

CENTRAL OTAGO DISTRICT COUNCIL
REQUESTED PLAN CHANGE 14 :
NEW ZEALAND CHERRY CORP (LEYSER) LP LTD, CROMWELL : PC 00014
REPORT OF PLANNING CONSULTANTS PURSUANT TO SECTION 42A OF THE
RESOURCE MANAGEMENT ACT 1991

1.0 INTRODUCTION

On 29 May 2019 New Zealand Cherry Corp (Leyser) LP Ltd requested a change to the Central Otago District Plan (Operative District Plan) pursuant to section 73(2) and clause 21(1) of Part 2 of Schedule 1 to the Resource Management Act 1991 (the Act/RMA).

The request is to change the zoning of land at Ripponvale Road near Cromwell from Rural Resource Area to Rural Resource Area (5) to enable the “comprehensive and integrated” subdivision and development of the land. The plan change also provides for enlargement of the area subject to the Outstanding Natural Landscape (ONL) notation and for a reduction in the Significant Amenity Landscape (SAL) notation on land subject to the private plan change request. This land has a total area of approximately 244 hectares being the land in Record of Title (RT) Identifiers 126180, OT 106/99, OT 7C/632 and OT 7C/633 in the Otago Land Registration District that is described as follows:

- Lot 2 DP 330709, Sections 4, 11, 98, 101 & 103 Block III Cromwell Survey District (SD) and Part Sections 5 & 25 Block III Cromwell SD and Part 1201R (RT 126180).
- Section 54 Block III Cromwell SD (RT OT 106/99).
- Sections 27, 28, 96, 99 & 102 Block III Cromwell SD (RT OT 7C/632).
- Sections 26 & 100 Block III Cromwell SD (RT OT 7C/633).

The Council accepted the request pursuant to clause 25(2)(b) of Part 2 of Schedule 1 to the Act on 14 August 2019.

2.0 PUBLIC NOTIFICATION, SUBMISSIONS & FURTHER SUBMISSIONS

The requested plan change was publicly notified as Plan Change 14 on 16 November 2019 and the closing date for submissions was 18 December 2019. Altogether some 94 submissions were received in response to the requested plan change.

The submission by Ricky Paul Larsen (48) was lodged with the Council on 20 December 2019, ie. 2 days follows the closing date for submissions. Section 37 of the Act provides for a local authority, in any particular case, to extend a time period or to waive a failure to comply with the time of serving documents. Having taken into account the matters listed in section 37A(1) of the Act we **recommend** that the late submission by Ricky Paul Larsen (48) be accepted.

A summary of the submissions (including the late submission discussed above) was notified for further submissions on 15 February 2020, with further submissions closing on 28 February 2020. Some 75 persons and organisations lodged further submissions.

Several of the further submissions are incomplete as no address for service is provided. In our view these are not valid further submissions and we **recommend** that the further submissions by Hamish Anderson (104), Blaine Gill (123), Morgan Halliwell (124), Gavin Jenkins (132), Katie Leslie (138), Kieran Philip (154) and Jennifer Takaesu (164) be declared invalid. We note that all of these further submissions relate to the original submission by the Cromwell Mountain Bike Club (13).

We have prepared a summary of all submissions and all valid further submissions received in response to requested Plan Change 14 that has been posted on the Council's website at <https://www.codc.govt.nz/publications/plans/district-plan/plan-changes/Pages/default.aspx>. The valid further submissions are summarised in the right hand column of that document, adjacent to the summary of the corresponding original submission.

The summary document only summarises the contents of each submission and valid further submission, and we acknowledge that further details are contained in the full text of the submissions and further submissions that will be available to the Commissioners and the parties at the hearing.

3.0 STATUS OF THIS REPORT

The attention of the requester, submitters and further submitters is drawn to the fact that the purpose of this report is to bring to the attention of the Commissioners all relevant factual information or issues which should be considered in deliberating on requested Plan Change 14 (which we refer to as Plan Change 14 in this report). It must be emphasised that any conclusions reached or recommendations made in this report are not binding on the Commissioners, and it should not be assumed that the Commissioners will reach the same conclusion or decision having considered all the evidence.

4.0 SCOPE OF PROPOSAL

Plan Change 14 amends Maps 44 and 51 of the Operative Central Otago District Plan to apply a new Rural Resource Area (5) [RuRA(5)] to approximately 142 hectares of land that has frontage to Ripponvale Road, near Cromwell. Maps 44 and 51 are also amended to enlarge the Outstanding Natural Landscape (ONL) notation and to reduce the Significant Amenity Landscape (SAL) notation as these notations relate to the land subject to Plan Change 14.

Plan Change 14 as described in the request document and as publicly notified provides for part of the land subject to the plan change to be included in the RuRA(5) and for the balance of the land to be retained in the Rural Resource Area. Plan Change 14 provides for a new Policy 4.4.18 to provide for integrated rural lifestyle subdivision and development within the RuRA(5); and for the insertion and/or amendment of various rules (of the Rural Resource Area) to provide for subdivision and development in the RuRA(5). Plan Change 14 provides for the insertion of a Structure Plan as Schedule 19.23 to guide future subdivision and development and to identify the Rural Lifestyle Areas (RLAs) 1-5 where minimum allotment areas (that vary between 2000m² and 3 hectares) and minimum heights (that vary between 5 metres and 7.5 metres) apply. Schedule 19.24 and Schedule 19.25 insert a Circulation Plan and a Planting Schedule, respectively, with respect to the RuRA(5).

New or amended rules that are specific to the RuRA (5) include:

- Provision for residential activity as a controlled activity in the RuRA (5) provided relevant standards are complied with.

- Subdivision to be a controlled activity within the RuRA(5) with minimum allotment areas varying between RLAs as shown on the Structure Plan as follows:

| | |
|-------|---------------------|
| RLA 1 | 2,000m ² |
| RLA 2 | 3,000m ² |
| RLA 3 | 4,000m ² |
| RLA 4 | 1 ha |
| RLA 5 | 3 ha |

- Subdivision within the RuRA(5) to be in general accordance with the Structure Plan to be contained in Schedule 19.23.
- Building platforms no greater than 1000m² to be shown on the plan of subdivision for RLA 4 and RLA 5 in the RuRA(5).
- A rule to stipulate a maximum height in the RuRA(5) of 7.5 metres in RLAs 1, 2 and 3; 5.5 metres in RLA 4; and 5 metres RLA 5.
- A rule to require a minimum setback in RLAs 1-3 of 6m and RLAs 4 and 5 of 10m; with a minimum setback of 30 metres from the road boundary of Ripponvale Road; and a minimum setback of 25 metres from the zone boundary adjoining the Rural Resource Area (except for buildings located in RLA 3).

New Schedules specific to the RuRA (5) are to be included being:

- **Schedule 19.23 : Structure Plan – Rural Resource Area (5).**
- **Schedule 19.24 : Circulation Plan – Rural Resource Area (5).**
- **Schedule 19.25 : Planting Schedule – Rural Resource Area (5).**

The 142 hectare RuRA(5) is intended to provide for the development of a rural lifestyle community of up to 160 allotments. The balance of the subject site (which has an area of 244 hectares) will accommodate an expansion of the existing NZ Cherry Corp orchard, with some 29 hectares of land to be developed as a cherry orchard; such orchard development to be required by a rule that ties in with the development of land in the Rural Resource Area (5) for residential activity. The ONL is to be enlarged to provide greater protection of the Pisa Range hill country areas that form part of the western visual backdrop to the Cromwell township. Provision is to be made for public access through the site for recreation purposes.

