base of Ben Lomond with differences in the height of adjacent buildings being no more than one or two storeys. A tall isolated 'landmark' building is likely to compete with rather than complement the surrounding landscape character.

Shading and dominance issues have not been fully addressed in this study.

## 2.0 Introduction

Queenstown Lakes District Council (QLDC) is undertaking a study to assess the implications of increasing maximum building height in high density residential-zoned areas of the town adjoining the base of Bob's Peak/Ben Lomond (subsequently referred to as Ben Lomond). As part of this study, QLDC has commissioned a landscape and urban design assessment of the Height Study Area (see Figure 1 below). This study is to evaluate the landscape and urban design implications of allowing buildings of greater height than the current 8-metre height limit (for sites with less than 6 degree gradients) and the current 7-metre height limit (for sites with more than 6 degree gradients). The brief for the landscape and urban design assessment involves consideration of the existing landscape character and urban form and assessment of the landscape and urban design outcomes of allowing additional height in various areas. This includes consideration of effects on important vantage points and view shafts in the surrounding visual catchment.

The study area is based on the premise that the impact of exceeding the current maximum height limits along the toe of Ben Lomond may:

- not impact adversely on the built character of Queenstown in relation to its landscape setting;
- not impact adversely on neighbouring sites in terms of impeding key views from those sites
- not impact adversely on neighbouring sites in terms of shading over and above existing shading from Ben Lomond.

The study is to test the validity of the first two premises and to facilitate answers to a number of other questions, including:

- Should there only be one area that has higher buildings, or multiple areas?
- Where are the preferred locations for additional height?
- How can height in appropriate locations be a positive contributor to Goal 1 of the Urban Design Strategy: “distinctive built form creating neighbourhoods that reflect our people, culture and character”.

- What locations could be appropriate for iconic buildings where extra height contributes towards a positive outcome for Queenstown?



**Figure 1:** Queenstown height study area.

### **3.0 Methodology**

The landscape assessment methodology involved site visits to the study areas and to significant vantage points and view shafts identified from desktop study. Other less significant representative viewpoints were also visited and photographs taken. A three-dimensional GIS model of Queenstown and the surrounding landscape was used to confirm appropriate viewpoints and to evaluate the visual and landscape effects of two previously proposed developments: the QLDC Lakeview Development on Thompson

Street and the Chamonix development on the corner of Brecon Street and Cemetery Road. Controlled development possible under the District Plan (as modified by Plan Change 10) in the Bowen Street area was also modelled within the GIS terrain, as well as increased building heights in this area.

The landscape character was assessed using a modified version of the 'Pigeon Bay' landscape assessment criteria set out in Part 5 of the District Plan: geomorphology and topography; vegetation and ecological components; urban form and character; aesthetic values (including expressiveness and legibility); and historical associations.

## **4.0 Landscape and urban character analysis**

### **4.1 *Landform – geomorphology & topography***

The central area of urban Queenstown (Queenstown Bay) is predominantly located on alluvial floodplain and beach deposits associated with Horne Creek and Lake Wakatipu, respectively. Elevated terrace areas in Lakeview Holiday Park and around Brecon Street are remnants of benches cut by the lake when it was at a higher level, while alluvial fans intrude into the Horne Creek floodplain in the Hamilton/Huff Street area and in the Bowen Street area. To the west and east, the central township is enclosed by the steep schist mountains of Ben Lomond and Queenstown Hill. On the western side of the town, within the study area, the current urban zone boundaries largely follow the change in gradient between the schist mountainside and the easier slopes of beach, moraine and alluvial fan deposits.

### **4.2 *Vegetation and significant trees***

Mature wilding conifer forests on Ben Lomond and Queenstown Hill form the dominant vegetation features within the landscape. For visitors to the area, particularly international tourists, these forests are likely to contribute to the perceived naturalness and visual amenity of the urban setting. For locals and New Zealanders perceptions of the forest will vary depending on their knowledge about wildling conifer spread and their attitudes towards plantation forestry. Whatever its influence on perceived natural character, the forest on Ben Lomond provides a vegetative backdrop to urban development and a strong visual emphasis to edge of the town.

There are a number of significant mature trees within the study area, some of which are scheduled heritage trees protected under the District Plan:

### Heritage trees

- A sweet chestnut at 93 Thompson Street;
- Two Wellingtonias, six oaks and four cedars within Lakeview Holiday Park on Thompson Street;
- Four cedars within Lakeview Holiday Park on Mann Street;
- Wellingtonias in the Queenstown cemetery;
- A Wellingtonia on the corner of Brecon and Isle Streets;

### Other significant trees

- Mature Douglas fir and larches within Lakeview Holiday Park;
- Two mature gums on the corner of Brecon Street and Cemetery Road;
- A mature Douglas fir on Isle Street next to the medical centre;
- A gum on lower Hamilton Street;
- Mature Lombardy poplars, pines and Douglas fir on the 'Q-box' site at the end of Bowen Street.

## **4.3 Existing urban form and permitted baseline development**

Intense built development in Queenstown is currently focused on the town centre and the strip of visitor accommodation that extends along Lake Esplanade. There is a relatively consistent height of development in the town centre (permitted height limit of 12 metres), which is bounded to the west by the vertical step up to the higher alluvial terrace along Man Street. An entertainment activity arm extends from the town centre along Brecon Street up to the Gondola base building. This area is zoned for high density residential, but has a Commercial Precinct zoning overlay.

Less dense residential development spreads out from centre. Within the study area, this consists of predominantly single-storey or two-storey detached dwellings. The relatively flat overall urban form reflects the town's location on floodplains or gently sloping beach terraces (with exception of the alluvial fans at Huff and Bowen Streets and development on a ridge in the Thompson St/Lomond Cres area).

Large areas of open space break up the urban form along the base of Ben Lomond: Lakeview Holiday Park; Queenstown Primary school and Kiwi Birdlife Park, Wakatipu High School. These open spaces could be described as 'green fingers' extending from the forested form of Ben Lomond into the townscape.

The study area is zoned High Density Residential, Sub-Zone A, B or C (pursuant to Plan Change 10). Development within the parameters of District Plan rules for the zone is likely to result in higher density urban form in the future, with less interstitial open space and vegetation. The zoning allows greater site coverage (between 45 and 65% depending on the sub-zone) while limiting the length of continuous façades. It is likely to encourage greater continuity of development addressing the street edge and on large sites, perimeter block development, where buildings front the street directly and enclose internal open space in mid block.

There is consequently likely to be significant progressive change in the character of the study area, even without additional building height. As sites are redeveloped, a high-density but low rise urban form is likely to emerge, with two-storey buildings defining and enclosing the streets.

#### **4.4 *Urban character/aesthetic values***

Essential to the experience of Queenstown is the perception of encountering settlement at the confluence of mountains and lake. This is emphasized by the confinement of settlement to the flats and terraces near the lake edge, the more gentle slopes of Queenstown Hill below the tree line, and the Horne Creek gorge leading away from the lake between Queenstown Hill and Ben Lomond.

The mountains and the lake visually dominate the town, which is subservient to the wider natural environment. The effect is of a consolidated zone of settlement nestled into a dramatic natural landscape setting. The confinement of the settlement and predominance of the natural setting is further emphasized by the current height restrictions that result in the built form cumulatively reflecting the underlying topography.

From within the town, the prevailing experience is the distinct contrast between the built foreground and the natural backdrop.

Although the scale of buildings within the town centre and in the residential areas is relatively consistent, there is little consistency in building form, style or colour. This

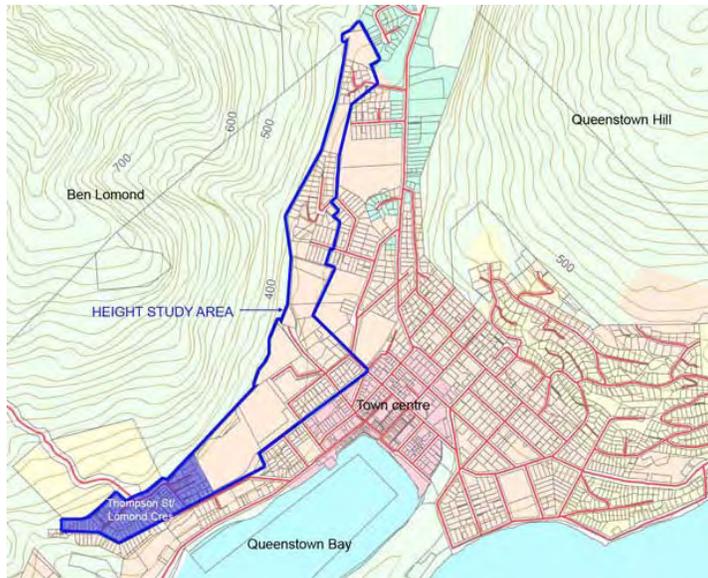
contrasts with comparable mountain resort towns in Canada and Europe (eg. Whistler, Zermatt and Lake Como), which have greater control over building design.

#### **4.5 *Heritage values***

Scheduled heritage features within the study area include the protected trees identified in Section 4.2, the Brecon Street Cemetery and Glenarm Cottage on the corner of Camp Street and Man Street. Crucial to this study are the heritage values of the cemetery, which include the gravestones and monuments and the stories they have to tell about the history of the town, but also the physical setting high on the lake beach terrace with views out to the mountains and the town.

## 5.0 Visual & landscape effects of increased building height

### 5.1 Thompson Street/Lomond Crescent



This is an area of detached residential dwellings abutting the steep forested slopes of Ben Lomond. Houses extend further up the mountain than elsewhere in the study area.

It is considered that this area has potential to absorb a limited increase in building height, especially near the upper zone boundary. This is because:

- The steep forested slopes would provide a visual backdrop to development;
- The area is not highly visible from the town centre and higher development would therefore not compromise any significant views from the town;
- Where the area is more visible (from Queenstown Gardens, the lake and St Omer Park/Lake Esplanade), it is viewed behind the visitor accommodation and hotels on the esplanade. There is potential for buildings to step up the slope, echoing the broad form of Ben Lomond.

The orientation of streets and lots within the area does mean there is potential for taller buildings to shade adjacent development, particularly in the summer months when the rising and setting sun are oriented further from north. These potential shading effects are beyond the scope of this study and require further investigation. There is also little

existing tall vegetation in the area that would integrate and provide scale for taller buildings and uneven development of the small lots could result in currently available views out over the lake and mountains being obscured. Consequently, it is considered that any increased height should be limited to one or two storeys above that currently permitted, with increases of two storeys being restricted to those lots on the upper edge of the residential zone. There are no particular public views that would be obscured by taller development.

## 5.2 **Lakeview Park**



This area comprises the Queenstown Lakeview Holiday Park and James Clouston Memorial Recreation Reserve, adjoining Thompson Street and Man Street. The remnant beach terrace is currently predominantly open space, with significant mature trees and scattered single storey cribs and holiday park facilities.

