Request for further information response
Landscape
CRC 156320

Prepared with regard to a land use resource consent application to increase irrigation areas

Prepared for
Benmore Irrigation Company Limited

November 2015
Introduction

To follow is the response to the request for further information concerning landscape matters identified by the Canterbury Regional Council’s consultant landscape architect, Mr Chris Glasson. There are four matters to be addressed, which I discuss in more detail shortly. Additionally, for clarification purposes, I have discussed some of these directly with Mr Glasson.

In addition to the landscape RFI a landscape review was prepared by Mr Glasson. It includes:

- a critique of the landscape AEE
- a graphic attachment that identifies residential and recreational vantage points not considered in the landscape AEE
- an excerpt from a landscape audit concerning the Upper Waitaki Catchment prepared by Chris Glasson Landscape Architects Ltd for ECAN

I confirm that I have read the review and taken note of the concerns raised in it where they apply to the RFI matters discussed below. The enumeration to follow reflects each RFI bullet point.

1 Landscape characteristics west and east of the Ostler Fault

Please provide a revised assessment of effects that differentiates these areas, in particular an assessment on the effects of the proposal on the sites west of the Ostler Fault.

Generally the landscape character west of the Ostler Fault is significantly less modified and cultivated compared to that to the east. As a result the landscape appears comparatively more natural. This effect is reinforced by the mountain backdrop of the main divide and associated ranges. The presence of water bodies such as kettle lakes, wetlands and relatively minor water courses also contribute to naturalness. The combination of these features results in high scenic quality, particularly looking westward toward the mountain backdrop and rolling outwash plain in the foreground.

Away from busy SH8 the landscape west of the fault feels more remote, open and expansive. It is a less busy and complex landscape compared to that east of the fault.

Despite its apparent natural character, it is nonetheless a landscape that involves widespread cultivation arising mostly from dryland farming activity. It is evident that land cover (vegetation) patterns are informed by a network of geometric linear fence lines. Shelter belts, particularly centred on Ribbonwood Station at the top end of Quailburn Road are also prominent. So too are relatively extensive areas of cultivated land – see Version 2 Graphic Attachment Photograph 1.
Irrigation does occur west of the Ostler Fault, including centre pivots located on the western slopes of Table Hill and between it and Lake Ruataniwha. But compared to that land alongside SH8 east of the fault irrigation is relatively uncommon.

From SH8 it is not possible to see the landscape west of the fault as it is elevated relative to the highway. The highway is recognised as a premier tourist route linking Christchurch to Central Otago and Queenstown Lakes. West of the fault visual access is via Lake Ohau Road, which is the main route from which people will experience the landscape. Lesser roads access west of the fault such as Quailburn Road which is largely used by local residents and those accessing Ribbonwood Station. The roads alongside Ohau Canal and the Ohau River would be used more by the public as they access recreational destinations such as Lake Ohau and Ben Ohau Range. The Te Araroa Walkway and Alps to Ocean Cycleway also provide access – see Version 2 Graphic Attachment Map 2 (page 6).

Irrigation increase is sought for a number of sites west of the Ostler Fault. They occur in two distinct clusters – those on the western slopes of Table Hill (the GB1 & TD sites) - and those alongside and south of Lake Ohau Road (the BM sites). Since the application was lodged the BM1 site has been significantly reduced – see Version 1 Graphic Attachment page 5. The GB1 site on Table Hill has also been reduced.

Irrigation west of the Ostler Fault will result in the greatest extent of change in terms of both visual and landscape effects. This is because irrigation is not a common activity west of the fault compared to its prevalence eastwards. That is, deviation from existing patterns will be much less apparent east of the fault.

For the BM3 and BM4 sites west of the fault appreciation of their presence will be largely from Lake Ohau Road, as they adjoin it. BM2 site is setback some 700m from the road and will therefore be less noticeable from that vantage point.

At around 2.8km distant, the reduced BM1 sites will be significantly further from the road. Additionally the BM1 site is not visible from Lake Ohau Road due to the presence of an intervening ridge. The same applies to views toward BM1 from Quailburn Road – a distance in excess of 6km - due to the presence of another intervening ridge – see again Version 1 Graphic Attachment Photograph 1. The photograph from ‘viewpoint 9’ shown in the peer review graphic attachment incorrectly shows a site that is not subject to the proposed irrigation increase. The only site that can be seen from Quailburn Road is WB2 whose extent is now much reduced – see Version 1 Graphic Attachment amended maps and Version 1 Graphic Attachment photograph 2 (page1).