Key features of this Structure Plan are:

- The five RLAs that will provide for smaller lots to be created on the flat central part of the site, with lots progressively increasing in size towards the outlying areas of the site commensurate to the landscape values and degree of landscape sensitivity.
- Identification of no build areas to avoid development in areas that are visually sensitive, to avoid development on land subject to natural hazards and to retain open space character across the RuRA(5).
- A planted amenity edge along Ripponvale Road and adjacent the Horticulture Area (cherry orchard), together with boundary setbacks across the zone to provide amenity frontage to

the zone [along Ripponvale Road] and a buffer between development and surrounding rural activity.

- Controls on building materials and colour, landscape planting, and the requirement to identify building platforms in more visually prominent areas of the site at the time of subdivision to ensure that development responds to and is integrated into the site and surrounding rural area.
- An open space network that will encompass stormwater flow paths, planting of native species and recreational trails, to provide amenity, biodiversity and recreational benefits.

Access to the site is to be provided from Ripponvale Road. All necessary infrastructure services are to be provided to the site.

The RuRA(5) is proposed to assist in meeting demand for rural lifestyle sections in the wider Cromwell area. The requestor advises that approximately 860 dwellings are projected in the rural fringe/rural areas of the Cromwell ward by 2043; and Plan Change 14 is proposed to cater for approximately 18% of long-term demand (between 2016 and 2043) within the rural fringe/rural area of Cromwell; such provision to be made in the RuRA(5).

It is emphasised that the above is a summary only of relevant rules and other provisions proposed in Plan Change 14 and that Appendix A of the plan change request document should be referred to as this contains all amendments proposed to the Operative District Plan. It is also noted that Plan Change 14 identifies the provisions that are to be amended in the Operative District Plan in the order in which they are presented in the Operative District Plan.

5.0 DOCUMENTS IN SUPPORT OF REQUESTED PLAN CHANGE

5.1 Request Document

The private plan change request document entitled “Request for a Change to the Operative Central Otago District Plan : Shannon Farm 144 Ripponvale Road, Cromwell” prepared by Town Planning Group (NZ) Limited for NZ Cherry Corp that is dated 28 May 2019 provides background information relevant to the proposed plan change. The request document provides information with respect to the content and purpose of the plan change; a description of the site and surrounding environment; the planning context including statutory matters; a section 32 analysis (assessment) of alternatives; and an assessment of the effects of the proposal on the environment.

The purpose of the proposal [Plan Change 14] is stated in Section B5.0 of the request document as follows:

“Purpose of the Proposal:

To enable the subdivision, use and development of approximately 142 hectares of land located at 144 Ripponvale Road to provide a mix of different land use densities to meet demand for rural lifestyle development outside of urban Cromwell; recognise and provide for the natural landscape values of the Pisa Range; and facilitate use of a further approximately 29 hectares of land for horticultural development. Rural lifestyle development is to occur in an integrated, sustainable and planned manner to meet the needs of the District’s people and communities, while avoiding, remedying or mitigating potential adverse effects on:

- *The Pisa Range – Outstanding Natural Landscape*
- *Landscape and amenity values*

- *Water resources*
- *The soil resource*
- *Surrounding land uses*
- *Natural hazard risk"*

Attached to the request document are proposed amendments to the Operative Central Otago District Plan (Appendix A); an Evaluation of the Plan Change against the Operative, Proposed and Partially Operative Regional Policy Statement (Appendix B); Section 32 Evaluation Tables (Appendix C); and copies of the Records of Title (Appendix D). Also attached to the request document are supporting technical assessments and reports as follows:

- Landscape and Visual Assessment Report prepared by Rough & Milne Landscape Architects Ltd dated 20 May 2019 (Appendix E).
- Infrastructure Report prepared by Paterson Pitts Limited Partnership dated 21 May 2019 (Appendix F).
- Demand & Supply Assessment prepared by Market Economics Limited (M.E Consulting) dated 23 May 2019 (Appendix G).
- Flood Hazard Assessment prepared by GeoSolve Limited dated 24 May 2019 (Appendix H).
- Geotechnical Investigation prepared by GeoSolve Limited dated 23 May 2019 (Appendix I).
- Transportation Assessment (dated 23 May 2019) and Response to Request for Further Information relating to Transportation Matters (dated 23 July 2019) prepared by Carriageway Consulting Limited (Appendix J).
- Preliminary Site Investigation (with respect to potential for soil contamination) prepared by WSP Opus dated 14 May 2019 (Appendix K).
- Evaluation of Soils prepared by Manaaki Whenua Landcare Research dated 9 May 2019 (Appendix L).

On 15 April 2020 the requestor forwarded a Noise Assessment to the Council. It is noted that this Noise Assessment was prepared subsequent to the lodging of submissions and further submissions in the context of Plan Change 14; and a copy of the Noise Assessment has been posted on the Council's website at the address stated in Part 2.0 above. This additional report is as follows:

- Noise Assessment prepared by Tonkin & Taylor Limited dated 5 April 2020.

6.0 MATTERS RAISED IN SUBMISSIONS

To avoid preparing an unnecessarily lengthy report, and to avoid repetition, we have chosen to discuss the matters raised in submissions throughout this report and particularly when addressing the effects on the environment of the proposal; and we have therefore refrained from discussing the matters raised in submissions on a submission by submission basis.

As noted above 94 original submissions have been lodged; and valid further submissions were received from 68 persons and organisations. Several of the submissions and further submissions have raised multiple topics; and many of the further submitters have responded to only one of the original submissions being the submission of the Cromwell Mountain Bike Club (13).

In many instances the same or a similar point is raised by several submitters; and we have chosen not to identify every submitter who has made a particular point in our report, to avoid an unnecessarily lengthy report. We confirm that we have had regard to the contents of all valid submissions and further submissions when preparing this report; and that the summary document and the full text of submissions and further submissions will be available to the Commissioners and the parties at the hearing.

Our analysis of the original submissions lodged indicates that 55 (58.5%) support and 15 (16.0%) conditionally support Plan Change 14. Some 21 submissions (22.3%) oppose Plan Change 14 and 2 submissions (2.1%) oppose the proposal in part. One submission (1.1%) neither supports nor opposes the plan change. In summary 69 submissions (74.5%) support or conditionally support Plan Change 14; 23 submissions (24.4%) oppose or oppose in part Plan Change 14; and one submission (1.1%) is neutral with respect to Plan Change 14.

7.0 RIPPONVALE AND APT DESCRIPTION OF PROPOSAL

7.1 Ripponvale Locality

The site subject to Plan Change 14 is located at Ripponvale being the rural locality to the north and west of State Highway 6 that is confined by the foothills of the Pisa Range (to the west) and the ridge and terraces between Ripponvale and Burn Cottage Road (to the north).

Ripponvale has been a focus for the fruit growing industry for more than a century. The soils at Ripponvale are suitable for fruit growing when irrigated. The Ripponvale Settlers Water Race is located at the foot of the Pisa Range and bisects the site. In the 1980s the Ripponvale Irrigation Scheme commanded an area of some 377 hectares. Subsequent to the filling of Lake Dunstan irrigation water is now taken from the Lake via pumps by the Ripponvale Irrigation Company Limited; and bore water is also used for irrigation on some properties.

Fruit growing occurred initially to the west of Ripponvale Road below the Ripponvale Settlers Water Race. Larger orchards have been established in modern times generally to the south of Ord Road and on the land adjacent to the subject site, including the requestor's orchard property.