It is considered that this part of the study area has the greatest potential to absorb additional building height:

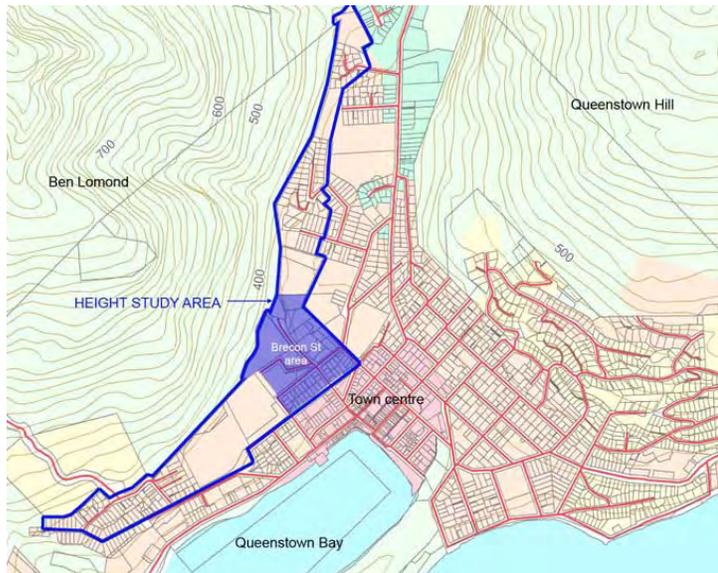
- The steeply sloping land and cliffs behind the beach terrace provide containment and scale for taller buildings;
- The gently sloping former lake beach allows buildings on the front of terrace to obscure taller buildings behind;

- The mature trees (some of which are protected) provide opportunities to screen and integrate taller buildings and provide scale to the built form;
- The area is not highly visible from town centre and taller development would not compromise significant views from the retail/commercial area or esplanade;
- Where the area is more visible (from Queenstown beach, the lake and Queenstown Gardens), it would be viewed behind visitor accommodation and hotels lower on slope. There is opportunity for buildings to gradually step up, echoing the broad form of Ben Lomond.
- The site is in single ownership and is large enough to be developed comprehensively, allowing buildings that are in scale with those surrounding them and an incremental increase in height towards the base of Ben Lomond.

Potential shading and dominance effects on adjacent areas would need to be taken into account and any increased height would need to be achieved gradually across the lake beach terrace so that built form mimicked the gradient of the surrounding landform. Although this pattern of built form would compromise the legibility of the former lake beach, it is unlikely to adversely affect the visual balance between the town and its mountain context.

To ensure that buildings remain in scale with the built fabric of Queenstown, it is recommended that the tallest buildings adjacent to the cliffs should not exceed 6 (???) stories above ground level.

### 5.3 Brecon Street surrounds



This area includes Queenstown Cemetery, Queenstown Motor Park, commercial recreation activities, community facilities (including the fire station and kindergarten) and low density residential development between Isle and Man Streets.

It is considered that this area has capacity to absorb limited increases in building height:

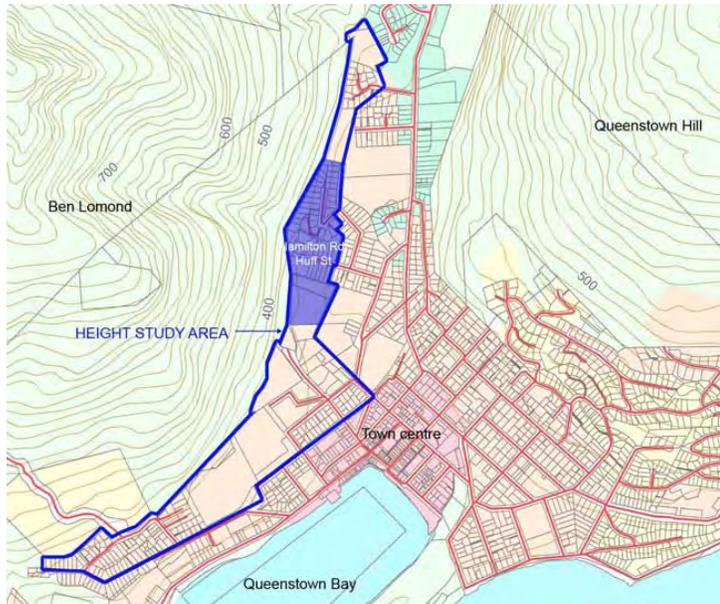
- The area is closely connected to the town centre and there is potential to step built height up gradually, following the land contour;
- There is one protected Wellingtonia tree and several other significant mature trees (gums and Douglas fir) that have the potential to provide scale and to integrate taller buildings;
- There is potential for Brecon St to be rezoned to acknowledge and enable further commercial and recreation activities, reinforcing the link to the gondola;
- There is potential for a group of taller buildings (up to a maximum of 5 storeys), rather than a single landmark building, to emphasize the edge of the remnant terrace.

- There are some advantages in being able to see a landmark building or buildings from the Shotover St/Brecon St intersection to draw people up the Brecon steps and make the connection to the gondola more legible. Such a building would need to be located near the corner of Man and Brecon Streets.

The area has less potential to absorb significant building height increases than the adjacent Lakeview Park area, as it is separated from the steeply sloping land of Ben Lomond by the cemetery open space. Building heights over three or four stories could have significant adverse effects on landscape and heritage values:

- By dominating and shadowing the cemetery and potentially blocking views out from this important public space to the Remarkables, Cecil Peak, Queenstown Hill and the town;
- Visually dominating views from Queenstown Recreation Grounds, Queenstown Primary School playing fields and parts of the town centre;
- Potentially obscuring vistas up Brecon St and Camp St to the gondola and Ben Lomond.

## 5.4 Hamilton Road/Huff Street



This area includes the Reavers Lodge site and low density residential development on the upper part of an alluvial fan. This fan has been formed by a steep stream catchment on the face of Ben Lomond and has been identified as a potentially active composite fan in the Otago Regional Council's Otago Alluvial Fans Project (Opus International Consultants Limited 2009). Queenstown Primary School and the Queenstown Birdlife Park have been included in this area but are unlikely to be developed, as they are owned by the Education Ministry and QLDC, respectively.

From a landscape and urban design perspective, ignoring the potential effect of land stability hazards, this area is considered to have only very limited capability to absorb additional height (one additional storey):

- Significantly greater height would not be consistent with the urban form on the floodplain below and would result in a more exaggerated 'wavy' edge to urban development along the base of Ben Lomond, as the schools on either side of this area are likely to remain undeveloped. Because the elevated land is an alluvial fan built up into the floodplain rather than a ridge descending from the mountain, considerable additional height in this location would detract from the legibility of the landscape setting. It would also compromise one of the aesthetic characteristics of urban Queenstown: nestling at the base of Ben Lomond.

- There is limited existing vegetation to integrate taller buildings.
- There is potential for shading and dominance of adjacent residential dwellings within the area.

On the positive side, greater building height (for example, two additional storeys) against the steeply sloping hill has potential to obscure the cleared track and power lines in the QLDC reserve behind, resulting in a more consistent and aesthetically coherent urban edge. For the remainder of the study area, the dense vegetation the wilding conifers forms the immediate backdrop to the town.



**Figure 2:** View to Hamilton/Huff Street area from Hallenstein Street.

## 5.5 Bowen Street



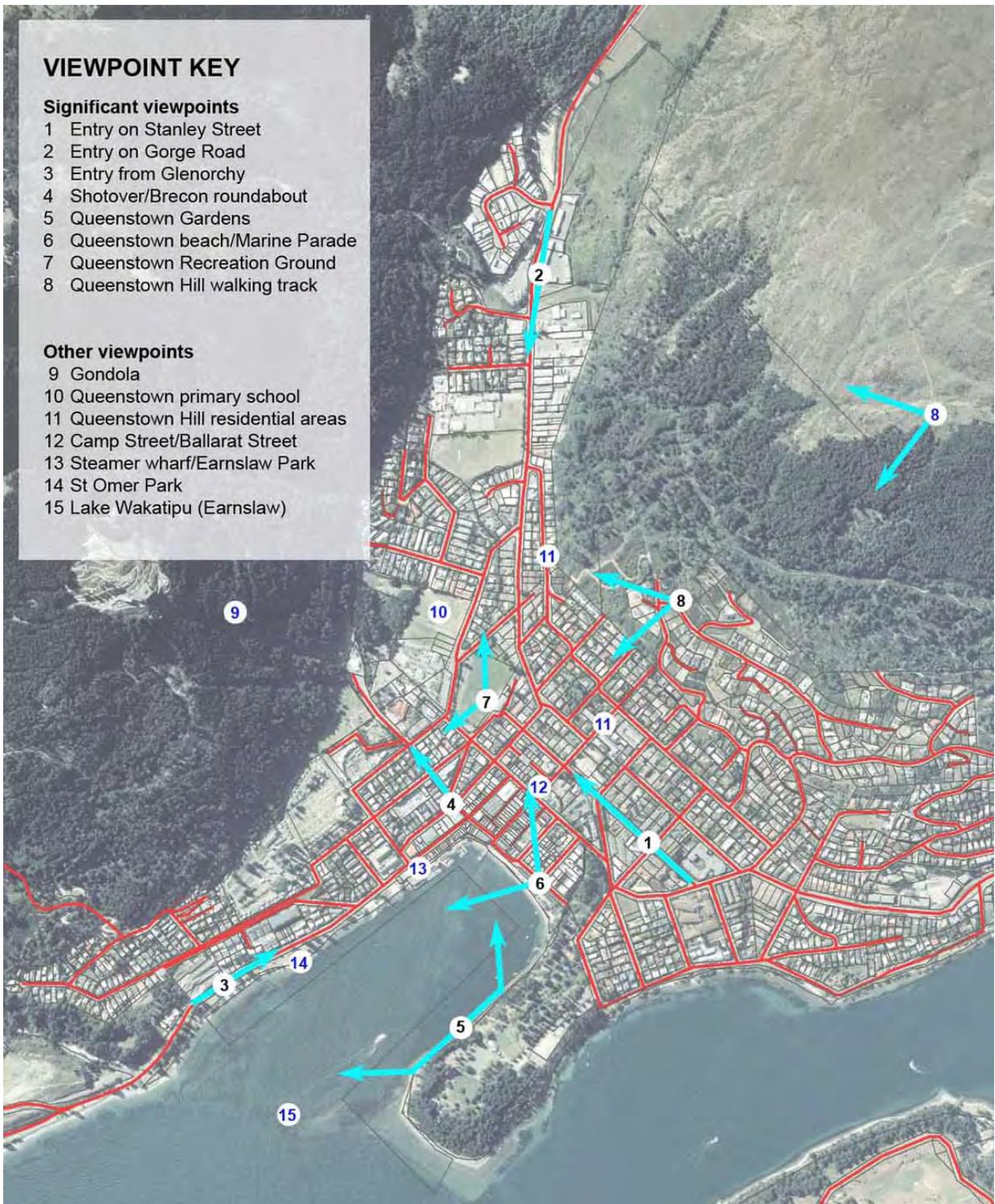
This area includes the upper residential development served by Bowen Street and Kiely Lane and the 'Q-Box Ltd' site on Bush Creek. The upper part of the Wakatipu High School site is included in the study area, as it is possible that this land could be redeveloped for residential or commercial use in the future. Like the Hamilton Road/Huff Street area, existing residential development is located on an alluvial fan, in this case formed by Bush Creek. It has also been identified as a potentially active composite fan in the ORC study.

From a landscape perspective, the area is considered to have potential to absorb buildings of greater height than that currently permitted, especially on the 'Q-Box Ltd' site. This is because:

- The corner Q-Box Ltd site is screened by industrial development to the north-east and has significant mature vegetation (if retained) that could screen and integrate taller buildings;
- The area is not highly visible from the town centre, Queenstown Hill or Gorge Road. Visibility is limited to parts of Hallenstein Street, the intersection of Gorge Road and Bowen Street, and possibly the gondola.

- There is potential to step built height up gradually from the industrial development closer to Gorge Road, following the land contour.

However, as with the Hamilton Road/Huff Street area, significantly greater height on Bowen Street would result in a more exaggerated 'wavy' edge to urban development, detracting from the legibility of the urban edge and the mountain slopes. There is also potential for shading and dominance effects on adjacent landowners if the small lots were redeveloped unevenly. It is therefore considered that any increase in height should be limited to one to two storeys (with the greater height increase restricted to lots adjoining the zone boundary), except in the larger corner site.



