

**IN THE MATTER** of the Resource Management Act 1991

**AND**

**IN THE MATTER** of Stage 3 & 3b of the  
Proposed Queenstown Lakes District Plan

**STATEMENT OF SHANNON BRAY  
ON BEHALF OF SPARK NEW ZEALAND TRADING LIMITED**

**LANDSCAPE AND VISUAL EFFECTS**

**21 May 2020**

**1. INTRODUCTION**

1.1 My name is Shannon Bray. I am a Principal Landscape Architect and Director at Wayfinder Landscape Planning and Strategy Limited.

1.2 I have been engaged by Spark New Zealand Trading Ltd (Spark) to provide evidence as an independent landscape architect in regard to their submissions on those aspects of Stage 3 and 3b of the Proposed Queenstown Lakes District Plan (Proposed Plan) relevant to utilities, most specifically in regard to the height of the poles for telecommunication and radio communication facilities.

1.3 The submission was lodged jointly by Spark, Vodafone New Zealand Ltd (Vodafone) and Chorus New Zealand Ltd (Chorus) who work together on district plan reviews to provide a consistent approach to district plan matters from these major network operators. Although I have been engaged only by Spark, my evidence is also relevant to Vodafone. Chorus has elected not to be involved in this particular hearing given that the subject matter relates primarily to equipment that is not managed by them.

**Qualifications and Experience**

1.4 I hold the qualifications of a Bachelor of Landscape Architecture (with Honours) from Lincoln University and Bachelor of Forestry Science from Canterbury University. I am a Registered Landscape Architect with the New Zealand Institute of Landscape Architects, and am that organisation's immediate past president.

- 1.5 I specialise in evaluating landscape and visual effects and providing urban design guidance. I have worked on a wide range of infrastructure, utility, urban design and environmental projects in New Zealand, including the following:
- (a) Spark telecommunication facility resource consents in Auckland, Waikato, Bay of Plenty, Gisborne, Otago, and Central Otago;
  - (b) Telecommunication and electricity network submissions on the Auckland Unitary Plan and other District Plans across the country;
  - (c) Chorus overhead Ultra-Fast Broadband deployment consents in Auckland, Waikato, Gisborne, and Greater Wellington;
  - (d) Numerous roads of National Significance and State Highway projects in Auckland, Waikato, Bay of Plenty, Taranaki and Greater Wellington, including design, consenting and construction;
  - (e) Numerous wind farm projects in Manawatū, Taranaki and Greater Wellington, including design and consenting; and
  - (f) Electricity transmission lines in Manawatū, Auckland and Northland, including route planning and consenting.
- 1.6 I have written Urban and Landscape Design Frameworks for a variety of projects, and have been involved with the design and construction management of urban and landscape outcomes within large scale network and infrastructure projects. I am familiar with the contents and practical application of the NZ Urban Design Protocol.
- 1.7 I have provided expert evidence to Resource Consent hearings, Plan Change Hearings, Environment Court and Boards of Inquiry. I am a Registered Resource Management Commissioner.

#### **Involvement in the Submission**

- 1.8 I have not been involved in any previous submissions or stages related to Spark and Vodafone's submission, but I have been briefed on the overall process and have reviewed the original submission. I was also involved in pre-hearing discussions with the authors of the relevant s42A reports on 15<sup>th</sup> May 2020.
- 1.9 Due to the COVID-19 situation, I have not been able to undertake a site visit in preparation of this evidence. However, I have been involved with previous Spark developments in the Queenstown Lakes district, and in the past 24 months I have visited the wider area both in a professional capacity and as a domestic tourist over 8 times. I am familiar with the surrounding context, the character of the various zones within the district, including all of the proposed General Industrial Zones, the Three Parks Commercial Zone and the Cardrona Settlement Zone.

- 1.10 In this regard, I have not provided as part of my evidence any context photos. I have referred to some imagery provided by Mr McCarrison, and I have utilised Google Maps and Google Street View which provides relatively up to date (2018 or later) imagery that is publicly accessible.