Properties generally to the east and west of the north-south limb of Ripponvale Road have historically been subdivided into 10 acre (4 hectare) blocks under the legislation that preceded the Local Government Act 1974. At that time territorial local authorities had no effective control of subdivision into small parcels. When the Central Otago District Plan was prepared in the 1990s the Rural Residential notation was generally applied to land at Ripponvale and elsewhere in the District that had been subject to historic 10 acre subdivision. The Rural Residential notation provides for subdivision of land subject to that notation on the basis that an average allotment size of no less than 2 hectares is achieved. This mechanism has permitted rural lifestyle subdivision and development to occur on land subject to the Rural Residential notation at Ripponvale.

Ripponvale retains a strong rural character associated with fruit growing, in particular, and also viticulture and pastoral farming. It is noted that a former abattoir building complex to the south of the site has now been redeveloped as the Rockburn Winery that is located immediately to the rear of the Jakimm Orchards & Cherry Packhouse near the 35 kph bend on Ripponvale Road.

The following statement is made at page 31 of the request document:

"The Request seeks to provide for a mix of rural lifestyle opportunities within the rural fringe/rural area of Cromwell where significant demand is projected, in a location that is advantageous given its close proximity to Cromwell township and logical given that it will

continue an existing rural residential/rural lifestyle land use pattern along Ripponvale Road and around the fringe of Cromwell generally....”

(Emphasis Added)

Plan Change 14 will provide for the subdivision of land into allotments having a minimum area of 2000m² – 4000m² in the Rural Lifestyle Areas 1 to 3 on land to the north of Ripponvale Road. This concentrated form of subdivision (which will include most of the 160 lots to be created) contrasts with the pattern and density of subdivision that has occurred elsewhere at Ripponvale Road on land subject to the Rural Residential notation where an average lot area of 2 hectares is required. It is not considered that the subdivision and development to be facilitated by Plan Change 14 will continue the existing rural residential/rural lifestyle land use pattern that is currently found along Ripponvale Road.

As previously noted the Operative District Plan provides for subdivision of land subject to the Rural Residential notation within the Rural Resource Area where an average of 2 hectares is achieved. Such subdivision is a controlled activity in terms of Rule 4.7.2(ii)(a)(i). Elsewhere in the Rural Resource Area subdivision which creates allotments with an average allotment area of no less than 8 hectares and a minimum allotment area of no less than 2 hectares is a discretionary activity in terms of Rule 4.7.4(iii). The site and much of the land that has frontage to the east-west limb of Ripponvale Road and much of the land to the east of Ripponvale Road south of Ord Road is located in the Rural Resource Area and is not subject to the Rural Residential notation.

7.2 Apt Description of Proposed Subdivision and Development

The Explanation to Policy 7.2.7 which relates to the Residential Resource Areas (1)-(13) in the Operative District Plan states as follows:

“Within the Residential Resource Area specific areas have been identified where it is appropriate to apply different standards for subdivision allotment sizes, bulk and location or with respect to other effects of activities. In most instances the areas concerned have had specific planning provisions applied to them in the Transitional District Plan that recognise their particular characteristics. ...”

The minimum lot areas now proposed in the Rural Lifestyle Areas 1-4 correspond to average or minimum lot areas required in specific areas within the current Residential Resource Area as follows:

RLA 1 (minimum lot area 2000m²) compares to the Residential Resource Area (4) at Bannockburn where an average lot area of 2000m² (and a minimum lot area of 1500m²) applies.

RLA 2 (3000m²) compares to the Residential Resource Area (5) at Lowburn where a minimum allotment area of 3000m² applies.

RLA 3 (minimum lot area 4000m²) compares to the Residential Resource Area (6) that applies on land at Cromwell to the north of State Highway 8B and at Barry Avenue in Cromwell where a minimum allotment area of 4000m² is required.

RLA 4 (minimum lot area 1 hectare) can be compared to the Residential Resource Area (2) to the east of the Bannockburn – Cromwell Road and at Cairnmuir Road close to the Bannockburn Inlet where an average lot area of no less than 1 hectare (and a minimum lot area of 4000m²) is required.

Much of the subdivision and development to be enabled in the Rural Resource Area (5) by Plan Change 14 is essentially for residential purposes; and the Rural Lifestyle Areas 1-4 are comparable, in terms of the minimum lot areas required, to specific areas provided for in the Residential Resource Area in the Operative District Plan; the examples quoted above being areas that are located at Cromwell and elsewhere in the Cromwell Basin.

In our opinion much of the subdivision and development proposed by Plan Change 14 is not a continuation of the existing rural residential/rural lifestyle subdivision and land use along Ripponvale Road; but rather is an enclave of larger lot residential subdivision and development on the subject site.

8.0 EFFECTS ON ENVIRONMENT

The requestor has prepared an Assessment of Effects that is presented in Part G in the request document. We have chosen to address the actual and potential effects on the environment of the proposal by adopting the headings and the order used in Part G of the request document in Parts 8.1 – 8.11 and 8.21 of this report, below. It is emphasised that addressing effects in the same order as presented in Part G of the request document is done purely for the convenience of the Commissioners and the parties; and that this should not be taken as any assessment of our ranking of the relevant significance of these effects.

It is noted that a number of other effects and issues are relevant, most of which have been raised by submitters in response to Plan Change 14. We address these other effects and issues in Parts 8.12 – 8.20 of this report. Again the order in which these effects and issues are addressed is not to be taken as any ranking of their relative significance.

8.1 Effects on Landscape and Visual Effects

An Assessment of Landscape and Visual Effects prepared by Rough and Milne Landscape Architects Limited is attached at Appendix E to the request document. This is accompanied by a document entitled “Graphic Supplement to Landscape and Visual Assessment” dated 20 May 2019; and a document entitled “Landscape Strategy + Structure Plan” also dated 20 May 2019.

Effects on landscape and amenity values are also addressed in Section G2.0 of the request document.

The Landscape and Visual Effects Assessment presented at Appendix E to the request document has been subject to a peer review commissioned by the Council. The “Landscape and Visual Effects Assessment – Peer Review” prepared by Mr Ben Espie (Landscape Planner) of Vivian + Espie Limited dated 27 April 2020 is attached to this report at **Appendix 1**. It is important to note that Mr Espie’s report was prepared during the Covid-19 Alert Level 4 lockdown in April 2020. Consequently his peer review is very much a “desk top” exercise that did not involve a visit to the site and environs. The Vivian + Espie report has been informed by Mr Espie’s visits to the vicinity at Ripponvale in the past.

8.1.1 Preliminary Matters

While the subdivision and development to be enabled by Plan Change 14 is described in general terms in Section 4.1 of the Assessment of Landscape and Visual Effects; there is no explicit statement to describe the location and number of allotments/dwellings to be enabled across the Rural Resource Area (5). We consider such detail to be important to enable the effects of such subdivision and development to be properly assessed by the Commissioners.

Plan Change 14 provides for up to 160 allotments to be used for residential activity on the site. It is important to note that the amendment proposed to Rule 4.7.2(ii)(a)(i) provides for subdivision within the Rural Resource Area (5) as a controlled activity for which resource consent must be granted by the consent authority, pursuant to section 104A of the RMA. The new Rule 4.7.2(i)(b) also stipulates that residential activity is also to be a controlled activity (and therefore must be consented) in the Rural Resource Area (5). As a consequence the decision as to whether such subdivision and development should proceed or not is a decision that can only be made during the consideration of Plan Change 14.