**Figure 3:** Viewpoint map

## 6.0 Effects on significant vantage points and viewshafts (refer Figure 3)

### 6.1 *Entering Queenstown on Stanley Street – viewpoint 1*

This is the first view of the town centre and study area for people arriving in Queenstown from the west. The vista from Stanley Street is dominated by Ben Lomond and the gondola/Skyline building and framed by mature Wellingtonias and Douglas firs on either side of the street. The town centre appears as low rise built form, subservient to the surrounding mountains. There is a visual connection to the open space of Brecon Street cemetery.

The Lakeview Park, Brecon Street and Hamilton Road/Huff Street study areas are visible as people enter the town. While increased building heights as recommended in Section 5 above would be consistent with existing urban character, structures taller than these recommendations are likely to detract from the legibility of Ben Lomond and disrupt the balance between urban and rural landscape.

Increases in height in the Hamilton Road/Huff Street study area would be particularly noticeable given the rising grade towards the toe of Ben Lomond.



**Figure 4:** View towards Ben Lomond from Stanley Street

## **6.2 *Entering Queenstown on Gorge Road – viewpoint 2***

For visitors and locals entering Queenstown on Gorge Road, the view is directed toward Cecil Peak rather than Ben Lomond and the study areas are only minimally visible. The urban character is industrial and commercial with the visual clutter of signage, car parking and varied building form and scale.

The Hamilton Road/Huff Street area is visible as people pass the Wakatipu High School playing fields, but is not the focus of the view. Increased height in the study area is therefore unlikely to affect the entry experience.

## **6.3 *Entering Queenstown from Glenorchy – viewpoint 3***

Approaching Queenstown from Glenorchy via the One Mile roundabout, the lake and St Omer Park are the dominant components of the view. Although taller buildings in the Thompson Street/Lomond Crescent and Lakeview Park areas could be visible from Lake Esplanade, they would be substantially screened by closer structures. Adverse effects on the visual amenity and character of the entry experience are unlikely.

## **6.4 *Up Brecon Street from Shotover Street – viewpoint 4***

The intersection of Brecon Street and Shotover Street is a key vista within the town centre, particularly for pedestrians. At this point, views open up to Eichardt's Hotel and the Remarkables (down Rees Street) and to Ben Lomond and the gondola (up Brecon Street steps). Towards Ben Lomond, only the mature trees on Brecon Street and the forested slopes are visible above the steps.

As discussed earlier, there would be advantages in being able to see buildings at the crest of the steps to make the connection to the gondola and other recreational activities more legible. Buildings considerably higher than currently permitted are likely to obscure views of the mountain within this vista and result in the built form dominating the rural landscape rather than vice versa.



**Figure 5:** Looking up Brecon Street steps from Shotover Street

### **6.5 Queenstown Gardens towards Ben Lomond – viewpoint 5**

From the western side of Queenstown Gardens, including both the upper and lower walking tracks, intermittent views are available across the bay to Ben Lomond and the township. This is one of the few public vantage points where the entire urban edge from Lomond Crescent to Brecon Street is visible. The flat former beach terrace reads clearly at the base of Ben Lomond and the township is a relatively narrow strip between the lake and the massive form of the mountain.

With additional building height in the visible study areas stepping up from the lake, the upper beach terrace would no longer be legible and the currently flat urban edge would be more variable. While this would detract from the character of Ben Lomond to some extent, the mountain would remain dominant in the landscape.



**Figure 6:** View towards Ben Lomond from Queenstown Gardens

### **6.6 *Queenstown beach/Marine Parade towards Ben Lomond – viewpoint 6***

The character of views from the beach and Marine Parade Reserve towards Ben Lomond is similar to that from the gardens, discussed above. While taller buildings at the base of the mountain would reduce the legibility of the terrace, they would not detract from the urban character of Queenstown if built height steps gradually up the slope. Tall ‘landmark’ buildings considerably higher than surrounding structures would compete with the natural landform and reduce the visual coherence of the landscape. This is particularly the case for the vista down Marine Parade towards the memorial gates.



**Figure 7:** View towards study area from Queenstown Beach



**Figure 8:** View towards Ben Lomond from Marine Parade

### **6.7 Queenstown Recreation Ground – viewpoint 7**

The recreation ground is within a hollow, visually enclosed by Ben Lomond, Memorial Hall and the escarpment leading up to the former beach terrace at Brecon Street.

Taller buildings in the Brecon Street sub-area would further enclose the playing fields but would not substantially obscure any views to Ben Lomond. Beyond a certain height increase, tall buildings around Brecon Street could block views to Walter and Cecil Peaks.

### **6.8 Queenstown Hill walking track – viewpoint 8**

Expansive vistas are available from parts of the Queenstown Hill walking track over the lake, mountains and township. The lake and mountains are generally the focus of the view. Oblique views of the Lakeview Park and Brecon Street parts of the study area are available from the start of the track and from rest points on the ascent. Isolated taller buildings separated from the steep slopes of Ben Lomond would detract significantly from the visual coherence of the landscape. Conversely, a gradual increase in height towards the base of the mountain, with taller buildings set against the steeper gradient, would complement the natural landform.



**Figure 9:** View toward study area from base of Queenstown Hill track

## 7.0 Other viewpoints

A number of other less significant viewpoints were identified as part of the landscape assessment and the effects of increased building height in the study areas considered. These included the following:

- The gondola and Skyline building – viewpoint 9
- Queenstown primary school – viewpoint 10
- Queenstown Hill residential areas – viewpoint 11
- Camp Street/Ballarat Street intersection and the Village Green – viewpoint 12
- Earnslaw Park and the Steamer Wharf – viewpoint 13
- St Omer Park – viewpoint 14
- Lake Wakatipu (eg. from the Earnslaw) – viewpoint 15

From some key public places – Earnslaw Park/Steamer wharf and the Village Green – taller buildings in the study areas would be largely screened by closer structures and would have little effect on the landscape and urban character.

From the other identified vantage points, it is considered that increased heights as recommended in Section 5 would not significantly detract from the legibility, expressiveness or coherence of the visible landscape.

## 8.0 Conclusions & discussion

The principal conclusions of the landscape and urban assessment are as follows:

- Essential to the experience of Queenstown is the perception of encountering settlement at the confluence of mountains and lake. The central part of Queenstown is 'nestled' on the lakeside at the base of the surrounding mountains. The urban form is subservient to the wider natural environment.
- The flat overall form of the town reflects its location on floodplains or gently sloping beach terraces.

- Any increase in building heights within the study areas should follow the massive broad form of the surrounding mountains – Queenstown Hill, Ben Lomond, Cecil Peak. Buildings should step gradually up to the base of Ben Lomond with differences in the height of adjacent buildings being no more one or two storeys.
- There may be greater opportunity for additional height close to the town centre and to the existing visitor accommodation area.
- Existing mature trees can provide scale and context to taller buildings as well as partially screening buildings and integrating them with the conifer forest on the Ben Lomond backdrop.
- Within the study area, the Lakeview Park sub-area appears to have the greatest potential to absorb taller buildings without adverse effects on the urban or landscape character.
- Opportunity for increased height is also recognised in the Brecon Street area, but the potential increase is limited by Queenstown cemetery and the prominence of the area in important view shafts and vistas.
- In other parts of the study area, any increase in height should be limited to one or in places two additional storeys.
- Shading and dominance issues within the study area may further limit increased height. These issues have not been addressed in the study.
- A tall ‘landmark’ building would compete with rather than complement surrounding landscape character and reduce the visual coherence of the natural and urban landscape.
- The integrity of Bob’s Peak/Ben Lomond as a landscape feature would be best maintained by a relatively even line of built form along base of the mountain, with exceptions following ridgelines extending down from the mountain rather than alluvial fans built up into the floodplain. An even edge to the urban form is however interrupted by the large Council- or government-owned areas of land against Ben Lomond – Lakeside camping ground, Queenstown Primary School and Wakatipu College. These retained ‘green fingers’ of open space extending into the urban area prevent a continuous built edge to the town at Bob’s Peak.

It is recommended that any additional height allowances be expressed in terms of the number of storeys plus roof articulation, in addition to absolute height limits. This way of expressing building height is more transparent to the general public, in terms of visual effect, and also allows for variation of rooflines.

**AEE**  
**APPENDIX B**

Fearon Hay Architects Ltd and Populous: Urban Design Framework

# LAKEVIEW: URBAN DESIGN FRAMEWORK

*Aug 2014*

**POPULOUS**

fearonhay

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# 1.1 EXECUTIVE SUMMARY

## INTRODUCTION

The Lakeview Subzone represents one of the largest underdeveloped areas of prime land in central Queenstown. It occupies a prominent terrace at the base of Scenic Reserve, and stretches between the city and the outer Queenstown region. Redevelopment of this area creates opportunities to extend the existing successes of the Queenstown's town centre, and to create a sequence of engaging public spaces which reinforce Queenstown sense of place. The Urban Design Framework emphasises the need to protect the character of the landscape of Queenstown while providing a high quality public realm with new quality residential, commercial and tourism development opportunities catering for anticipated regional growth.

The purpose of the Lakeview Subzone Area Urban Design Framework is to provide a clear, robust and flexible framework to guide and coordinate the progressive development of the Lakeview site in a manner which firmly connects it to and embeds it within an extended Queenstown Town Centre. It:

- Establishes a clear vision for the future of the Lakeview Site which supports and complements the vision for Queenstown Town Centre;
- Provides a design framework for the Lakeview public realm and community infrastructure;
- Defines urban design principles in order to guide future development propositions.

## KEY ATTRIBUTES OF THE FRAMEWORK INCLUDE:

- **OPPORTUNITY FOR PLACE**  
Shaping the public realm to maximise shared values including economical, environmental and social dimensions.
- **STREET EDGES**  
Buildings and activities defining and activating public space
- **BUILDING TYPOLOGIES**  
Creating a rich, mixed use urban environment which is responsive to its landscape setting
- **VEHICULAR CONNECTIVITY**  
Allowing legible movement through the site
- **PEDESTRIAN & CYCLE CONNECTIVITY**  
Connecting people and places through a highly permeable network of circulation routes
- **PARKING AND SERVICING**  
Creating a sustainable, well resourced urban zone

## 1.2 DOCUMENT STRUCTURE

The report outlines the rationale and provides the supporting documentation upon which the Lakeview Subzone concept plan has been developed. The purpose of this document is to arrive at, to validate, and illuminate a development framework which will inform the District Plan provisions for the Lakeview Subzone - including Lakeview, Thompson/Glasgow & Man/Brecon subareas. This is achieved through a series of urban design principles and application of urban design strategies.

The principles and strategies illuminated are a combination of diagrams, illustrations, precedents, imagery and associated text. This framework does not offer specific design solutions.

The report develops sequentially through the following main sections:

- 1.0 Introduction
- 2.0 Existing Context and Site Analysis
- 3.0 Urban Design Principles
- 4.0 Urban Design Strategies
- 5.0 Development Framework

The primary focus of this document is on the layout of public space and the three dimensional spatial definition of that network by built form containing activities that will contribute to the character, vitality and/or amenity of the public realm. The footprints and form of buildings shown in plans, diagrams and illustrations in this document are indicative only. This framework is not a statutory document.

The Lakeview development vision, principles and strategies are aligned to existing Queenstown Lakes District Council guidelines. The framework acknowledges the successful implementation of design strategies in Queenstown Town Centre and takes the opportunity to extend these.

Documents that have informed the design process include:

- New Zealand Urban Design Protocol (November 2009).
- Queenstown Town Centre Strategy (December 2009).
- Queenstown Town Centre Character Guidelines (October 2007).
- Queenstown Height Study: 'Landscape and Urban Design Assessment' for Queenstown Lakes District Council (November 2009). (draft)
- QLDC Urban Design Strategy (Nov 2009).

# 2.0 CONTEXT & ANALYSIS

- 2.1 Local Context
- 2.2 Planning Context
- 2.3 Site Analysis

## 2.1 LOCAL CONTEXT

Queenstown is a largely tourism-based centre located on the shores at the head of Lake Wakatipu. Lower density housing extends away from the core along the shoreline and up into the lower alpine slopes which contain the town.