### **Code of conduct**

- 1.11 Although this matter is not before the Environment Court, I confirm that I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2014. I have complied with the Code of Conduct in the preparation of this evidence. This written evidence is within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

## **2. SCOPE OF EVIDENCE**

- 2.1 My evidence will:

- (a) Provide a brief overview of the submission that this evidence supports;
- (b) Discuss landscape character and provide an overview of how people characterise and value different landscapes;
- (c) Discuss the nature of the infrastructure related to the submission and how it tends to be perceived within different landscapes;
- (d) Provide an overview of the measures available at a District Plan policy level to help reduce and mitigate potential effects of telecommunication infrastructure; and
- (e) Consider the effects of the placement of taller infrastructure in each of the proposed zones.

## **3. OVERVIEW OF SUBMISSION**

- 3.1 Spark's submission on Stage 3 and 3b of the Proposed Plan seeks amend rule 30.5.6.6 by adding "General Industrial Zone" to the list of zones subject to an 18m height limit, and add a new clause that provides for 18m poles in the Three Parks Commercial Zone where there is a single operator, and 21m for multiple operators on the same pole.
- 3.2 The submission also seeks to amend rule 30.5.6.6 by adding a new clause to the rule that provides for 15m poles in the Cardrona Settlement Zone where there is a single operator, and 18m for multiple operators on the same pole.

- 3.3 Mr Horne, at paragraphs 16 to 22 of his evidence, provides more details in regard to the rationale for the submission, and provides a series of maps showing the locations of each of the zones. I have also reviewed the joint evidence of Mr McCarrison and Mr Clune which further discuss the rationale for the submission and the outcomes sought by Spark (and Vodafone).

#### **4. LANDSCAPE CHARACTER**

- 4.1 It is widely recognised that the Queenstown Lakes district, and the wider Central Otago region, is set within some of the country's most outstanding and valued landscapes. Section 3.1 of the Proposed District Plan sets out an over-arching strategic direction for ensuring the sustainable management of the special qualities of the district, recognising "dramatic alpine landscapes free of inappropriate development" at the top of the list. Sections 3.2.4 and 3.2.5 provide strategic objectives regarding the protection of "distinctive natural environments" and retention of "distinctive landscapes".
- 4.2 But equally, the Proposed Plan (like all Resource Management policy) seeks to balance human activity (including the "development of a prosperous, resilient and equitable economy" and the management of "urban growth") with effects on the environment. Largely this is achieved through zoning rules, where the type and intensity of activities permitted is altered across different areas of the district.
- 4.3 Zoning, and the activities associated with each zone, has a profound impact on landscape and the way in which people perceive and value it. In a broad sense, zoning provides a preliminary basis for determining landscape and urban character, and immediately sets expectations on how people will experience areas of the landscape. Most people can easily picture in their minds, and describe, the differing qualities of a rural or residential zone compared to a commercial or industrial zone. And they will place different value on the landscape of each zone.
- 4.4 Outstanding Natural Landscapes (particularly in the Queenstown Lakes district) by their very definition ("outstanding" being defined by the Cambridge Dictionary as "clearly much better than what is usual") are the most valued landscapes. They tend to draw the attention of the viewer outward to vast, wide areas. Whilst certain aspects, ridgelines, rocks, trees or other features might draw specific attention for a moment, overall the experience is of the middle and long distance and is holistic.
- 4.5 By contrast, commercial and industrial areas are typically much less valued. They are functional, urban areas with limited natural qualities. In such landscapes, viewers tend to focus on specific details, usually related to the purpose of their visit. Whilst dramatic background landscapes may remain prominent, foreground activity will likely grasp the most attention. Whether it is a particular shop, a sign, or a specific localised activity,

people within commercial and industrial landscapes tend to be more inwardly focussed. They want to get to the place they are going, and actively seek out localised (usually built) features that will guide them there.

- 4.6 Residential (predominantly lower density residential) and rural landscapes sit between these other zones, in that viewers often balance the value of wider background landscapes with an appreciation of foreground amenity and activity.
- 4.7 Landscape is ultimately a human construct – defined by the NZ Institute of Landscape Architects as “the cumulative expression of natural and cultural features, patterns and processes in a geographical area, including human perceptions and associations”. Each of the different zones, each with its distinctive landscape character, carries different levels of human perception. It is the human tolerances and expectations of landscape that ultimately define how we visualise and value it, drives what we derive from the experience of being within it, and what activities or features we anticipate to see.
- 4.8 Or, in short, people have expectations of what certain landscapes will contain, and to what extent they will tolerate activities or features that are at odds with those aspects of a landscape that are valued. People are much more tolerant of intensely developed built forms, advertising signage, movement of people and presence of infrastructure in industrial and commercial landscapes than they are of such activities in landscapes that are largely comprised of natural elements.
- 4.9 Therefore, in considering landscape management at a broader District Plan scale, in my opinion it is sensible (if not obvious) to intensify urban activities in those areas of the landscape that are considered to be less valued, with the aim of reducing such activities in higher valued landscapes. This is usually already inherent in the placing of zones within the district – rarely (if ever) do you see high intensity industrial activities located in the most valued part of the landscape.
- 4.10 Translating this through to controls under a District Plan, in my opinion the approach should be to have tighter controls in regard to built development (including infrastructure) in natural or higher amenity landscapes, including rural and lower density residential zones, than within commercial and industrial zones.