The TD and GB sites on the western slopes of Table Hill will not be visible from SH8. They will however be visible from the Te Araroa Walkway and Alps to Ocean Cycleway. These sites will also be visible from two dwellings on Manuka Terrace west of the roads alongside Ohau River and canal. Because these sites are elevated visibility of them will be greater from vantage points to the west. The effects from these vantage points will be discussed in more detail shortly.

The TD sites in the northern half of Table Hill are located among land that is currently irrigated and cultivated. Consequently the deviation from existing patterns will not be as great as for the GB sites on to the south. As a result irrigation of the GB sites will result in the greatest extent of visual and landscape change. Much of this land

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1 GB - Glenbrook; TD – Twizel Dairy; BM – Benmore
comprises wilding pines and exotic dryland pasture – apparent in Version 1 Graphic Attachment photograph 4 page9).

In summary the receiving environment west of the Ostler Fault will undergo the greater extent of change resulting from proposed irrigation. The contrast between irrigated and non-irrigated areas will be most apparent during the dry summer months. The mostly dry tawny grasslands will be transformed to lush green pasture within the areas to be irrigated. As the Version 1 Graphic Attachment page 1 topographic Map shows, the land to be irrigated west of the Ostler Fault is proportionately quite small. For this reason and those discussed above, the degree of change is not particularly extensive. The presence of centre pivot irrigators will also introduce structures that are for the most part currently absent.

While irrigation west of the fault will introduce to a relatively limited extent new land use patterns, it is important to acknowledge that the Waitaki District Plan\(^2\) anticipates such permitted activity. Or to put it another way, the Plan harbours the expectation that such change arising from irrigation activity will occur west of the Ostler Fault, as it does presently.

2 Additional vantage points

Please provide a revised assessment on the effects on landscape values on recreational and residential views.

In the explanatory comment accompanying this request it is noted that ‘There are many viewpoints that have been missed, or not fully represented, including numerous recreational and residential views.’

A further explanatory comment states: Viewpoint photographs contain insufficient information to accurately locate them or the proposed site. And then goes on to state: This makes the proposed viewpoint and site locations problematic or not possible to verify.

Regarding the photo-points each has been shown on maps in the Version 1 Graphic Attachment (pages 4 – 7). I regard them sufficiently accurate to identify the location and direction from which the photographs were taken. The arrows point to each site identified on the maps. As the photo-point arrows indicate, some photographs were taken either within the site or alongside it. Consequently the foreground land is at least going to incorporate the site. As requested\(^3\) the co-ordinates for each photograph are listed later in this document.

I accept that there are photographs of more distant sites and their location is therefore more difficult to pinpoint. I have shown on the photographs where these particular sites are.

Regarding evaluation from recreational and residential vantage points it is necessary to consider these, and a further an on-site evaluation has been undertaken\(^4\). Following discussions with Chris Glasson Landscape Architects, the key vantage points in this regard are:

\(^2\) Discussed in more detail in the landscape AEE
\(^3\) In the peer review
\(^4\) On November 6\(^{th}\) 2015
• The Alps to Ocean Cycleway
• Te Araroa national walkway
• Quailburn Road
• Residences whose outlook is potentially affected and are otherwise not involved in the application.
• Greta Track

Each of these vantage points is considered below:

The Alps to Ocean Cycleway

The Alps to Ocean Cycleway goes between Aoraki Mount Cook and Oamaru. The route passes through a variety of landscapes most of which is farmland. Cyclists also encounter hydro – power schemes, townships, plantations, and conservation areas. Consequently the landscape encountered along the cycleway will exhibit varying degrees of modification or naturalness. This ranges from the highly modified environments of settlements and townships en-route such as Twizel, Omarama, and ultimately Oamaru; through to relatively natural settings such as that at Aoraki Mount Cook. Indeed, the majority of the cycleway is modified, even at Aoraki Mount Cook. As a result cyclists cannot expect the cycle route landscape to be free of human activity and of relevance, this includes irrigated farmland. The same applies to those using the Te Araroa Trail.

That part of the cycleway route potentially affected by the proposed irrigation increase is shown on the Version 2 Graphic Attachment Map 2.

On site evaluation indicates that views to the irrigation sites occur within a relatively short section of the cycleway as shown on the Version 2 Graphic Attachment Map 1 (page 2). This section follows the sealed Glen Lyon road alongside the north bank (true right) of Ohau Canal. As the Version 2 Graphic Attachment Photograph 3 shows, only the irrigation sites (TD2, GB2 and the now reduced GB1) on the upper slopes of Table Hill are visible. The lower GBa (see Graphic Attachment Version 2 Map 1) and TD1 sites are obscured by the southern embankment of the canal shown in the aforementioned photographs. The peer review graphic attachment viewpoint 6 photograph incorrectly shows what can be seen from the road alongside the south side of the canal - this is not part of the cycleway.