The existing, celebrated Queenstown Town Centre is an intimately scaled, small core oriented to the lake front. Historic buildings clustering around the lakefront establish the low built form and scale. The primary scale and form of the built environment is established by historic streets, lanes, parks and buildings.

The roofscape of the town centre, as viewed from higher vantage points, surrounding residential areas and tourist attractions such as the Skyline gondola, form a varied skyline image.

The grid layout of the streets provides view corridors to the mountains and lake. Within the town centre there is a variety of streetscapes, reflective of the scale of the pedestrian and traffic environments.

Balconies and verandahs overhanging street footpaths aid pedestrian comfort and weather protection. Street furniture, planting, and outdoor dining areas contribute to the attraction of, and comfort within, the town centre.

The small scale and size of the town centre with its many service lanes makes it a highly accessible environment for pedestrians. Pedestrian permeability has been historically achieved through small block and allotment sizes, together with mid-block service lanes. The historic pattern of pedestrian linkages has been retained and enhanced and forms an important means of promoting pedestrian permeability throughout the town centre. The pattern of arcades also contributes to the character of the town centre.

### RELATIONSHIP TO QUEENSTOWN TOWN CENTRE:

The Lakeview Subzone is visible from the Town Centre. The centre of town, accommodation and Fernhill are all within a 10-15 minute walk. The steepness of a short portion of the walk could be mitigated by pedestrian walkway upgrades (steps).

The southern edge of the site along Thompson Street and down to the lake edge is defined by a range of high density, larger scale developments, many of which provide short-stay accommodation.

### RELATIONSHIP TO GEOGRAPHIC AND CULTURAL LANDMARKS:

The overwhelming grandeur of the natural landscape provides a unique relationship between the mountains and Lake Wakatipu. While the Lakeview Subzone is elevated so as to obtain outstanding views across the lake, any development will be comparatively insignificant in terms of scale, bulk and spatial definition when contrasted against the scale and grandeur of the natural environment.

The subzone provides the 'iconic' views (of both lake and the mountains) which underpin the marketing of Queenstown as a destination. Through its unique setting, combined with innovative architecture, a highly legible, permeable and interconnected network of public spaces will be key to its success, to which the subzone areas provide ample opportunity for these to prosper.

# 2.1 LOCAL CONTEXT

## SITE AND SURROUNDING LANDMARKS

Key

- 01 Skyline Gondola
- 02 Queenstown Memorial Hall
- 03 Brecon Street Stairs
- 04 Mall Street
- 05 Queenstown Waterfront
- 06 The Earnslaw Wharf
- 07 Queenstown Holiday Park
- 08 Queenstown Gardens
- 09 Queenstown Rugby Field
- 10 St. Omer Park
- 11 Hotel St. Moritz
- 12 The Ridges Hotel
- 13 Sofitel Hotel
- 14 Crowne Plaza Hotel
- 15 Novotel Hotel
- 16 Heritage Hotel
- 17 Mercure Resort
- 18 Copthorne Hotel



0.09

Site and Surrounding Landmarks  
Scale 1:10,000



Queenstown Lakeview Development  
Urban Design Framework  
August 2014

**POPULOUS**

fearonhay

## 2.2 PLANNING CONTEXT

The vision for development outside the town centre had been established in Queenstown Lakes District Council Growth Management Strategy (April 2007).

The District Plan, as the key statutory instrument for promoting considered development in the Queenstown region, provides the Council with discretion to examine applications for new buildings and changes to the existing built fabric.

The QLDC currently zones the site as High Density Residential. As a result of this zoning, it is difficult for the site to develop as a single, integrated development. Careful consideration needs to be given to how the site may develop as the population and civic demands of Queenstown grow.

The primary purpose for developing Lakeview is to ensure that the land parcels can deliver significant economic benefit to the District.

Having a long-term view of the development's effect on infrastructure is consistent with Council's obligation to develop infrastructure in a manner that is efficient and cost-effective.

Coordinated development will minimise disruption of the site and neighbouring areas, and is likely to maximise the level of developer interest.

This document will inform the District Plan provisions for the Lakeview Site.

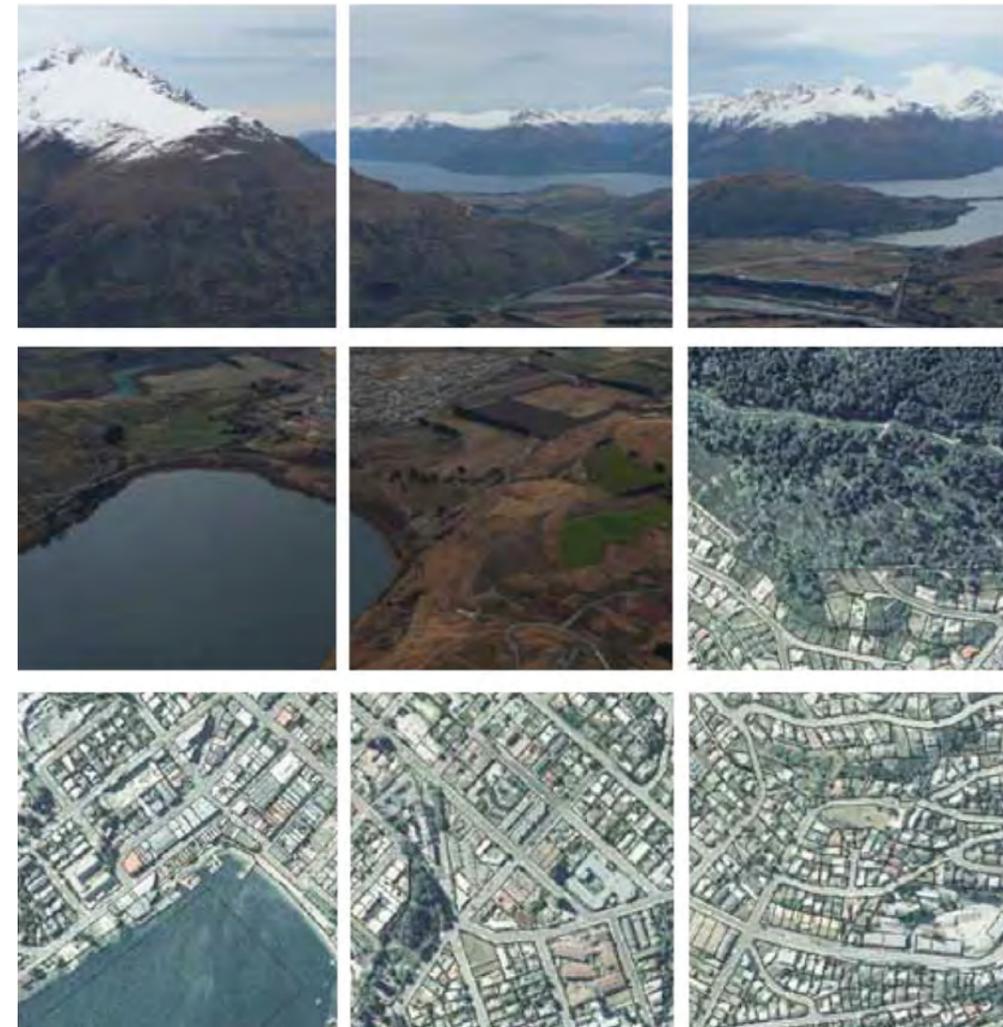


Figure 1: QLDC Queenstown Town Centre Character Guidelines, October 2007 (Pg... 15)

## 2.3 SITE ANALYSIS

### KEY SITE ATTRIBUTES

- ADVANTAGES:** Excellent vistas of Queenstown and the surrounding landscape.  
Visible from the city centre.  
Multi-level and varied density development.
- OPPORTUNITY:** Unique opportunity for views.  
Natural site contours advantage public space and building layouts.  
Potential for future expansion on surrounding land.
- DISADVANTAGE:** Uphill walk from city.

### SITE APPRAISAL

- SITE FORM:** The site size and shape means an optimal layout and design can be achieved.
- SITE TOPOGRAPHY:** The way the land rises steeply behind the site means that built form will not dominate the landscape and will not break ridgelines or the skyline. The generally level topography of the site affords views across the site.
- ENVIRONMENT:** The site provides the 'iconic' views (lake and mountains) which underpin the marketing of Queenstown as a destination. A unique setting combined with a well defined and legible public space network defined by a innovative architecture is key.  
The site provides the opportunity for all of these elements.
- PROXIMITY TO CBD:** Walking time to the centre of town is within the generally acceptable 10-15 minute time frame.  
The steepness of a short portion of the walk could be mitigated by the introduction of stairs at some point along Man Street.
- ACCOMMODATION:** Walking time to a variety of accommodation towards the Town Centre and towards Fernhill is within the generally acceptable 10-15 minute timeframe.
- ORIENTATION:** The North-South direction of the site allows sunlight and good views to the East from much of the site.
- OVERALL APPEAL:** The Master Plan responds to and takes advantage of all of the features offered by the site.  
The only slight drawback is the steepness of the walk to the city centre and visitor accommodation in the same direction.