There is no statement made in the request document or in the supporting technical reports (including the Assessment of Landscape and Visual Effects) to categorically state the allocation of the maximum of 160 allotments between the Rural Lifestyle Areas 1-5. The Demand & Supply Assessment prepared by Market Economics Limited that is presented at Appendix G to the request document is helpful in this respect. Figure 2 in the Demand & Supply Assessment contains an indicative yield of dwelling lots per Rural Lifestyle Area for a total of 152 lots. We have prepared the following table, derived from Figure 2.

| <u>Rural Lifestyle Area</u> | <u>Minimum Lot Size</u> | <u>Dwelling Lot/Yield</u> |
|-----------------------------|-------------------------|---------------------------|
| RLA 1 | 2000m ² | 35 |
| RLA 2 | 3000m ² | 33 |
| RLA 3 | 4000m ² | 39 |
| RLA 4 | 1 ha | 27 |
| RLA 5 | 3 ha | 18 |

Again we note that the above dwelling lot yield is likely to be approximate as the total number of lots recorded in Figure 2 totals 152, being less than the maximum of 160 lots provided for in Plan Change 14.

The source for Figure 2 is stated in the Market Economics report as “NZ Cherry Partnership, 27th February 2019”. Given that the total dwelling lot yield stated in Figure 2 is specifically stated as 152 (and not 160) it is assumed that the 152 lot total is derived from some detailed examination of the subdivisional potential of this land.

It is logical that a concept plan of subdivision would have been prepared that provides the basis for the 152 dwelling lot calculation. In our view such a concept plan would be of material assistance to the Commissioners and the parties in assessing the landscape and visual effects (and other effects) of the proposal. Such a concept plan has not been presented by the requestor in the request document or in any of the supporting technical reports. In our experience it is common for a concept plan of subdivision to be presented as part of a plan change request that seeks planning provisions to enable a more intense and large scale subdivision of a specific site.

On 1 April 2020 an additional graphic depiction was received from the applicant via the Council that superimposes elements of the proposal including the RuRA(5), No Build areas and the Indicative Road Network over the site. This graphic is attached at **Appendix 2** to this report.

It would also be helpful to have a plan that shows the contours at the site; and we note in this context that the Mott MacDonald water modelling report (attached as Appendix D to the Infrastructure Report at Appendix F to the request document) states that the development’s

elevation ranges between 225m and 400m; indicating that dwellings are anticipated to 175m above Ripponvale Road at the site.

It is clear that a substantial number of dwellings are being provided for in the Rural Lifestyle Areas 1-5 within the Rural Resource Area (5). Other built development can also be anticipated including, for example, garages and sheds for the storage of vehicles and recreational equipment; and possibly farm sheds on the larger lots (particularly in the RLA 5). The presence of large sheds is a feature of large lot residential development and can be observed, say, in the Residential Resource Area (6) at Cromwell where a minimum lot area of 4000m² applies.

Given that up to 160 allotments for residential activity are being provided for via Plan Change 14; we consider that a visual simulation such as a photomontage that depicts such future development across the site, as anticipated by the requestor, would be helpful to the Commissioners and the parties in fully assessing the landscape and visual amenity effects of the proposal. In our experience it is common for a visual aid of this nature to be provided where a significant planning proposal is presented for consideration (via plan change or resource consent). Such a visual simulation should show the dwellings and accessory buildings across the site; including the maximum heights of 7.5 metres (for RLA 1, 2 and 3), 5.5 metres (for RLA 4) and 5 metres (for RLA 5) as now to be provided for in terms of Rule 4.7.6A(f) as well as the associated roading and mitigation plantings envisaged by the requestor.

In our view the requestor should provide a concept plan of subdivision (that we assume exists given the 152 lots tabulated in Figure 2 of the Demand & Supply Assessment), a contour plan and visual simulations to show future built development as provided for in the rules to be amended in terms of Plan Change 14.

We discuss the Viewpoint images presented in the Graphic Supplement to the Landscape and Visual Assessment in Part 8.1.4 below. It should be noted that such Viewpoint images do not convey what is seen when the site is actually viewed in the landscape. Notwithstanding this constraint it would be helpful if the areas to be subdivided and developed for residential activity could be identified by shading on these Viewpoint images (and on any others to be presented at the hearing); rather than the “Development Site” simply being indicated by a single arrow on each Viewpoint image.

As a consequence of the Rural Study in 2005 and 2006 a 3 tier landscape categorisation was introduced into the District Plan via the plan change series being Plan Changes 5A – 5W; and by Plan Changes 5A and 5R in particular. This tripartite classification includes:

- Outstanding Natural Features and Outstanding Natural Landscapes.
- Significant Amenity Landscapes.
- Other Rural Landscapes.

Outstanding Natural Features and Outstanding Natural Landscapes are those subject to section 6(b) of the Resource Management Act 1991. Section 2.3.1 of the Operative District Plan confirms that Significant Amenity Landscapes are subject to section 7(c) of the RMA; albeit that Other Rural Landscapes in the District are also recognised as having amenity values including those associated with the results of human endeavour. The site subject to Plan Change 14 includes landscapes categorised as ONL, SAL and ORL.

8.1.2 Existing Landscape

The existing environment is described in Section 3.0 of the Assessment of Landscape and Visual Effects; and landscape values attributed to the application site are discussed in Section 3.5.

The Assessment confirms in paragraph 41 that an understanding of the application site's existing landscape character, natural character and amenity value has significance as a basis for assessing the landscape character and visual changes that will result from development in accordance with the Rural Resource Area (5) [as proposed in Plan Change 14].

At paragraph 43 of the Assessment it is stated that the western part of the application site displays moderate to high values of natural character; and that currently the ONL boundary as shown on the Operative District Plan planning maps traverses the face of this landform. The plan change proposes that the ONL boundary line be realigned through the site to include the entire face of the slope; and in doing so this area of the application site that displays the highest level of natural character is afforded appropriate recognition and protection through the expansion of the ONL.

Mr Espie has noted at his paragraph 24 that no activities will be enabled in the ONL that are not currently enabled; and that therefore Plan Change 14 will avoid effects on the ONL, and not "mitigate or avoid" such effects as stated in paragraph 79 of the Assessment. Mr Espie considers that the ONL extension can best be thought of as a "correction" of an ONL boundary line that has been drawn inaccurately; and he therefore considers that Plan Change 14 will bring a "(relatively slight) positive effect" in relation to the appropriate management of the District's ONLs, and will have no adverse effects on the relevant ONL.

At paragraph 44 the Assessment considers that while there is a level of natural character associated with the lower elevations of the application site, it is low, and it is considered that rural character prevails [on that part of the site not subject to the extended ONL].

The Assessment at paragraphs 48 and 49 identifies the landscape character of the application site as rural with varying levels of naturalness, as follows:

- "48. *The application site is zoned 'Rural' ... and has attributes consistent with a rural character. It also adjoins a zone for rural residential activity and 2ha sites that contribute to the prevailing character. In a broad sense the application site character is derived from the natural character of the adjacent Pisa Range, the rural character of the agricultural/horticultural region of this part of the Cromwell Basin along with Cromwell township. More specifically it is also derived from the evolving rural residential land pattern associated with Ripponvale Road.*
49. *The land use within the immediate receiving environment results in a landscape that is rural in character with varying levels of naturalness, reflective of resource provided by the landform. Along Ripponvale Road, manicured road berms indicate a degree of residential character which is considered 'rural lifestyle'. Fencing, planting and exotic trees line residential properties emphasising the amenity offered by these rural lifestyle sections within the rural environment. Although modified, the application site landscape character has varying degrees of pastoral and natural qualities. ... "*

It is understood that the "zone for rural residential activity" referred to in paragraph 48 is, in fact, a reference to the Rural Residential notation that provides for the creation of allotments having an average area of 2 hectares within this part of the Rural Resource Area. It is acknowledged that land to the south of the east-west limb of Ripponvale Road between the Cromwell Racecourse and the 35 kph bend in Ripponvale Road is subject to the Rural Residential notation; as is land further to the south on the north-south limb of Ripponvale Road. It is emphasised that the Rural Residential notation is not applied to any land on the north side of the east-west limb of

Ripponvale Road; and that all of this land is located in the Rural Resource Area where an average lot area of 8 hectares and the minimum lot area of 2 hectares is required for subdivision. We also note that paragraph 48 states that in a broad sense the site character is derived from, *inter alia*, the Cromwell township. It is unclear how the rural character of the site is derived from the presence of the Cromwell township, to the east of State Highway 6.