From the on site evaluation it is evident that the Table Hill TD 2 sites are cultivated. Further, an existing centre pivot irrigator is present which is difficult to discern from the cycleway. As the land is cultivated, and therefore informs the existing environment, then irrigation of the proposed TD2 sites will represent a relatively minor deviation from existing land use patterns. Irrigation of the uncultivated GB1 site will result in change. This is especially so given that much of the site contains wilding pines, which will be supplanted by green pasture following irrigation and cultivation. In my opinion this is a better or remedial outcome compared to the present situation. Further, irrigation of the GB1 site – now reduced since the application was lodged – will be consistent with the level of cultivation presently occurring within the TD1 site.
From the point of view of cyclists therefore, the effects of irrigation will not appear adverse. Based on observation, centre pivots will be barely visible, although the resulting green landscape will be. There will be no view intrusion by irrigation apparatus, nor any significant effects on views and scenic quality. Further, the area affected by irrigation constitutes a relatively small proportion of the expansive views attained from the elevated cycleway.

Once having reached Lake Ohau the cycleway then more or less follows the shoreline trail. The landform alongside this section of the lake rises steeply and therefore obscures views of any of the proposed irrigation sites – see Version 2 Graphic Attachment Photograph 4 (page 3).

South of Lake Ohau the cycleway follows the Tarnbrae Track and then onto Quailburn Road. As mentioned, none of the sites west of the Ostler fault can be seen from Quailburn Road. Site WB2 east of the fault is however visible – see again Version 2 Graphic Attachment Photograph 2 (page 1). Regarding this view the overall existing environment is clearly extensively irrigated, and indeed pivot irrigators come up to the road on its west side. It is concluded that within this context the proposed WB2 sites will be consistent and in keeping with the landscape character of their setting and therefore the effects on road users will be insignificant.

**Te Araroa national walkway**

As indicated on the Version 2 Graphic Attachment Maps 1(p.2) and 2 (p.6) the Te Araroa Trail runs directly alongside the TD1 and GB2a sites. It is also close to the TD2 and GB1 and GB2b sites located on the western slopes of Table Hill. The trail more or less follows the road that in turn follows the Ohau River. The sites mainly visible from the trail are TD 1 and GB2a. Because the other sites are elevated they are for the most part obscured by a series of terraces and steep embankments. From certain vantage points on the trail however, slivers of the upper sites are momentarily visible. And from one point the top of the existing pivot irrigator within the TD2 site is visible when it approaches the northern end – see Version 2 Graphic Attachment Photograph 5 (page4).

Much of the TD1 site is currently centre pivot irrigated. Consequently this activity informs the landscape character of the existing environment for this stretch of the trail. As a result further irrigation will not deviate to any significant degree from existing patterns.

The application site landscape alongside the trail is not, in my opinion, of particular high quality. Much of the land cover (vegetation) comprises significant areas of wilding pine, rosehip and exotic grasses – see Version 2 Graphic Attachment Photograph 6 (page 4). Further that part of the trail adjoining the TD1 site has been modified by the presence of a substantial water race and associated works. Other modifications include the presence of a quarry and pylons at the north eastern end of the TD1 site.

Significantly greater scenic quality occurs north of the trail away from the proposed irrigation sites. In this direction scenery includes the Ohau River, its terraces backdropped by the Ben Ohau Range. The existing and proposed irrigation will have little effect on these views.
A remedial benefit arising from irrigation will be the removal of wilding pines and other undesirable exotic species - principally rosehip and hieracium. Southward beyond site GB2a the trail merges with the Alps to Ocean Cycleway. As for the cycleway, there will be no views of any of the proposed application sites.

**Quailburn Road**

Refer to the discussion concerning the Alps to Ocean Cycleway.

**Residences**

Two residences were identified as being potentially the most adversely affected by proposed irrigation. Other residences with views toward the application sites may be affected – along Manuka Terrace for example – however it is considered the effects on them will be less than those for the closest two. These two dwellings are reasonably close to each other – to the point where the effects from both would be roughly the same. Consequently a photograph was taken from in front of the most prominent – the location of which is shown on the Version 2 Graphic Attachment Map 1 and Photograph 7 (page 5). Version 2 Graphic Attachment Map 1 (p.2) also shows the position of other dwellings in the vicinity where it is determined that the effects on them will be less than that for the dwelling at photo-point 7.