# 2.3 SITE ANALYSIS

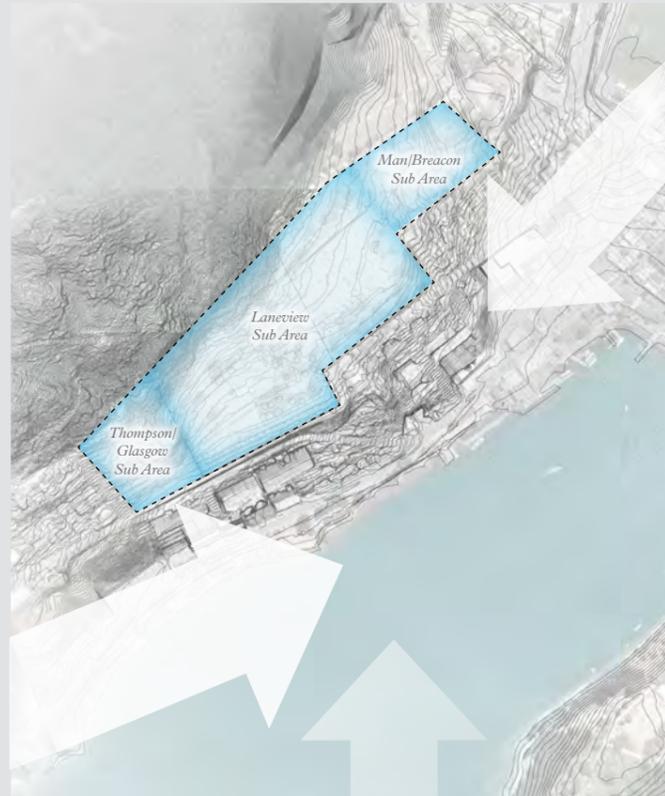
## KEY SITE ATTRIBUTES

### VANTAGE POINTS



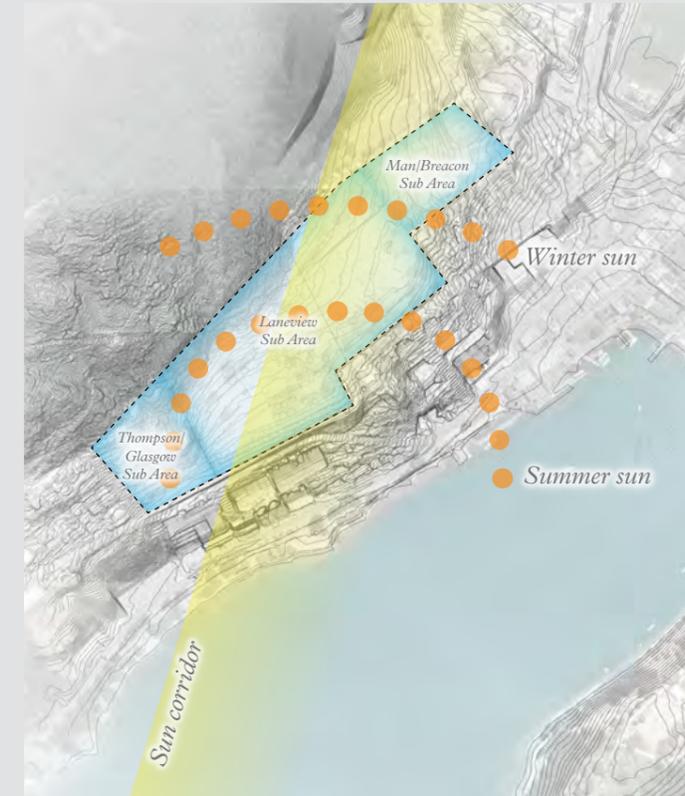
Indicative Views From Site

### MAIN WIND DIRECTION ON SITE

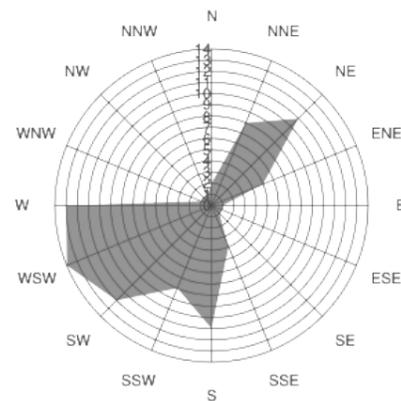
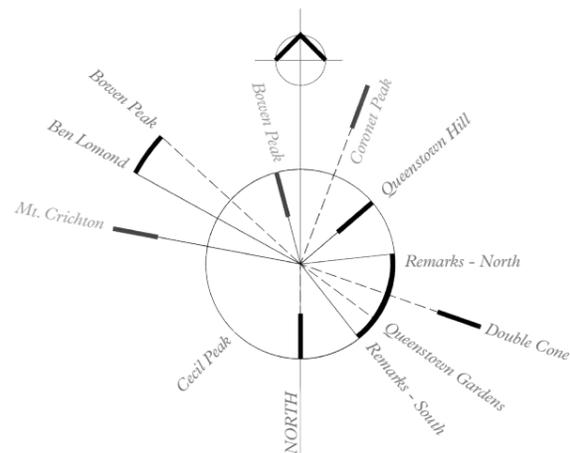


Yearly Wind Distribution Average (Regional Data)

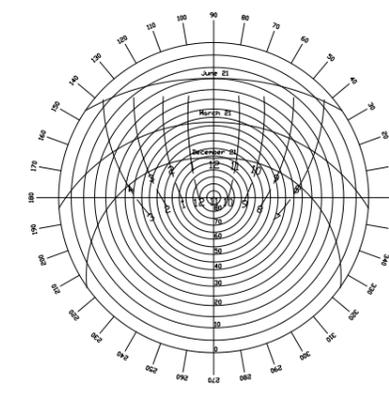
### SUNLIGHT



Average Annual Sunshine Hours: 2180 (Regional Data)



Site Analysis



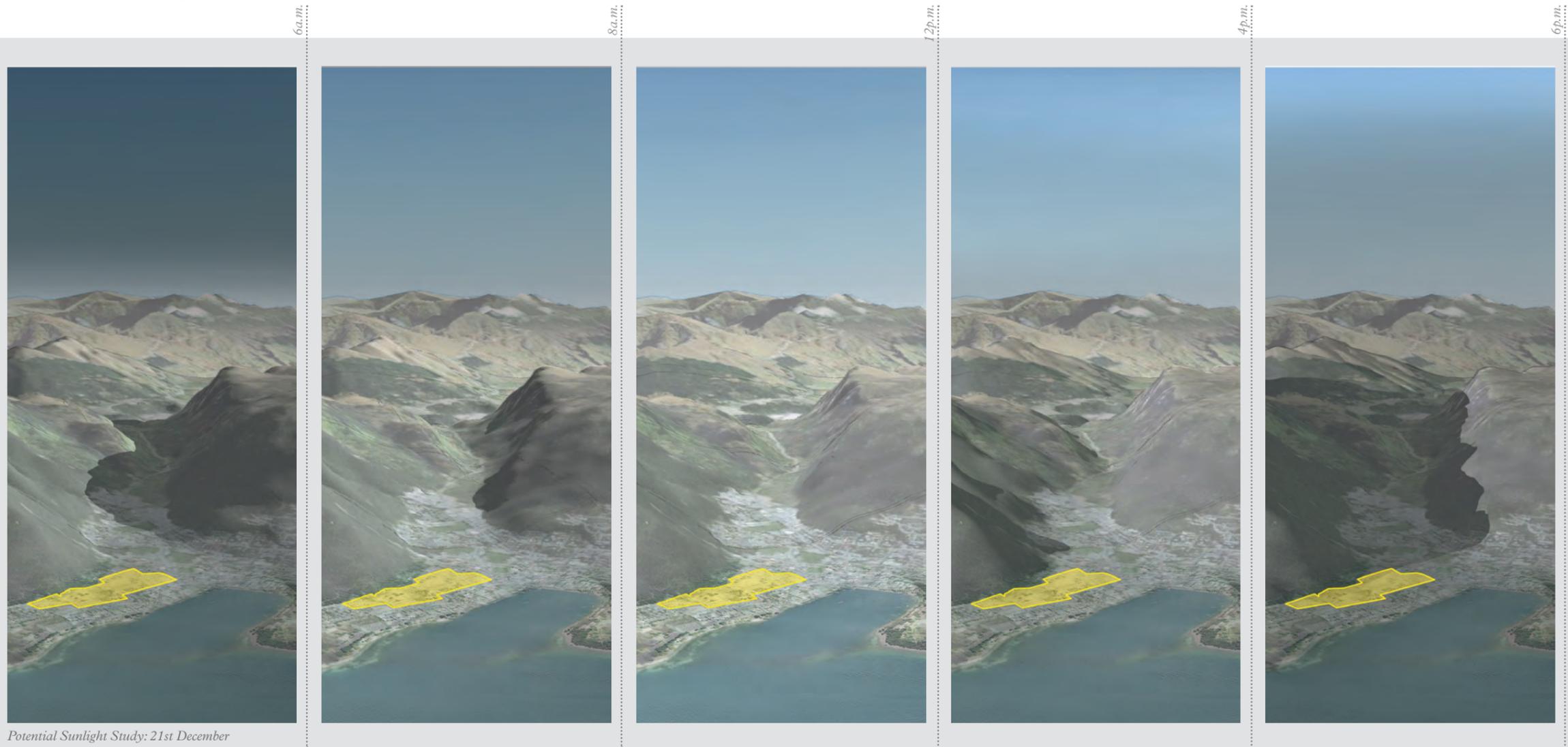
Queenstown Lakeview Development  
Urban Design Framework  
August 2014

**POPULOUS**

fearonhay

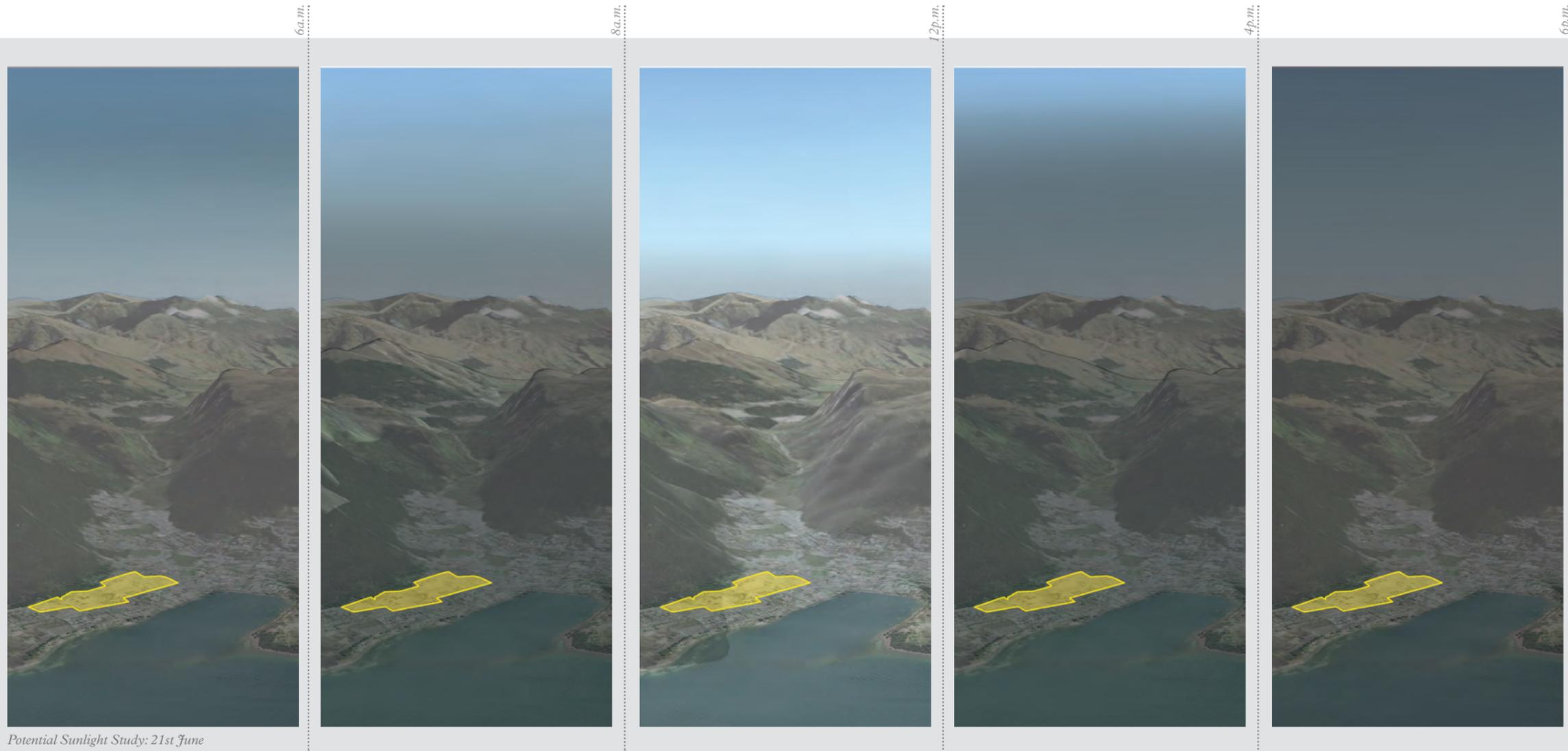
# 2.3 SITE ANALYSIS

## SUNLIGHT STUDIES: SUMMER SOLSTICE



# 2.3 SITE ANALYSIS

## SUNLIGHT STUDIES: WINTER SOLSTICE



Potential Sunlight Study: 21st June

# 3.0 URBAN DESIGN PRINCIPLES

- 3.1 Objectives
- 3.2 High Quality Public Spaces (Streets, Squares, Lanes & Parks)
- 3.3 Distinctive Built Form
- 3.4 Consolidated Growth and Interconnected Urban Structure

# URBAN DESIGN PRINCIPLES

This section defines the Four Key Urban Design Principles for the Lakeview Urban Design Framework. The Design Principles are clearly aligned with the Urban Design Goals for the District outlined in the QLDC Urban Design Strategy (Nov. 2009).

The following Design Principles, and associated diagrams, convey a series of aspirations which are not design solutions or outcomes in and of themselves. These cover the high level thinking in the application of the urban design principles to the site and planning contexts. The following section, 4.0 Design Strategies, addresses the urban design applications which reinforce these principles.