It is appropriate, when considering the description of the receiving environment at Ripponvale Road (as described in paragraph 49 of the Assessment) to acknowledge the prevalence of horticultural activity at Ripponvale Road and the pattern of subdivision as depicted in Figure 13 of the Demand & Supply Assessment prepared by Market Economics Limited (at Appendix G to the request document). In essence the “rural lifestyle” development that has occurred at Ripponvale Road has a rural rather than a residential character.

Land to the north of the east-west limb of Ripponvale Road has a strong rural character associated with pastoral farming and orcharding rather than a “rural lifestyle” character at present. Land on the south side of the east-west limb of Ripponvale Road for the 1 kilometre stretch between State Highway 6 and land subject to the Rural Residential notation also has an open rural character. This land is occupied by the Cromwell Racecourse Recreation Reserve that is designated D81 for “Recreation Purposes” – Cromwell Racecourse in the Operative District Plan and adjacent land to the south and east is designated D199 for “Aerodrome Purposes” – Cromwell Aerodrome.

The Assessment of Landscape and Visual Effects advises that closer examination of the site reveals that the generic rural character varies across the site and accordingly the Assessment divides the site into four character areas as delineated in the aerial photograph image presented as Sheet 17 of the Graphic Supplement to Landscape and Visual Assessment. These four character areas are:

- Farmland Basin.
- Farmland Terraces.
- East Gully.
- West Slope.

The Farmland Basin is that part of the application site that borders Ripponvale Road including the flat to gently sloping land of the south area of the site that is characterised by orchards and open pasture land divided by tall shelter belts of exotic trees typical of agricultural land found elsewhere in the Cromwell Basin. At paragraph 50 the Assessment confirms that the shelter belts [some of which appear to have been removed] enclose paddocks creating a sense of large enclosed spaces. The Farmland Basin includes the existing access drive, the cluster of existing “relatively ramshackle” farm buildings at the site and the dwelling at 144 Ripponvale Road. The Assessment observes that the Farmland Basin is a modified rural landscape with evidence of human influence over time, including the presence of fencelines, water races and mining races. It advises that several of the existing irrigation ponds are also prominent. The Assessment considers that the Farmland Basin has a low level of natural character and low-moderate amenity value.

We note that the Definitions and Methodology presented in Appendix 1 to the Assessment provides interpretation of terms such as “Moderate – Low”; and that this term relates to the magnitude/degrees of effects on landscape and/or visual amenity. No such explanation is given with respect to the rating applied to “amenity value” such as the term “low – moderate” as used in paragraph 50 and to the corresponding amenity value rating terminology used in succeeding paragraphs of the Assessment.

The Farmland Terraces are located immediately to the north of the Farmland Basin. The Assessment at paragraph 51 advises that the transition between the lower farmland and the upper slopes occurs as the slope of the lower site gently increases and is then interrupted by a series of small hills and terraces which form the toe of the open slopes. The Farmland Terraces show evidence of modification including historic water and mining races, fence lines, orchards and pine stands. We also note that an irrigation dam is located on the Farmland Terraces. The Assessment considers the Farmland Terraces to have a low-moderate level of natural character and moderate amenity values.

The East Gully is the north-east area of the site that is bound by ridgelines paralleling the property boundary with a gully at the base which extends towards the lower areas of the site. At paragraph 52 the Assessment notes that this forms a gently valley which is vegetated primarily with grasses and has a very spacious open character. The Assessment advises that the Significant Amenity Landscape (SAL) notation encompasses the East Gully; and that this area is part of the lower terraces of the Pisa Range as the mountains meet the Cromwell Basin. The Assessment advises that the East Gully has a moderate level of natural character and high amenity value. It is understood that Plan Change 14 proposes to reduce the extent of the SAL notation at the site; such that it applies to the East Gully and not to the Farmland Terraces at the site.

The West Slope is the steepest and most visible part of the site and forms the bottom of the Pisa Range. At paragraph 53 the Assessment advises that the slope is divided from the East Gully by the north gully and a saddle between the north ridgeline and the western slope. The existing ONL encompasses the upper west slope; and this is to be extended (as discussed above). The Assessment confirms that the West Slope has a high level of natural character and high amenity value.

While no overlay has been provided of the Structure Plan (Schedule 19.23) over the landscape character areas (as shown on Sheet 17 of the Graphic Supplement); it is noted that the eastern portion of the Farmland Basin is to be retained as the Horticulture Area; and that most of the West Slope is to be ONL. The Rural Lifestyle Areas 1-5 within the Rural Resource Area (5) are to occupy part of the Farmland Basin, the Farmland Terraces, the East Gully and small portions of the West Slope albeit that parts of the upper portions of the site are to be No Build areas.

8.1.3 Landscape Effects of Proposal

The subdivision and built development elements of the proposal are succinctly summarised at paragraph 55 in Section 4.1 of the Assessment of Landscape and Visual Effects as follows:

“55. The proposed RuRA5 zone will provide a mix of different rural living densities. A range of proposed lot sizes will accommodate a variety of lifestyle types and allows for smaller lots and denser development to occur on the flat and less visibly prominent core of the application site. Larger 1-hectare lots, a setback along Ripponvale Road, minimum lot sizes of 3-hectares and no build areas are proposed for the more sensitive and visible areas of the application site. Coupled with mitigation and design controls, this will minimise landscape and visual effects.”

We question whether “rural living” densities are to be provided across the Rural Resource Area (5). At paragraph 49 the Assessment has referred to the “rural lifestyle” character along Ripponvale Road that we assume that this is a reference to land subject to the Rural Residential notation where an average lot area of 2 hectares is required. The proposal is to provide for large residential allotments of 2000m² – 4000m² in the Residential Lifestyle Areas 1 – 3; and as discussed in Part 7.2 above these are at large lot residential rather than “rural living” densities. Apart from the RLA 5 and possibly the RLA 4 Plan Change 14 provides for “rural living” only in

the sense that residential activities are to be provided for on a site that is surrounded by land in the Rural Resource Area ie. is located in a wider rural environment.

In Section 6.1 at paragraph 69 the Assessment discusses sensitivity. The Assessment notes that large-scale changes which introduce new or uncharacteristic features into the landscape or view are likely to have a more significant effect than small changes involving features already present within the landscape or view. The Assessment advises that an appraisal of other existing modifications and patterns of development within the existing environment is therefore necessary to determine appropriateness, along with consideration for the local planning context and activities expected within the zone. Again it is noted in this context that land to the north of Ripponvale Road is located in the Rural Resource Area and is not subject to the Rural Residential notation.

At paragraph 72 the Assessment also notes, in respect to receptor sensitivity, that a person who lives locally will be more familiar with the existing features of the landscape and will potentially notice developments more readily. It is anticipated, in this context, that many residents of Ripponvale will utilise the east-west limb of Ripponvale Road to access commercial and community services in Cromwell. These persons will pass the site when travelling along this part of Ripponvale Road.