## **5. INFRASTRUCTURE**

- 5.1 The Cambridge Dictionary defines infrastructure as “the basic systems and services, such as transport and power supplies, that a country or organisation uses in order to work effectively”. Ultimately, infrastructure is the network of roads, cables and pipes that allow us to live and function together as a whole society. It is a fundamental aspect of

the world that we create and build around us, and to that extent, is a fundamental element of the landscape in which we live.

- 5.2 Wireless or cellular infrastructure is no different. In today's modern world, nearly everyone relies on mobile communications for work, social interaction and emergencies, fittingly reinforced by the current COVID-19 situation.
- 5.3 As outlined in the evidence of Mr Holding, the provision of the mobile network requires the construction of telecommunications antenna, erected on poles that allow line of sight connections to mobile devices in use and moving around the wider landscape. Unfortunately, mobile networks just do not work underground, and ultimately taller telecommunications masts allow for a more efficient and more connected network.
- 5.4 Historically, in the early stages of developing the telecommunications network, the required infrastructure was often located high on surrounding hill summits – with many placed in highly valued landscapes. However, as technology has advanced, so too have the requirements for a greater number of connections and higher data transfer speeds, alongside more stringent controls around development of such hilltop locations. As a result, there is a greater need to place such infrastructure within the built environment, closer to the places people live, occupy and ultimately use the network.
- 5.5 Therefore, telecommunications masts are a fundamental element of the urban landscape we build and manage around us. And, unsurprisingly, people's tolerance of them is commonly related to the value of the landscape in which they are located. Generally, as for industrial and commercial zones, people are much more accepting of such infrastructure in landscapes that have low value compared to higher value or higher amenity locations. Partly this is because lower valued landscapes, such as industrial zones, tend to be highly modified built landscapes where infrastructure is already prominent. People expect that such landscapes, or zones, will have more functional structures, such as electricity transformer boxes, overhead lines, visible car parking, signage, etc. Equally, it is generally accepted that outward views from industrial and commercial areas will be restricted. Buildings tend to be taller and occupy larger areas of the site, and security fences and storage yards block side views. The scale of the built environment is larger, and views are therefore more restricted.
- 5.6 Further, as outlined by Mr Holding, obstructions within the urban environment ultimately limits optimisation of the network. As a result, it is necessary to raise the height of mast to avoid coverage limitations or overlapping.
- 5.7 Considering all of the points above, from a strategic landscape management and urban design perspective where telecommunications infrastructure is an essential part of the world we live in, in my opinion, it is better to place taller more efficient infrastructure in

the lower valued areas of the landscape, and avoid or reduce the location of less efficient infrastructure in higher valued landscapes.