# 3.1 OBJECTIVES

## OBJECTIVES FOR THE TOWN CENTRE

### QLDC Queenstown Town Centre Strategy (December 2009)

- Heritage and other elements that contribute to the unique identity of Queenstown will be identified and protected (Objective 1)
- The public realm within and connected to the town centre builds upon the elements that make Queenstown a special place (Objective 2)
- To strengthen Queenstown's town centre as a prosperous commercial centre (Objective 3)
- Diverse range of economic, social and cultural activities to promote a vibrant environment (Objective 4)
- The town centre retains key civic and community functions that underpin its relevance to the local community (Objective 5)
- Recognized as a mixed use environment where a diverse range of activities coexist (Objective 6)
- Create an urban environment that is safe and an attractive asset (Objective 7)
- Is easily accessible (Objective 8)
- Design of streets and management of traffic is prioritized towards pedestrians, creating more permeable and versatile spaces that balance vehicle & pedestrian movement, improved amenity and social spaces (Objective 10)

### Urban Design Goals for the District

### QLDC Urban Design Strategy (November 2009)

- Distinctive Built Form
- High Quality Public Spaces
- Consolidated Growth
- Connected Urban Form
- Sustainable Urban Environments
- Cohesive Communities



Figure 2: Image Gallery. Queenstownnz.co.nz (January 2014)  
[http://www.queenstownnz.co.nz/media/media-image-gallery\\_md/index.cfm?subaction=category&categoryid=29](http://www.queenstownnz.co.nz/media/media-image-gallery_md/index.cfm?subaction=category&categoryid=29)

## 3.2 HIGH QUALITY PUBLIC SPACES (STREETS, SQUARES, LANES & PARKS)

### WITHIN THE LAKEVIEW SUBZONE AREA:

High quality public spaces that complement the quality and visual character appeal of the natural setting and foster economic vitality & community well being are desired.

- Ensure public space and infrastructure works are designed to create and/or contribute to consistently outstanding urban design outcomes.
- Control the quality of design of buildings fronting public spaces.
- Integrate street and land use activities, to generate and active building edges.
- Minimise excessive visual clutter and impediments to pedestrian amenity and movement.

Place-making within the site is encouraged in order to:

- Provide a variety of public spaces which encourage a sense of community.
- Establish gateways that generate a sense of arrival/departure when entering & leaving the site.
- Enhance connections to the scenic reserve behind, through careful interface design.
- Respond to the natural features of the site and its surroundings.
- Provide a connectivity and open green space.
- Create a visual legibility and highly permeable site.
- Extend and apply the characteristics of the street grid within Queenstown Town Centre across the site.



Figure 4: QLDC. Photograph of a high quality public realm amenity. *Queenstown Town Centre Character Guidelines*, October 2007 (Pg. 22)

# 3.2 HIGH QUALITY PUBLIC SPACES (STREETS, SQUARES, LANES & PARKS)

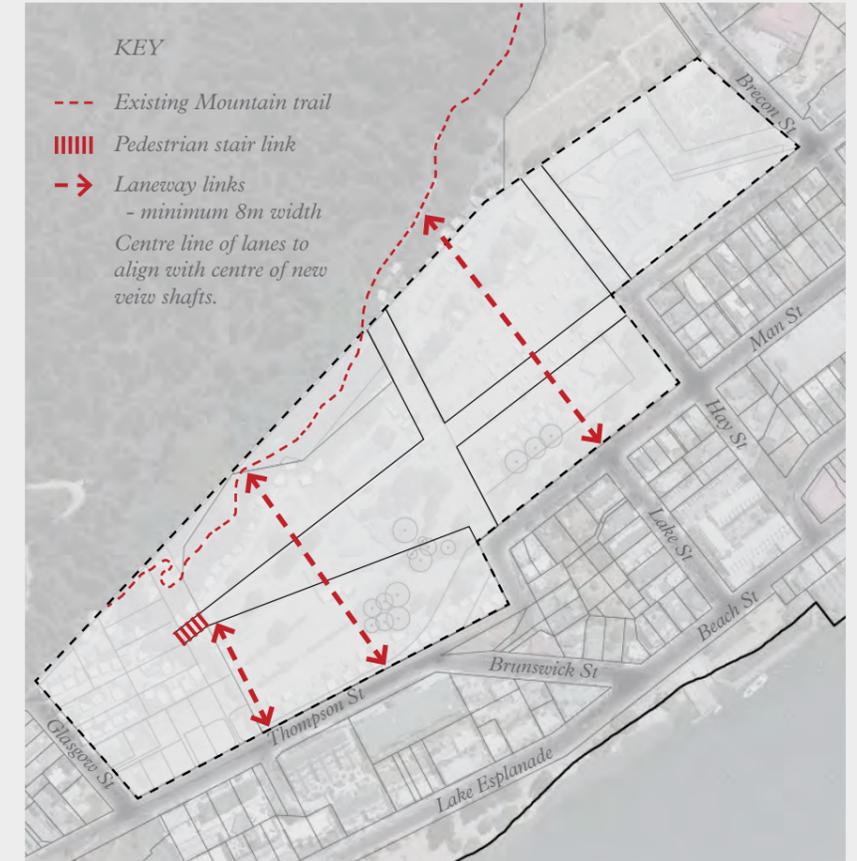
STREETS



THE SQUARE



LANES



# 3.2 HIGH QUALITY PUBLIC SPACES (STREETS, SQUARES, LANES & PARKS)

GREEN SPACES



VIEW SHAFTS



INDICATIVE SERVICE LANES



### 3.2 HIGH QUALITY PUBLIC SPACES (STREETS, SQUARES, LANES & PARKS)

#### PUBLIC SPACE EDGE CONDITIONS



KEY

- Active Frontage
- Active Building Corner



## 3.3 DISTINCTIVE BUILT FORM

### WITHIN THE LAKEVIEW SUBZONE AREA:

- Ensure that new development respects and complements the natural setting. Consider the distinctive mountain backdrop, orientation to the lake front, key views to and from existing public spaces, existing heritage trees, and valued alpine vegetation systems.
- Ensure all development is sympathetic to its urban context and broader landscape. Consider scale, form, fit with existing character, values and future diversity of Queenstown.
- Avoid visually dominant built form.
- Develop creative, distinctive and vibrant urban neighborhoods.
- Ensure new buildings define positive public spaces within the Lakeview subzones and provide positive integration with their neighbouring surroundings and context.
- Support retail where it can be integrated into street based, pedestrian-scaled and pedestrian-friendly urban environments.
- Ensure that those parts of buildings that people experience at close range or low speed are a human scale.
- Accommodation diversity including permanent housing, long-stay and short-stay visitor accommodation.
- Commercial activity to support the creation of a lively community focal point and to support the role of the Market Square as a recreational hub.



Figure 3: QLDC. Photograph of Ballarat St., Queenstown Town Centre Character Guidelines, October 2007 (Pg. 23)

## 3.4 CONSOLIDATED GROWTH & INTERCONNECTED URBAN STRUCTURE

Within urban boundaries, walkable and mixed-use neighbourhoods help reduce travel time and urban sprawl.

### CONSOLIDATED GROWTH

Within the Lakeview Subzone area:

- Consolidate growth within the agreed natural boundaries of the existing settlement.
- Deliver high quality streetscape amenity and provide communal open spaces in the form of small pocket parks and reserves in higher density areas.

### INTERCONNECTED URBAN STRUCTURE

Within the Lakeview Subzone area:

- Ensure people have clear transport mode options that are convenient, **efficient and affordable**.
- Ensure that all new streets, squares, lanes, parks and buildings are designed with universal accessibility as a key factor.
- Provide high quality pedestrian amenity around community facilities.
- Minimise the quality of directional and parking signs.
- Ensure that an appropriate quantum of on-site parking is provided.
- Reduce travel distances through small development blocks surrounded by well-connected street networks.
- Provide safe, attractive, and practical routes for walking and cycling. Ensure these are well-linked to existing or proposed passenger transport, local facilities and amenities within the zone, as well as connected to other areas beyond the zone, particularly the Queenstown Town Centre.



Figure 5: Image gallery [Queenstownnz.co.nz](http://www.queenstownnz.co.nz/media/media-image-gallery_md/index.cfm?subaction=category&categoryid=29) January 2014.  
([http://www.queenstownnz.co.nz/media/media-image-gallery\\_md/index.cfm?subaction=category&categoryid=29](http://www.queenstownnz.co.nz/media/media-image-gallery_md/index.cfm?subaction=category&categoryid=29))