The Assessment in Section 6.2 at paragraphs 73 and 74 explain the terms “landscape effects” and “landscape character” as follows:

- “73. *Landscape effects derive from changes in the physical landscape, which may give rise to changes in its character and how this is experienced. This may in turn affect the perceived value ascribed to the landscape¹².*
74. *Landscape Character can be described as a combination of generic natural and physical elements such as landforms, (including features such as water bodies), land cover (such as vegetation, buildings) and land use (such as farming and viticulture activities, residential use or recreational use). Where elements are commonly present, they can describe a particular landscape character. Elements common to a rural character generally include open space (ie. a lack of built elements), a dominance of vegetation and, but not necessarily, a productive land use.”*

At paragraph 79 the Assessment concludes, in the context of the ONL, that overall it is considered that Plan Change 14 will mitigate or avoid adverse landscape and visual amenity effects on the adjoining ONL. This is because no built development is to occur on the ONL that is to be extended to the transition between the upper and lower slopes. Again it is noted that Mr Espie considers that Plan Change 14 will avoid rather than “mitigate or avoid” effects given that the status quo is to be maintained with respect to the ONL rules.

It is unclear whether no development is proposed in the ONL. The Circulation Plan at Schedule 19.24 identifies “Walking Track” within the ONL and a sign displayed on the fence of the site (that indicates the boundary of the Horticulture Area) indicates the ONL area as being for “Open Space & Recreation Tracks”. It is also noted that the submissions by Connor William Atherton (3/1) and others supported by the Cromwell Mountain Bike Club (116.2) propose that the recreation area [presumably the ONL] should be made available for mountain bike trail development by the Cromwell Mountain Bike Club. If such development is anticipated it is unclear whether the effects of this activity have been assessed in the Assessment.

The East Gully and part of the Farmland Terraces are subject to the current SAL notation. This notation applies to the upper portions of the RLA 3, RLA 4 and RLA 5. It is unclear how many residential activities are anticipated within the SAL albeit that 39, 27 and 18 dwellings are anticipated in the RLA 3, RLA 4 and RLA 5, respectively, in total. It would be helpful to know how many residential activities are anticipated on the current SAL and on the SAL as proposed to be reduced by Plan Change 14.

At paragraph 80 the Assessment notes that the SAL has a high level of amenity; with rural spaciousness due to the generally open areas of land and low density of built form [there is none] and the presence of some human modifications (fencelines and water races). The Assessment notes in paragraph 81 that the potential future development of this part of the site would include low density rural residences with design controls to assist with integrating built form and activity into the site. The Assessment concludes in paragraph 83 that Plan Change 14 "... will mitigate or avoid adverse landscape and visual amenity effects on the SAL while maintaining and enhancing landscape values." We consider it doubtful that providing for residential activity on lots having a minimum area of 4000m², 1 hectare or 3 hectares (in the RLA 3, RLA 4 and RLA 5, respectively) will serve to mitigate or avoid adverse landscape and visual amenity effects on the SAL.

In Section 6.2.3 the Assessment discusses the effects of the proposal on landscape character and the quality of the receiving environment. At paragraph 84 properties along Ripponvale Road at the base of the Pisa Range are described as conveying a rural character, modified by existing and/or consented residential and agricultural development. The resulting land use within the immediate receiving environment is described in paragraph 85 as resulting in a landscape that is rural in character with varying levels of naturalness and again reference is made to the "rural lifestyle" character of Ripponvale Road.

The Assessment at paragraph 86 states as follows:

"86. Although the proposed plan change will inevitably change the rural character of the application site through a change in land use, it will not degrade the quality of the surrounding landscape. The proposed development will be consistent with this rural lifestyle character of the surrounding environment, while acknowledging the importance of the Pisa Range ONL through a considered structure plan and design controls for the RuRA5. Development in the proposed location is a logical extension to an existing rural lifestyle character."

The Assessment finds that the proposal will be consistent with the rural lifestyle character of the surrounding environment. Again it is acknowledged in this context that land to the south at Ripponvale Road is subject to the Rural Residential notation where an average lot area of 2 hectares is permitted; and that this land has a predominantly rural rather than a residential character. Given that the proposal will enable the creation of 160 lots for residential activity, many being essentially large residential lots, it is difficult to accept that the proposed development will be consistent with the rural lifestyle character of the surrounding environment. Similarly it is difficult to accept that development at the site is "a logical extension to an existing rural lifestyle character" at Ripponvale Road.

Effects of the proposal on landscape character and the quality of the site are discussed in Section 6.2.4 of the Assessment, commencing at paragraph 87. At paragraph 89 the Assessment concludes that:

“89. Though the rural character of the application site as it is at present will change considerably, the proposed development will complement the character and quality of the application site and surrounds....”

Again, given the density of subdivision and residential development proposed at the site and the rural character evident at Ripponvale we question whether the proposed development in the Rural Resource Area (5) will serve to complement the character and quality of the application site and surrounds.

Landscape effects are summarised in Section 6.3 of the Assessment as follows:

*“90. Overall, the rural character of the application site will change from a working farm to a rural living character. Within the immediate rural context, it is considered an appropriate change. This is not seen as adverse as this change is sensitive to the existing landscape character and seeks to retain areas of the application site with high landscape value, including the west slope of the Pisa Range ONL which while included on the Structure Plan is not part of the proposed rezoning.
...”*

Again we question whether “rural living character” will be achieved given the density of subdivision and residential development proposed. Similarly it is questioned whether the subdivision and development enabled by Plan Change 14 is an “appropriate change” that is not “adverse”. We consider that Plan Change 14 would have a significant adverse landscape effect given that 160 allotments are proposed for residential purposes; many of which are more aptly described as “large residential allotments” rather than being “rural lifestyle” in character.

8.1.4 Visual Amenity Effects of Proposal

A Visual Amenity Assessment is presented in Section 6.4 of the Assessment of Landscape and Visual Effects. At paragraph 93 the Assessment confirms that while amenity values encompass a broad range of issues; the focus of the Assessment is visual amenity, which is a measure of the visual quality of a landscape as experienced by people living in, working in or travelling through it.

At paragraph 94 the Assessment considers that, aside from the ONL, the majority of the receiving environment demonstrates a level of character more consistent with a rural character. This is conveyed by an open spaciousness, a general absence of built form, a predominance of pastoral vegetation or exotic shelter species and cultural patterns associated with the rural activity (such as orchards, pastures and agriculture). We concur with this Assessment, noting again that rural lifestyle development is found nearby at Ripponvale Road.

The Assessment advises at paragraph 95 that viewpoints which are representative of the types of views likely to be important in addressing the effects on values identified for this landscape are shown on the Viewpoint Location Map on Sheet 10 of the Graphic Supplement; these viewpoints being depicted in the images on Sheets 11-14 of the Graphic Supplement. The Assessment advises in paragraph 96 that the viewpoints that are most representative of public views of the site are considered to be those from vantage points on the State Highway 8 lookout, Bannockburn Road, State Highway 6, and the Bannockburn Sluicing track.

Viewpoint 1 is located on Ripponvale Road approximately 400 metres south of the site (ie. on the north-south limb of Ripponvale Road). The Assessment notes at paragraph 100 that Ripponvale Road provides access to a number of orchards and dwellings and is regularly used by locals living in the area. Viewpoint 1 is also referred to as “one of the closest views of the application site from a public place” that has been selected for its representation of potential effects on local residents.

The site has frontage to the east-west limb of Ripponvale Road. As previously noted this portion of Ripponvale Road is likely to be used by local residents travelling to and from Cromwell; such that those residents are likely to travel past the site. In these circumstances we find it surprising that no viewpoint photograph or photographs have been provided for the east-west limb of Ripponvale Road along with an assessment of visual effects from such viewpoint(s).