## **6. MITIGATING EFFECTS OF TELECOMMUNICATIONS INFRASTRUCTURE**

- 6.1 As outlined in the last section, it is not possible to create an invisible telecommunications network. However, it is possible to reduce the perceived visibility of the infrastructure through various controls. Notably, placement is a key consideration, and I have set out my rationale to favour the placement of telecommunications infrastructure (masts and antenna) in lower valued landscapes such as industrial and commercial zones, rather than within higher valued landscapes. Generally speaking, the presence of infrastructure in lower valued urban environments is more likely to be expected and tolerated.
- 6.2 This isn't to say that the amenity of such lower valued urban locations isn't a consideration. Increasingly across the country Councils are seeking improved urban amenity outcomes within commercial and industrial areas, with the incorporation of planting, architectural controls, requirements for screening of storage yards, etc. Controls can also be put in place to help reduce the effects of telecommunications infrastructure.
- 6.3 One of the simplest ways to mitigate effects is to reduce the overall number of telecommunications masts required. In a general sense, there is more likelihood of a person seeing, and noticing, telecommunications infrastructure if there are more masts than if there are less. Whilst at a localised level a taller mast might be more immediately prominent, over the wider scale it is more likely to be recessive from most locations than several masts scattered across the landscape.
- 6.4 In this regard, I note the evidence of Mr Holding who outlines that at a simplistic level antennas that have the greatest level of optimisation are those that can be seen from the widest area with the minimum level of obstructions. A taller mast with larger antenna is likely to have greater optimisation, reducing the need for additional masts to fill black spots created by obstructions.
- 6.5 In this context, it is important to consider that "line of sight" is a technical term rather than an actual description of the visibility of an antenna. For a radiofrequency wave, it is merely a matter of being able to travel directly from the transmitter to the receiver without (or with minimal) interruption. Human sight, on the other hand, is significantly more dynamic, and the visual signals received are further subject to both subconscious and cognisant evaluation. Just because an antenna might be "visible" doesn't mean that it is a prominent, or even a noticeable element in a view. Whether an antenna is noticed, whether it affects how a person interprets a scene, or whether it changes how the overall landscape is valued will depend on numerous factors, including (but not limited to):

- (a) Whether the viewer is moving or static;
- (b) Whether the viewer is naturally drawn to the location of the antenna (either by the antenna itself or by something behind or adjacent to it);
- (c) Whether the antenna interrupts the aesthetic coherence of a scene (such as interrupting the skyline);
- (d) Whether the antenna is in the foreground or background; and/or
- (e) Whether the antenna is partially screened by a foreground element (such as a tree).

6.6 Relative scale is also important – placing taller masts in areas where there are taller buildings assists with reducing the perception of scale. In a residential environment, where buildings are rarely built to the height limit, its preferable to use smaller masts as they can more easily become prominent elements. However, in commercial and industrial areas, it is much more difficult to ascertain the true height and scale of masts relative to surrounding bulky buildings which are regularly built to the full height and breadth of the permitted building envelope. Where the relative scale of the surrounding built environment compared to a viewer is high, it is usually very difficult to accurately ascertain the height of infrastructure such as masts, street lights and power-poles.

6.7 On the contrary, diameter or width tends to be much easier to ascertain. Masts that have large headframes or bulky antenna are regularly perceived as more visually prominent than slimmer, taller masts. These latter masts usually appear to be more sculptural in form, whereas wider masts are often much more industrial in character (this can be seen by comparing the 9m Glendhu Bay mast, page 43 of Mr McCarrisons evidence, with the 18m Fielding example on his page 44). In my opinion, it is preferable to favour taller, slimmer masts.

6.8 Having said this, it is important to recognise that current technology doesn't allow for all masts to be thin and discrete. I understand from Mr Holding that the use of larger antenna allows for greater range and capacity – therefore smaller, slimline antenna (located on smaller masts) are best used where there is a need for visual discretion, the cost being less optimisation and a greater number of masts overall. In lower quality environments, it makes sense to maximise optimisation for each mast in order to reduce the overall number of masts required, and this may require larger antenna combined with taller masts.

6.9 Further, there is (in my opinion) more sense in supporting the co-location of equipment on masts, such that network providers are able to share infrastructure. Mr Holding provides examples in his evidence about how co-location can occur, including options for co-locating on headframes, or using slimmer but taller masts with one operators



antenna placed above the another operator. Achieving such outcomes avoids the placement of two or more masts in the same area, one for each operator.

- 6.10 Controls can also be factored in regarding height to boundary ratios, particularly on the boundary between two zones. Such controls are considered in other sections of the Proposed Plan as they are relevant to the whole district, notably Objective 30.2.7 *“the adverse effects of utilities on the surrounding environments are avoided or minimised”*. Various rules that follow from this objective in Chapter 30 of the plan provide standards for setback, antenna size, appearance, colour, etc. Mr Horne also promotes the use of such controls for the Cardrona Settlement Area (and I agree).
- 6.11 In this regard, considering all sections of the plan together, it is possible to mitigate the effects of infrastructure such that localised landscape and urban amenity can be maintained. However, in my opinion, a strategic approach is required – such that greater focus is placed on protecting (and enhancing) the amenity of higher value landscapes and urban environments than on lower valued locations. Ultimately a telecommunications mast placed in an industrial or commercial environment has much less likelihood of affecting the experience of that place than if the same mast was placed in a natural landscape or residential environment. In that regard, it makes strategic sense to promote the placement of masts in these lower valued environments, even if the effects on localised amenity are greater.
- 6.12 In undertaking this strategic decision making, it is important to recognise that the type of amenity people expect in an industrial landscape will be quite different to what is expected on (for example) a lakefront. An industrial area with a tall telecommunications mast can still be a pleasant place to work in and visit, with quality urban design outcomes. I refer to my earlier points in regard to what people anticipate in different quality landscapes, the nature of the activities being undertaken, and the relative focus of the viewer in such environments.