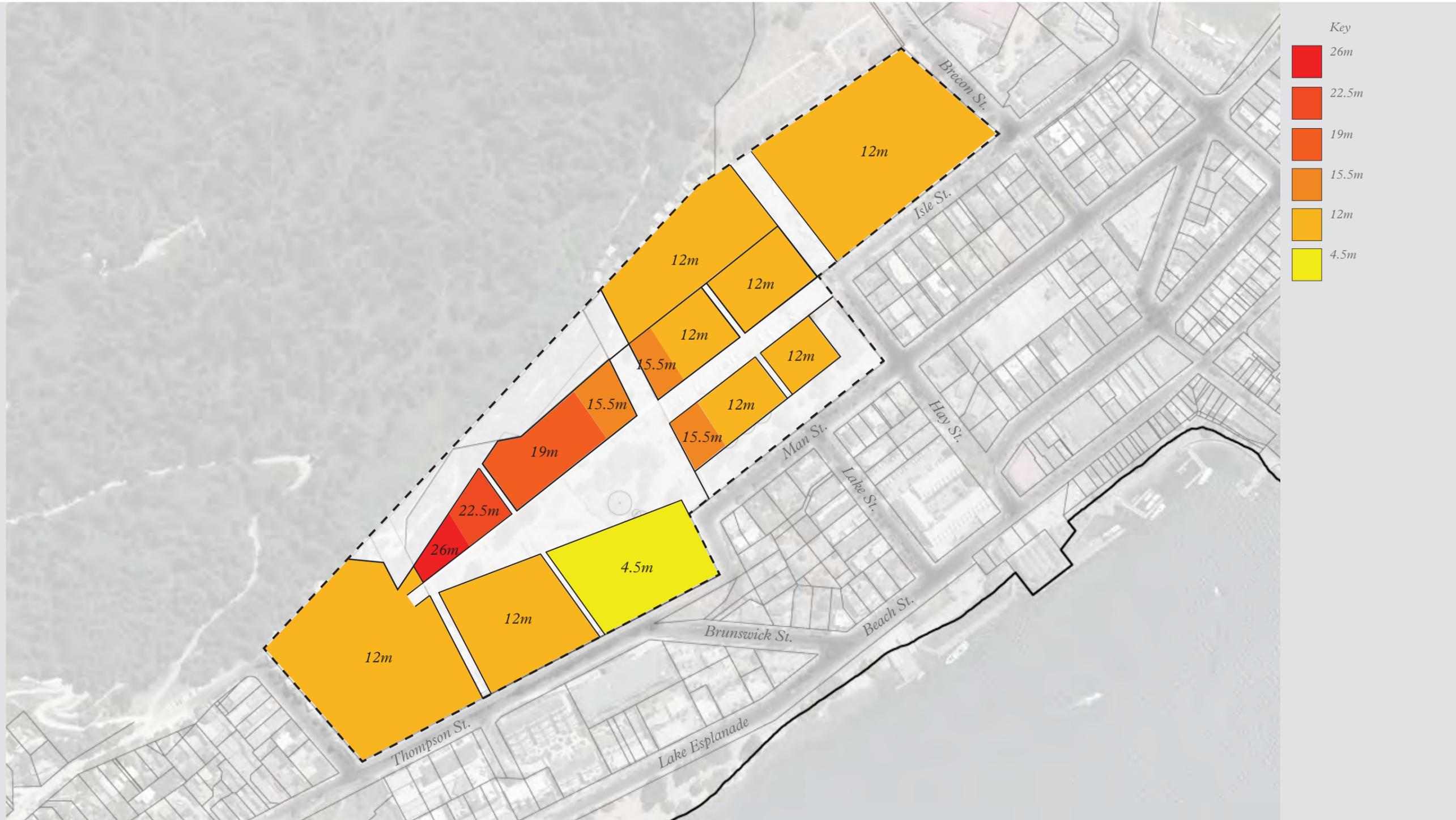
# 4.0 DEVELOPMENT FRAMEWORK

- 4.1 Structure Plan
- 4.2 Height Limit Plan
- 4.3 Shading Diagrams

# 4.1 STRUCTURE PLAN

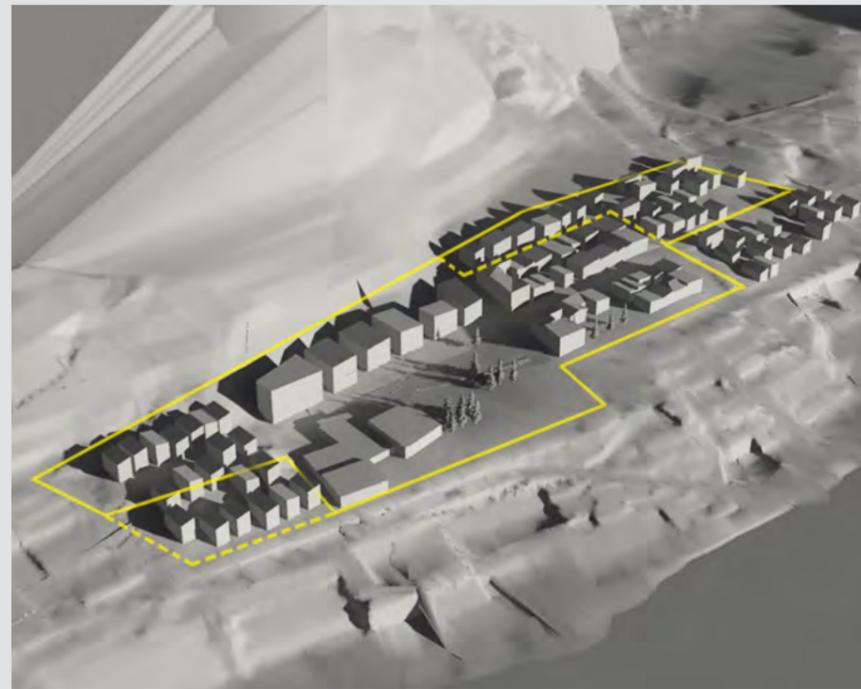


# 4.2 HEIGHT LIMIT PLAN



# 4.3 SHADING DIAGRAMS

## SUNLIGHT STUDIES: SUMMER SOLSTICE



6am



8am



12pm



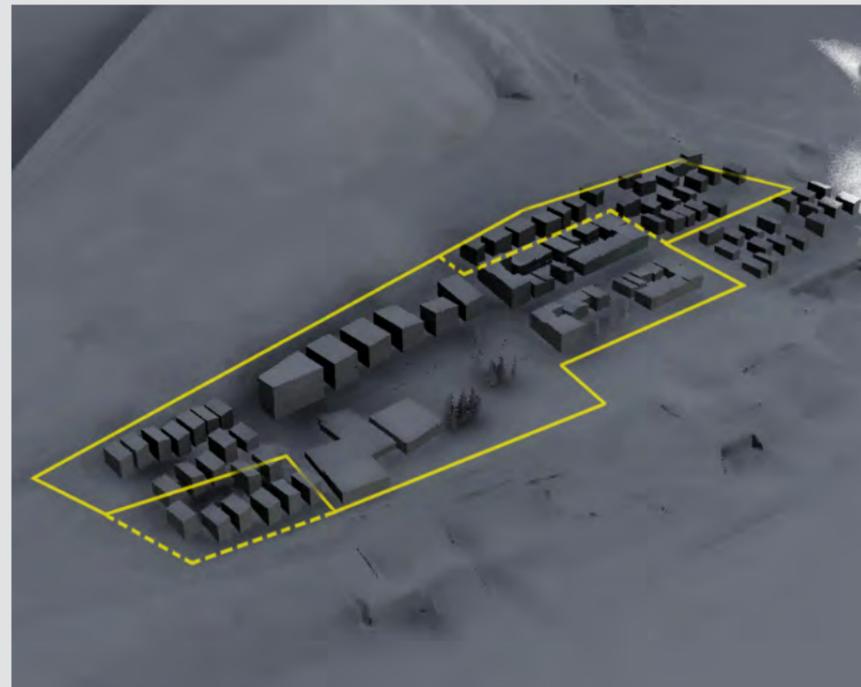
4pm



6pm

# 4.3 SHADING DIAGRAMS

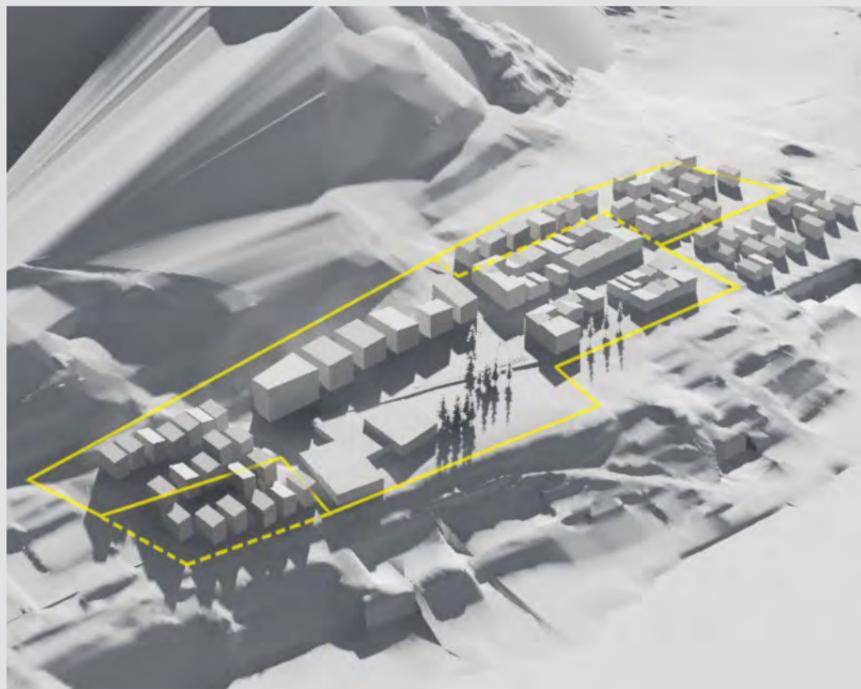
## SUNLIGHT STUDIES: WINTER SOLSTICE



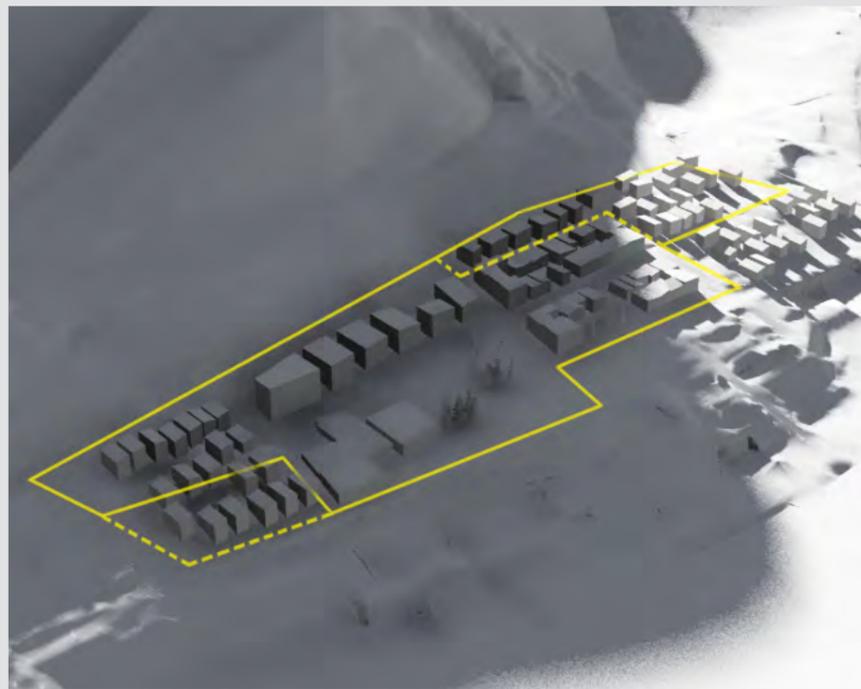
6am



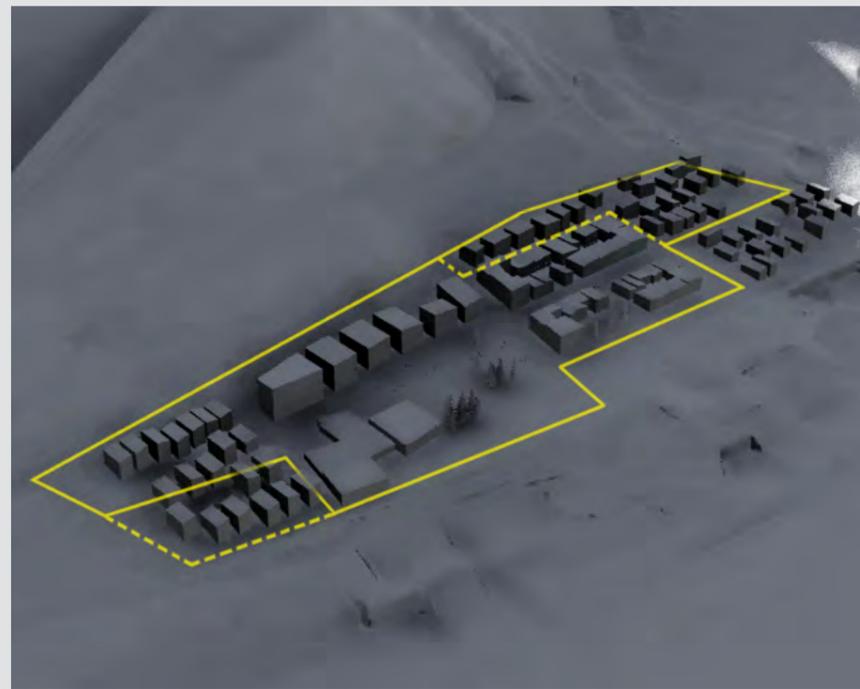
8am



12pm



4pm



6pm

**AEE**  
**APPENDIX C**

Stephen Chiles Ltd : Noise Assessment

# Chiles Ltd

Private Bag 55037, Christchurch 8154

21 August 2014

Ref: 140103

Mitchell Partnerships  
PO Box 489  
Dunedin

Attention: Louise Taylor

Dear Louise

**Subject: Lakeview plan change - noise assessment**

## **Introduction**

Chiles Ltd has been engaged by the Queenstown Lakes District Council (QLDC), to make an assessment of noise issues associated with the proposed Lakeview plan change, including consideration of appropriate noise rules. The plan change seeks to rezone an area adjoining the existing Queenstown town centre from high density residential zone to town centre zone, thus expanding the town centre. This assessment has been made on a desk top basis from review of the:

- Lakeview urban design framework dated August 2014,
- Lakeview plan change draft fact sheet dated 14 July 2014,
- Lakeview draft structure plan dated August 2014,
- A draft plan change district plan map dated August 2014,
- Operative Queenstown Lakes District Plan (District Plan), and
- Lakeview integrated transportation assessment (and addenda) dated August 2014.