A site visit confirms that the East Gully portion of the site is very prominent in views available from the southern portion of the north-south limb at Ripponvale Road. From this portion of the road (including Viewpoint 4) the view is not constrained by roadside trees (as is Viewpoint 1).

As noted in paragraph 96 of the Assessment, viewpoints most representative of public views include vantage points on State Highway 6. No viewpoint photographs have been provided from State Highway 6 albeit that Viewpoint 2 that is from Ord Road was selected as an “indicative view” from SH6. Development on upper portions of the site will be particularly visible across the open aerodrome and racecourse from State Highway 6 when travelling north between, say, Ord Road and the McNulty Road intersection. No actual viewpoint photograph or photographs have been provided with an assessment of visual effects from such viewpoint(s) from State Highway 6 that is the most frequented public place from which the proposal will be viewed.

It is also noted that public views of the site are likely to be available from the Cromwell Racecourse Recreation Reserve on the south side of Ripponvale Road that is also a public place.

We also note that an unformed length of McFelin Road extends to the northern boundary of the site. Again no viewpoint or assessment of visual effects has been provided with respect to this public place.

We consider that key viewpoints, particularly from Ripponvale Road adjacent to the site and from State Highway 6, have not been described or assessed in the Visual Amenity Assessment. As a consequence we do not consider that the Viewpoints provided represent significant public views of the proposal that will be experienced by people travelling on the east-west limb of Ripponvale Road or on State Highway 6; and in this regard the Assessment is not accepted as being comprehensive.

An Assessment of Visual Effects has been provided for Viewpoints 1-10 as presented in the Assessment. For each viewpoint the Assessment provides a finding with respect to the magnitude of change and with respect to the effects on landscape and visual amenity. These Assessments are helpfully summarised by Mr Espie in the table on page 8 of his peer review report as follows:

| Viewpoint | R&M finding regarding magnitude of change | R&M finding regarding degree of effect on visual amenity |
|-----------|---|--|
| 1 | mod-low | mod-low |
| 2 | mod | mod |
| 3 | mod | mod |
| 4 | low | low |
| 5 | mod | mod |
| 6 | mod | mod |
| 7 | mod | mod |
| 8 | mod | mod |
| 9 | mod | mod |
| 10 | very low | very low |

Mr Espie considers that the Assessment report discussion of effects on views and visual amenity would have been more effective if, in relation to each viewpoint, an assessment was made of the

magnitude of visual change, and then whether the visual change will affect visual amenity in an adverse, neutral or positive way, and to what degree. At paragraph 39 Mr Espie, based on his knowledge of the vicinity and in reliance on the viewpoint photographs, has provided tentative comments with respect to the various viewpoints in a table form. Again it is noted that Mr Espie was not able to visit the site and environs when preparing his peer review report due to the Covid-19 Alert Level 4 lockdown. Mr Espie's summary with respect to Viewpoints 1-10 are as follows:

| Viewpoint | Peer review comment |
|-----------|---|
| 1 | It appears that the parts of the PC14 site that are visible in this view are very largely no-build areas. A small part of upper RL5 appears visible which may lead to visible built form and a decrease in the visual simplicity and naturalness of the slopes but this would be difficult to discern. An adverse effect on visual amenity of a very low degree. |
| 2 | Some visibility of RL3 and RL5 as part of the treed valley floor part of the site. An increase in visual busyness but in a way that ties in relatively well with existing patterns in the landscape. The RL5 area will be seen to decrease simplicity and naturalness of the northeastern gully part of the site (which is within the SAL). The overall scene that is taken in from this viewpoint (and similar ones) is complex. An adverse effect on visual amenity of a moderate-low degree. |
| 3 | Very similar to Viewpoint 2. Some loss of simplicity and naturalness of a midground element. An adverse effect on visual amenity of a moderate-low degree. |
| 4 | It appears that upper parts of RL4 and RL5 may be visible on what are currently open slopes. These activity areas provide for low density rural living such that they will comprise of ample open space. From this viewpoint it appears that any visual change will be hard to discern and an adverse effect on visual amenity will be of a very low degree. |
| 5 | Visibility of the valley-floor activity areas RL1, 2 and 3 will visually tie in well with the existing treed valley floor patterns. RL4 and 5 will be seen to alter the northeastern gully, decreasing the open simplicity of these SAL hill slopes. Again, RL4 and 5 provide for low density rural living with ample open space; therefore, not a particularly built type of visual pattern. Visual amenity will be affected adversely, to a moderate-low degree. |
| 6 | Much of the site is visible in this view but at a considerable distance and as part of a very broad scene. Development provided for by PC14 will increase the visual complexity of the midground/background of the view but at this distance, the change will blend in considerably with its context. An adverse effect on visual amenity of a low degree. |
| 7 | Similar to Viewpoint 6 but less of the site is visible and very little of the activity areas that will provide for development. Any effect on the visual amenity of an observer will be of a very low degree at most. |
| 8 | Similar to Viewpoints 6 and 7 but only particularly small parts of RL5 will be visible and at long distances as part of a complex scene. A very low degree of effect on visual amenity at most. |
| 9 | Much of the site is visible in this view. Development enabled by RL1, 2 and 3 will potentially be discernable but will tie in well with other horizontal valley floor elements such that it accords well with existing patterns. Much of RL5 that spreads up to higher elevations is hidden, thus the hillslopes will remain very largely as they currently are. Again, the site is a small part of a complex scene. Effects on the visual amenity of an observer will be of a low degree. |
| 10 | No development enabled by PC14 will be visible. Visual amenity will not be affected. |

Again it is noted that no viewpoint image or assessment of visual effects has been provided for potential viewpoints on the east-west limb of Ripponvale Road or from State Highway 6, in particular. Viewpoints are generally from further afield; and, in the instance of Viewpoint 10, from a location where development in the Rural Resource Area (5) will simply not be visible due to intervening topography.

Viewpoints 1-10, in summary, confirm that visual effects will be associated, in particular, with residential activity on the upper portions of the RLA 3-5. The number of future dwellings visible from the various viewpoints is not quantified and it is noted that a total allotment yield of 84 lots/dwellings are anticipated across the RLA 3-5 within the site (based on Figure 2 in the ME Consulting Limited report at Appendix G to the request document) albeit that some of the lots/dwellings in the RLA 4 will be on lower parts of the site as shown on the Structure Plan.

The terminology used in the Assessment [and as used in Mr Espie's summary presented above] in assessing the magnitude/degrees of effect on visual amenity is defined in Table 5 at Appendix 1 to the Assessment. We note, in particular, that a Moderate-Low magnitude/degree is defined in Table 5 as follows:

"Minor loss of or modification to one or more key elements, features, and/or characteristics. New elements are not uncharacteristic within the visual environment and do not disturb the pre-development visual amenity."

We question whether providing for a substantial number of allotments and residential activities on the East Gully, the Farmland Terraces and on parts of the West Slope, including on land subject to the SAL notation, are characteristic within this visual environment and do not disturb the pre-development visual amenity of these parts of the site as viewed, say, from Viewpoints 2 and 4, from the east-west limb of Ripponvale Road and from State Highway 6 to the north of the Ord Road intersection.

Visual effects are summarised in Section 6.5 of the Assessment in paragraph 139 as follows:

"139. Overall it is considered that the effects on visual amenity arising from the proposed plan change will be moderate – low in terms of the change to the existing character of the application site in context of the receiving environment. It is considered that the effects of the proposal in the receiving landscape will not be at odds with the existing patterns of development in the surrounding environment and will not represent an adverse change."