From this dwelling a clear view of all the Table Hill sites west of the Ostler Fault are visible. The greenness of the cultivated and irrigated areas on Table Hill and alongside to the north are readily apparent and therefore inform the existing environment. The existing pivot irrigators are just visible, but are otherwise visually overwhelmed by the vast expansiveness of the landscape setting.

Further irrigation within and about the cultivated TD1 and TD2 sites on the upper slopes of Table Hill and northwards would result in little deviation from the existing environment. The GB1 site in the distance would be evidently transformed, resulting in the appearance of expanded greenery replacing the exotic dry grassland and wilding pine. In my opinion this effect would be consistent with the patterns that already occur as part of the existing environment. These effects would be further ameliorated by distance (perspective) and foreshortening effects$^5$.

Changes will be far more apparent for the closer lower GB2a and western TD1 sites directly alongside the Ohau River. The dwellings are relatively elevated in relation to these sites and therefore look down on them as seen in Version 2 Graphic Attachment Photograph 7 (page 5). Here dry exotic grasslands and evident wilding pine would be supplanted by green pasture and the presence of pivot irrigators. It is very likely the irrigators would not be dominant features as by their very nature they have low visual bulk and are essentially transparent. Further they would have a landform backdrop. So the greening would therefore be the most noticeable effect – one that is currently informed to a certain extent by existing cultivation and irrigation. In my opinion this would not be out of keeping (associative effects) within the overall receiving environment.

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$^5$ Foreshortening occurs when the line of sight approaches ground level – the effect being that the extent of the visible ground plane lessens as the viewer descends toward it. Conversely, the higher a viewer is the more of the ground plane becomes visible.
Greta Track

Greta Track provides public access to the Ben Ohau Range which overlooks the site at an average altitude of 1100m. Due to time constraints I did not climb the track but did ascend to 750m which was sufficient to give an idea of what would be seen at elevation – see Version 2 Graphic Attachment Photograph 8 (page 5).

It is evident from this vantage point that views across the potentially affected landscape are extensive – in fact take in all of the land west of the Ostler Fault. From higher elevations views of the landscape would be significantly greater.

What is evident is that the sites are quite distant – in excess of 4km. At this distance it is evident that pivot irrigators are not visible. Their effects are however evident in green pasturceland. This would be most apparent for the closer Table Hill sites. As discussed the discernible changes would be less noticeable for those irrigated and cultivated TD1 and TD2 sites. The GB1 and GB2 two sites would undergo the greatest apparent change6. Again in the context of the setting it is my opinion that these visual effects would not be significantly adverse in any way. They would not detract from the overall quality of views from Ben Ohau Range – particularly given the overriding immensity of the landscape below. Or to put it another way, the sites would appear diminutive in the wider context of their setting. Further, they would not be out of keeping with peoples’ expectations of the evident farming environment below.

3 Type of irrigation proposed

*Please provide further information on the types of irrigation system and extent of the equipment proposed.*

As outlined in the application the proposed method of irrigation is centre pivot spray.

4 Effects on Outstanding Natural Landscapes and mitigation

*Please provide comment on any proposed mitigation taking into account the ONL status of the subject site(s).*

In the explanatory comment accompanying this request it is noted that ‘The Environment Court has defined the Mackenzie Basin as an Outstanding Natural Landscape (ONL) (Decision No. [2011] NZEnvC387). Therefore, this means that any changes that do occur must be integrated within the character of the locality’s landscape. Therefore many of the proposals, at least, would require some form of mitigation.’

The Environment Court Decision referred to only applies to Mackenzie District and not Waitaki District in which the application sites are located.

In the landscape Version 1 Graphic Attachment (page 3) a planning map copied from the Waitaki District Plan is shown. Marked on this map are the Outstanding Natural Landscapes. All proposed irrigation areas subject to the consent application lie outside of the ONLs. Potential adverse effects on ONLs have therefore been avoided and for this reason no mitigation is considered necessary.

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6 Change is only appreciated if viewers have had prior experience of the landscape in question.
Finally regarding mitigation; it is understood that irrigation of the type proposed is a permitted activity under the Waitaki District Plan provided irrigation occurs outside of Outstanding Natural Landscape areas. The visual and landscape effects are therefore anticipated by the Waitaki District Plan. This aspect is described in some detail in the landscape AEE.
### Photo-point co-ordinates

The co-ordinates listed below correspond to the photo-points identified on the Version 1 Graphic Attachment.

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**Camera settings**

Camera make and model – Canon EOS 400D

Focal length – 50mm for all photographs (note: some, but not all, photographs have been stitched)