This assessment also draws on the authors' experience over 10 years making and reviewing noise assessments for various activities in and around the Queenstown town centre, and also assisting the QLDC with noise enforcement action, plan change 27A, proposed plan change 42 and the district plan review. Of relevance, the author was also involved in drafting the general environmental noise standards NZS 6801:2008 and NZS 6802:2008, and is currently an advisor to the Ministry of Business Innovation and Employment with respect to potential changes to Clause G6 of the Building Code.

## **Key issues**

The plan change is described in detail in the documents reviewed, and of particular relevance it seeks to enable a range of commercial, community and residential activities. These are intended to include an international convention centre and visitor accommodation. In terms of noise the following key issues need to be considered:

- Rules to enable the range of activities desired in the plan change area,
- Effects from noise emissions from activities enabled in the plan change area to the surrounding residential high density zone,

- Noise effects in the residential high density zone from consequential activities resulting from the plan change (e.g. pedestrian and vehicular traffic on public roads),
- Effects from noise emissions from activities enabled in the plan change area on other activities in the new zone (e.g. effects of noise from commercial activities on residential and visitor accommodation).

## **District Plan**

Rule 10.6.5.2.ii in the District Plan sets noise limits for activities in the town centre zone. The limits for most activities are 60 dB  $L_{Aeq(15 \text{ min})}$  during the daytime (0800-2200h) and 50 dB  $L_{Aeq(15 \text{ min})}$  at night. The  $L_{Aeq(15 \text{ min})}$  is essentially an average noise level, and while there are also other parameters used in the District Plan, for simplicity all noise levels quoted in this letter will be in terms of the  $L_{Aeq(15 \text{ min})}$  unless stated otherwise. The limits apply at any point within any other site.

The rule also specifies in part (c) that noise received in another zone must meet the limits of that other zone. The town centre zone is generally surrounded by a high density residential zone. This means that noise from activities in the town centre received in the high density residential zone has to comply with noise limits in rules 7.5.5.3.xii and 7.5.6.3.vii, which are 50 dB in the daytime (0800-2000h) and 40 dB at night.

The District Plan contains specific provisions for noise from construction, wind farms and airports, which are common in all zones. These provisions are considered appropriate where those specific activities occur in the plan change area.

## **Activities enabled**

Becoming part of the town centre zone the plan change area would be subject to the existing District Plan provisions outlined above. However, the plan change would define a Lakeview sub-zone and an Isle Street sub-zone to allow for specific new rules to apply to the plan change area where necessary.

### Daytime

The existing town centre daytime noise limit of 60 dB allows for a wide range of commercial activities. As set out in a report for the QLDC (URS, 42168107/R002 dated 29 April 2009), it is typical of noise limits in other commercial zones and town centres in New Zealand. Indoor activities and building services equipment can readily comply with a 60 dB limit using standard noise control measures. Activities such as those associated with loading docks might need to be screened to comply with the noise limit if close to a neighbouring property. For outdoor activity, or indoor activity with windows/doors open, a limit of 60 dB allows for quiet groups of people, such as sitting in the outdoor area of a café, but does not allow for music other than potentially at low background levels.

In summary, the existing town centre daytime noise limit of 60 dB would be appropriate to allow the range of activities envisaged in the plan change area.

In the surrounding high density residential zone a 50 dB daytime limit would apply to noise from the plan change area. For indoor activities this limit could be achieved through design of buildings using standard techniques. However, outdoor activities near the boundaries of the plan change area would

generally need to be screened from the adjacent high density residential zone. In some places, such as beside parts of Thompson Street, the terrain itself may provide sufficient screening, but in other areas the outdoor activity would need to be the other side of a building, or screened by a solid fence/wall. In the Urban design framework and draft structure plan, the active frontages in the plan change area are shown to be all internal. Therefore, it should be practical to provide screening of the main areas of outdoor activity, from the high density residential zone.

### Night-time

The night-time noise limit of 50 dB within the town centre, applying after 2200h, is stringent for a town centre or commercial area. While indoor activity can comply with this limit with appropriate building design, most outside activities cannot comply with this limit without significant screening. For example, it is often not practical to operate an area outside a bar, as required for smokers, while complying with this limit. The effect of this rule is that bars and restaurants cannot use outdoor areas after 2200h and have to keep all doors and windows closed after this time. In the existing town centre, most bars and their patrons wish to maintain use of the outdoor areas after 2200h, particularly on summer evenings, and this noise limit has been a significant constraint.

In the adjacent high density residential zone a noise limit of 40 dB applies to noise from the town centre zone after 2000h (as opposed to 2200h within the town centre zone). This is a stringent limit that cannot be achieved for most outdoor activity near the boundary of the plan change area, even with moderate screening. Indoor activity in the plan change area can generally be designed to comply with a 40 dB noise limit, but non-standard constructions may be required for noisier internal activities located near the boundary with the high density residential zone. With appropriate building layout standard constructions should be possible.

Bars operating into the evening with outdoor areas are envisaged as a potential activity in the plan change area that will contribute to vibrancy. As set out above, the existing town centre noise limits do not adequately allow for this activity and therefore specific rules are recommended for the Lakeview and Isle Street sub-zones. In the existing town centre, proposed plan change 42 and now the District Plan review have explored options for allowing night-life. However, this would compromise residential and visitor accommodation. As residential and visitor accommodation are integral to the plan change area, a blanket allowance for night-life is not considered appropriate.

It is understood that it is not desired to limit night-life to a specific part of the plan change area, and therefore it is recommended that any proposal for a bar/restaurant operating after 2200h should be assessed on a case-by-case basis, rather being a permitted activity. While this can occur under the existing town centre zone rules each bar would be assessed as a non-complying activity.

There is an existing controlled activity rule (10.6.3.2.iii) for premises licensed for the sale of liquor in the town centre operating after 2300h, but it remains subject to the noise limits. It is recommended that for the Lakeview and Isle Street sub-zones a new rule should be introduced making bars/restaurants (or 'premises licensed for the sale of liquor') operating after 2200h a discretionary activity if they do not comply with the night-time noise limits. In terms of noise, discretion should include whether the noise effects are appropriately mitigated for nearby residential and visitor accommodation, and in the high density residential zone. Other activities not complying with the

noise limits should remain non-complying. The exception suggested here just for bars/restaurants is due to the need for them to contribute to vibrancy, but the impracticality of compliance with the night-time noise limits.

### **Surrounding zones**

As set out above, under the existing rules, all activity in the town centre zone, and by default in the plan change area after re-zoning, has to comply with 50 dB daytime and 40 dB night-time noise limits when received in the high density residential zone. These limits are typical for residential zones, although at the lower end of the range, with some districts specifying 55 dB during the day and 45 dB at night, which are also the values recommended in NZS 6802. It is considered that the existing 50 dB and 40 dB limits provide for a good level of residential amenity and will provide protection from sleep disturbance.

The proposal could change the nature and likelihood of noise emissions from the plan change area to the adjacent high density residential zone. However, the noise limits would control noise to exactly the same levels that are currently permitted under the District Plan. Given that the noise limits are set at appropriate levels to protect health and amenity, the effect of noise from the plan change area subject to these noise limits, is considered to be acceptable in the high density residential zone.

In summary, it is recommended that the plan change area should remain subject to existing rule 10.6.5.2.ii(c), which results in noise limits in the high density residential zone from activity in the town centre zone of 50 dB during the day and 40 dB at night.

The plan change will also give rise to pedestrian and vehicular traffic on public streets, which is not subject to any District Plan or other noise limits. Noise from daytime pedestrian and vehicle movements is not expected to cause adverse effects as it would be consistent with normal usage of roads in the high density residential zone. However, as the plan change area develops there is the potential for evening and night-time pedestrian traffic that could cause disturbance, through noise from people's exuberant behaviour, as is common in the existing town centre.

From the Integrated transportation assessment it is understood the majority of pedestrian traffic will use links to the existing town centre through Hay Street and Brecon Street, passing mainly through the plan change area itself. However, the main node of activity/gateway to the plan change area is at the corner of Man Street and Thompson Street, which is expected to result in some pedestrian traffic immediately adjacent to the high density residential zone on Man Street between Thompson Street and Lake Street, and by the pedestrian link between Thompson Street and Brunswick Street.

There is currently residential and visitor accommodation adjacent to the potential pedestrian routes from the Man Street/Thompson Street node. The extent of any disturbance in these buildings will depend on the building layouts and constructions. Assuming standard constructions and bedrooms with windows not screened from the streets, it is anticipated there could be disturbance for residents and visitors, if there is moderate pedestrian traffic at night. This could cause an adverse effect of sleep disturbance and annoyance for those people. The main node at the corner of Man Street and Thompson Street is fundamental to the urban design framework, and it is therefore considered that there are no practical measures to avoid this effect. If the effect does eventuate, it could be mitigated by affected property owners in the high density residential zone treating their own buildings, such as

through the installation of enhanced glazing and ventilation systems (so that windows can be kept closed).

### **Sensitive activities**

Residential and visitor accommodation are important activities in the plan change area. With external noise limits of 60 dB during the day (up to 2200h) and 50 dB at night, sound levels in bedrooms (and other habitable spaces) could exceed World Health Organisation recommendations and result in annoyance and sleep disturbance. Furthermore, there may be road-traffic or general activity on the streets, which can also cause disturbance. As set out previously, the external noise limits are required to facilitate the range of activities desired in the plan change area. Therefore, the only practical option is for residential and visitor accommodation to be designed to appropriately reduce external noise to result in acceptable internal conditions.

Sound insulation rules were proposed for the town centre zone in plan change 1, but this was withdrawn in 2004 based on the expectation that the Building Code would be revised to address this issue. However, a revision to the Building Code has still not happened.

On the basis of the analysis in a report for the QLDC (URS, 42168467/R001B dated 23 July 2011) the following requirements are recommended as a site standard in the Lakeview and Isle Street sub-zones:

*A mechanical ventilation system shall be installed for all critical listening environments in accordance with Table 1 in Appendix 13.*

*All elements of the façade of any critical listening environment shall have an airborne sound insulation of at least 40 dB  $R_w+C_{tr}$  determined in accordance with ISO 10140 and ISO 717-1.*

The requirement for a ventilation system is so that windows can be kept closed and maintain their sound insulation. The requirement for sound insulation of 40 dB  $R_w+C_{tr}$  is stringent and will result in non-standard glazing. In most instances secondary glazing will be required with a second window in the order of 100mm inside the main window, potentially doubling the cost of the glazing (one of the two windows may also need to be double-glazed for thermal reasons resulting in a total of three panes of glass). This high performance sound insulation is required because of the nature of external sound in the town centre.

### **Conclusions**

Potential noise issues associated with the Lakeview plan change have been assessed.

The existing District Plan noise rules for the town centre zone are appropriate to enable most activities envisaged in the plan change area, subject to reasonable design and standard noise control measures. However, the existing town centre noise rules do not allow for bars and restaurants to operate after 2200h with outdoor areas, which as a minimum are required for smokers but are also desired for vibrancy. It is recommended that provision be made for bars operating after 2200h to be assessed on a case-by-case basis via the resource consent process.

The plan change area will border the high density residential zone on several sides. The existing noise rules for the town centre zone apply stringent limits on emissions to the high density residential zone.

With these limits, noise effects in the high density residential zone arising from the plan change area are considered acceptable.

There is the possibility of some disturbance in the high density residential zone from night-time pedestrian traffic generated from the plan change area, emanating from the gateway area at the corner of Man and Thompson Streets.

Residential and visitor accommodation in the plan change area should be subject to sound insulation (and ventilation) requirements to provide protection from sleep disturbance and for amenity.

Yours sincerely

**Chiles Ltd**

A handwritten signature in black ink, appearing to read 'Stephen Chiles', written in a cursive style.

Dr Stephen Chiles

[stephen@chiles.co.nz](mailto:stephen@chiles.co.nz)

03 318 8854