## **7. ASSESSMENT OF EFFECTS**

- 7.1 In the context of the discussion provided in the previous sections, I now turn to a more detailed consideration of the landscape qualities of each of the zones that would be affected should the relief sought by Spark be granted.

### **Queenstown General Industrial Zone**

- 7.2 This zone is proposed near to the eastern end of Queenstown airport, on the top of an elevated terrace overlooking the Shotover River.

- 7.3 I consider that the view from the end of the airport runway as one of the most iconic and memorable views in the district. It provides an elevated, uninterrupted vista across the river and river terrace, taking in prominent foreground landforms of Bowen Peak, Slope and Morven Hills, and the Crown Range escarpment, backdropped by the bold Southern Alps.
- 7.4 However, further to the north, beyond the clear-zone beneath the flight path, the view vanishes completely. A viewer is immersed into a commercial built environment, with minimal snapshot views to isolated sections of the Alps. The key views tend to be up and down the roads (such as Glenda Drive), but what captures the immediate attention is the foreground activity, comprising of signage, vehicles, and active forecourts. It is not the place to experience the view, it is a low-quality urban landscape where the natural landscape is of least focus.
- 7.5 Views from the surrounding landscape into this area are also unremarkable. Buildings and development are visible on the upper terrace from locations along SH6 and within the Shotover Country and Lake Hayes areas, but they are set against a landscape that, in comparison to views of the Remarkables or Coronet Peak, are not significant or particularly noteworthy. Wilding pines on the escarpment immediately below the area, and the presence of the sewerage treatment works, all lower the value of this part of the landscape.
- 7.6 In my opinion, this area is therefore the ideal location for telecommunication equipment to be placed, and it has a high capacity to absorb taller, larger masts. Wider controls contained in Chapter 30 of the Proposed Plan will help to limit effects on immediately surrounding zones.

#### **Arrowtown General Industrial Zone**

- 7.7 Whilst Arrowtown is widely known for its scenic beauty and its location within a dramatic alpine landscape, it too has areas that have lower visual qualities. The proposed General Industrial Zone, sandwiched between two lower height landforms (Feehly Hill and "A3KE") has limited outward views to the bolder natural landscape, with both hills covered with low-quality scrub vegetation. Some snapshots to mountain landscapes are possible, but this is certainly not the area a viewer would go to in order to appreciate the scenic qualities of the town.
- 7.8 Although much less developed than larger industrial and commercial areas found in Queenstown and Wanaka, this area has a 'back of town' character to it. Vehicles, signs, gateways, open yards and other infrastructure (such as transformers) are all dominating visible elements.

- 7.9 I consider this area of Arrowtown is the ideal place to encourage the placement of telecommunications equipment.

### **Wanaka General Industrial Zone and Three Parks Commercial Zone**

- 7.10 Three Parks is a mixed-use development that covers over 100ha on the outskirts of Wanaka township. It provides for retail, recreation, business and residential activity, including supermarkets, large-format retail stores and a recreational centre. It is located directly adjacent to the Wanaka General Industrial zone, and the characteristics of the two areas are very similar.
- 7.11 This wider area, which is still under development, is placed on a terrace between the Cardrona River and Lake Wanaka, at approximately the same elevation as Wanaka town centre. Mt Alpha and Roys Peak are prominent landforms that rise over 1000m in height above the terrace to the west, the Criffel and Pisa Ranges to a similar height to the south, Grandview Mountains (beyond Lake Hāwea) to the east, and Mt Burke, 'The Peninsula' and the wider Southern Alps beyond and flanking the lake to the north. By comparison to these dramatic elevated landforms, the landscape of the Three Peaks area is distinctly unremarkable.
- 7.12 Although still in construction, buildings that are already in place (such as the recreation centre, New World and the Three Peaks Storage facility) provide a clear direction on how the overall site will develop. Each building is tall – seemingly up to the full permitted 15m height limit, with limited windows and large overall site coverage (including construction directly up to each site boundary). Whilst outward views to the wider landscape is currently possible, it is clear that when the site is fully occupied, outward visibility will be remarkably limited.
- 7.13 Indeed, the nature of the development is consistent with the character of typical commercial and industrial sites that I described earlier in my evidence.
- 7.14 In my opinion the visual effects created by the placement of taller masts in this environment would be limited. Outward views are unlikely to be any further compromised than what they will be by the ongoing development of the zone, and taller masts will likely reduce the quantity of masts required (particularly if co-location is made possible). It is the ideal location in the wider Wanaka landscape to promote placement of telecommunications masts and avoid potential greater visual effects by placement of such infrastructure in more valued areas of the landscape.

### **Cardrona Settlement Zone**

- 7.15 Council has prepared a "Cardrona Village Character Guideline" which provides direction on the architectural and aesthetic development of Cardrona Village. The guidelines

identify the key existing characteristics that make Cardrona distinctive, and suggest ways that the community can build upon and compliment these characteristics as the village grows. It is noted that the guidelines are non-statutory, but are developed to “assist in the interpretation of the District Plan”.

- 7.16 The guidelines identify the “extraordinary natural environment, high country scenery, and the recreational activities based on this environment” as the qualities that attract visitors and residents to the area. It also discusses the heritage of the village and the flora of the surrounding area.
- 7.17 The guidelines do not currently contain any information in regards to the design or placement of telecommunications infrastructure (although this could be added in the future). Reference is made to street lighting where it is recommended to maintain a consist approach through the “transition zone” and “village core” (pages 23 and 24), and consideration of the use of “a rustic style of lighting” (page 26, with an example light provided at page 31).
- 7.18 Cardrona is set in a valley floor, with rolling hill landforms extending away from the village on the north and south, these immediate foreground hills eventually giving way to a steeper alpine landform. Vegetation in the surrounding countryside is limited, land that is not grazed tends to be covered in low tussock, bracken and scrub. Some poplar, willow and pine exists on farmed land, but the majority of taller amenity trees are confined to the village area. As such, visibility within the village is relatively confined, whereas immediately outside of the built environment the landscape, and views of it, is vast.
- 7.19 Two small areas identified as Outstanding Natural Landscapes are located on the fringe of the Village. Additionally, a central area of the proposed Settlement Zone is identified as a “High Landscape Sensitivity Area”.
- 7.20 As such, placing telecommunications facilities outside of the village environment is likely to result in much more significant visual effects than placement within it. Masts on the surrounding hill country would be eminently more visible, and more likely to be seen either on the skyline or in front of the alpine backdrop. However, within the village, any masts would likely be screened by foreground buildings, or be seen in the context of taller vegetation that limits outward views.
- 7.21 Of course it is such foreground buildings and taller vegetation that would require telecommunications masts to be taller within the village than if they were placed in the surrounding rural landscape. As outlined by Mr Holding, taller masts are required to ensure line of sight coverage because of the built environment.

- 7.22 However, taller masts are also likely to reduce the total number of masts required in the village to provide mobile coverage, including the ability for providers to co-locate their equipment on a single mast.
- 7.23 As such, it is my opinion that the placement of masts within the village would be more appropriate than placement of them in the surrounding rural landscape. I consider that the trade-off that requires masts to be taller in the village is still preferable than masts that could potentially be constructed in a high visibility location in the rural landscape.
- 7.24 Having said this, I recognise that both the High Landscape Sensitivity Area and the design guidelines both focus on the character of the core village area, particularly as experienced from Cardrona Valley Road. I therefore recommend that telecommunications masts should avoid being placed in the High Landscape Sensitivity Area, or as identified by Mr Horne (paragraph 42), limited to the Commercial Precinct which has greater capacity to absorb adverse effects. In addition, to ensure appropriate setback from the road, I recommend that masts be set back at least 3m from the road in the same manner as buildings (as set by proposed rule 20.5.7.1), and I support the proposed Height in Relation to Boundary and diameter restrictions suggested by Mr Horne (paragraph 42) that are designed to limit visual effects (including shading and dominance) in the context of Cardrona Village.

#### **Future General Industrial Zones**

- 7.25 During the pre-hearing discussion with the reporting planners, it was suggested that the planning provisions sought may also apply to General Industrial zones that are created in the future. The nature of a District Plan is such that occasionally, over time, zone boundary changes or new zone areas may be introduced through plan changes. Typically the controls for these additions fall under existing objectives and policies which remain unaltered. As such, it is possible that the outcomes sought for the General Industrial section of the plan may, one day, apply to areas of the district that have yet to be identified and obviously cannot be assessed at this time.
- 7.26 In my opinion, there are two ways in which the effects of telecommunication infrastructure in future General Industrial zones can be considered.
- 7.27 Firstly is the location of the zone itself. Given the nature of the activity being undertaken within an industrial zone, even if high localised amenity and urban design outcomes are sought, it is unlikely that such a zone would be placed in a highly valued area of the landscape. It's difficult to imagine an industrial zone being constructed in an elevated, highly visible area on the base of the Remarkables, for example. The known character and activity of industrial areas, as set out and envisaged by the plan itself, will effectively

ensure that any future zone location will be assessed for its appropriateness before it is zoned.

7.28 Secondly, even if such a zone was established in a relatively highly valued area of the landscape, it would be possible to provide an overlay or additional set of rules that provide additional controls for the particular area. Such a mechanism is widely used in District Plans, and is developed based on robust assessment and decision making that takes place at the time the new zone is proposed.

7.29 Therefore, I do not consider it is appropriate, or even possible, to provide comment on the effectiveness of controls for future General Industrial zones at this time. Such an assessment can be undertaken as part of any rezoning process, and appropriate controls put in place as required.

## **8. CONCLUSIONS**

8.1 My evidence has focussed on how people value different landscapes and urban environments, and as a result change their expectations of what they will see and experience. My assessment brings together my experience in both landscape and urban design assessment.

8.2 I consider that, generally speaking, industrial and commercial zones are typically valued much less than broad natural landscapes. At the same time, people in such zones tend to have an inward focus, whereas in higher valued landscapes the view is outward.

8.3 Even in the Queenstown Lakes District, which is widely known for its outstanding scenic qualities, there are locations where the view is of much less value. The presence of urban infrastructure, and the nature of buildings and development within commercial and industrial zones is such that, although there are snapshot views to the surrounding mountains, these are not places people travel to in order to experience the landscape. They are functional spaces where the focus is on localised wayfinding and human activity.

8.4 In my opinion it is these, less valued landscapes where we should encourage the development of infrastructure in order to avoid, as much as possible, its placement in more visible or more significant locations. Taller masts that are located in densely developed, large scale built environments are much more likely to be visually acceptable than smaller masts in the context of the natural landscape. People are also likely to be more accepting of such infrastructure – an expected urban utility.

8.5 Even within more scenic locations, such as Cardrona or Arrowtown, there are locations which have more capacity to absorb the effects of telecommunications infrastructure. In

my opinion, the focus of planning instruments such as a District Plan should be to encourage placement in such areas, even if this requires taller equipment, as it will help to avoid the placement of masts in more valued or sensitive locations.

- 8.6 My conclusions are based on the level of strategic thinking that is required for the preparation of a District Plan. At such a scale, there is a recognition that a balance is required between the development of a prosperous, resilient and equitable economy and the management of urban growth with effects on the environment (as outlined in Section 3 of the Proposed Plan).
- 8.7 Infrastructure is necessary to our way of life, and telecommunications infrastructure in particular is large and visible. Nevertheless, there are controls available (and included throughout the plan, notably Chapter 30) that help with the balancing exercise through avoiding and mitigating effects of infrastructure. Even at a strategic level, it is possible to ensure that appropriate levels of landscape and urban amenity are provided within different areas/zones of the landscape.
- 8.8 Therefore, in my opinion, I am supportive of the submission by Spark (and Vodafone) to seek taller masts within the General Industrial Zones and the Cardrona Settlement Zone, although I recommend that in Cardrona, telecommunications masts should avoid being placed in the High Landscape Sensitivity Area and be set back at least 3m from the road in the same manner as buildings (as set by proposed rule 20.5.7.1). Strategically, this favours the placement of infrastructure in less-valued areas of the landscape away from more highly valued locations.

**Shannon Bray**

21 May 2020