At his paragraph 40 Mr Espie advises that he does not have significant disagreement with the ultimate findings of the Assessment report regarding effects on visual amenity in relation to Viewpoints 1-10 albeit that he considers that from some viewpoints there will be adverse effects on visual amenity that range up to a moderate – low degree. It is important to emphasise that Mr Espie finds that there will be adverse effects whereas the Assessment finds that the effects of the proposal will not represent an adverse change.

Again we note that the effects on visual amenity, as presented in the Assessment, does not include any assessment on the effects on visual amenity that will be experienced by those travelling past the site on the east-west limb of Ripponvale Road or on State Highway 6.

8.1.5 Landscape Strategy + Structure Plan

The Landscape Strategy + Structure Plan has been provided with the Assessment of Landscape and Visual Effects. The purpose of this document is not clearly stated in the Assessment. Mr Espie notes at his paragraph 3 that the Landscape Strategy + Structure Plan is primarily a site analysis and design document and therefore is not directly part of the plan change request.

A plan entitled "Planning Context" is presented in the Landscape Strategy + Structure Plan at page 15. The Description which relates to this plan notes that the site is currently zoned as Rural Resource [Area] with an overlay of ONL to the north-west and SAL to the north-east. It notes that

under the current zoning a development could include 29 lots with an average size of 8.2 ha, ranging from 4-16 ha. It is understood that the Planning Context plan depicts such a subdivision.

We simply note that a subdivision as depicted would require resource consent as an unrestricted discretionary activity in terms of Rule 4.7.4(iii)(b) and Rule 4.7.4(i) [due to breach of Rule 4.7.6L(1)(e)] of the Operative District Plan; and it is not certain that consent would be granted to such a subdivision. It is also noted that the Planning Context plan shows a total of 3 lots having frontage to the east-west limb of Ripponvale Road, including an allotment that incorporates much of what is currently proposed as the Horticulture Area outside the Rural Resource Area (5) in Plan Change 14.

The Site Views presented on pages 16-19 of the Landscape Strategy + Structure Plan document are helpful in depicting the landscape within the site. View 05 shows part of the wider catchment from which future development in the RLA 1 in the vicinity of the existing irrigation pond will be visible (ie. from the direction of Cromwell). We also note that View 01 and View 02 are views of the site from the east-west limb of Ripponvale Road that have not been subject to an assessment of visual effects in terms of the Viewpoints discussed in Section 6.4 of the Assessment report.

8.1.6 Landscape and Visual Amenity Effects on Private Properties

The submission by Andrew Grant McFarlane (52/6) states that one only has to see the effect that the “Schooner Development” has had on the Cromwell Basin outlook to envisage what the hillside will become. The Schooner Development is a subdivision that has been consented immediately to the south-west of the Plan Change 14 site, being RC 180121 that was consented on 26 June 2018. That subdivision created 9 lots from a 78 ha site; such lots having an average area of 8.7 hectares and a minimum area of 2.0 ha (5 lots having areas of 2.0 or 2.01 ha). The submitter considers that a main part of Cromwell’s attraction is the landforms that surround it and that these should be preserved and housing development concentrated in the urban area of Cromwell.

The submission by Peter John Mead & Alistair David Stark as Trustees for the McKay Family Trust (60/6) supported by James Dicey (117/27) notes that the house on the submitters’ property enjoys an unrestricted rural view; two prominent features in this view being the mountain backdrop of the Pisa Range and the SAL area in the East Gully on the subject site. The submitters are concerned that the proposal will significantly alter and ruin the submitters’ outlook during the day and at night with lights. Their concern is that their rural outlook will become more urbanised. Again reference is made to the Schooner Development subdivision at Ripponvale Road as an example of what can occur (60/7). The submitters consider that SAL areas are there for a reason; and that no development should be allowed which detracts from our landscape amenity (60/8).

Bob Tovey (85/1) feels that too much of our higher countryside is being cut up and developed when there is plenty of land in the valley floor to still develop; and that RLA 3, RLA 4 and RLA 5 on the north side of the subdivision should not be built on; with the flat land being permitted to be more intensively developed down to 2000m². The submitter considers that the visual impact of a few houses and driveways seems a waste as the visual impact to the whole Ripponvale valley would be great (85/6).

David Garth Stark (82/4) refers to his attendance at several consultation sessions relating to the Cromwell Masterplan [discussed in Part 10.2.4 below] where a number of people opposed new houses being built on the hills surrounding the Cromwell Basin that comprises the visual amenity and sense of open space that is highly valued by the community. The submitter notes that people expressed a preference for a more clustered approach to landscape development where houses were more tightly grouped rather than scattered across a wide area. For this reason, and for efficiency in the provision of services and roading, the submitter opposes the aspects of Plan

Change 14 that facilitate the development of housing any significant distance up the hillsides; and he considers that these parts should be included in the open space area marked ONL on the Structure Plan. In compensation David Garth Stark (82/5) promotes that one of the RLA 4 areas and part of the RLA 3 area could be permitted to be subdivided to a higher density such as the 2000m² minimum lot size that applies to lower parts of the property [in the RLA 1].

Commencing at his paragraph 47 Mr Espie has addressed the issues raised in submissions which he summarises as being, to a large degree, the issue of residential land use spreading uphill from the valley floor onto the hill slopes within the SAL that can be viewed from the flat land to the south of the site. He notes that a resident taking in a favourite view from his or her property is an observer that is particularly sensitive to the effects on visual amenity; and that, when visible, the SAL slopes of the East Gully are currently open and visually simple.

Mr Espie considers that in the relevant views the RLA 4 and RLA 5 development will sit in the lower part of the East Gully, therefore leaving the prominent hillsides unaffected. While effects on the SAL land will not be entirely avoided, Mr Espie considers that the design of Plan Change 14 has considerably mitigated them albeit that [based on the information provided to date by the requestor] it is sometimes difficult to ascertain exactly where activity areas are visible in certain views.

Mr Espie also concurs with the view expressed by one submitter with respect to the need for suitable vegetative treatment of the Ripponvale Road frontage of the site and also vegetation within the Rural Resource Area (5) to appropriately soften built form in a visual sense. Mr Espie agrees at his paragraph 53 that ample and appropriate tree planting throughout the development enabled by Plan Change 14 will be important to its success. He notes that the Amenity Edge provisions fall within the matters over which the Council will retain control in terms of the proposed rules relating to the Rural Resource Area (5).

8.1.7 Conclusion : Landscape and Visual Effects

The Assessment of Landscape and Visual Effects would be materially assisted by a concept plan of the envisaged future subdivision of the site and a visual simulation such as a photomontage showing anticipated built development across the site. Such information would be of particular value given that if Plan Change 14 is approved resource consent must be granted to subsequent subdivision and residential activity enabled by the plan change.

The land to the north of the east-west limb of Ripponvale Road is in the Rural Resource Area and is not subject to the Rural Residential notation. The Rural Residential notation applies to land to the south (opposite the site) and further south on Ripponvale Road. Existing subdivision and development in this locality has a predominantly rural rather than residential character.

The proposal will enable the subdivision and development at the site, comprising up to 160 allotments, to accommodate residential activity. Much of the development can aptly be described as large lot residential rather than rural lifestyle in character. The proposal will have a significant adverse effect in terms of landscape. The Assessment of Visual Amenity Effects is incomplete as no such assessment has been undertaken with respect to public views of the site that are available from the east-west limb of Ripponvale Road and from State Highway 6, in particular. Notwithstanding this the Visual Amenity Landscape Assessment, based on the Viewpoints 1-10 provided, indicates that built development on the upper portions of the site will have an adverse effect in the low-moderate range.

Submitters have expressed concern at the effect of subdivision and development on the upper portions of the site including the effects of lighting at night. There will be an adverse effect on the

SAL resulting from development in the RLA 4 and the RLA 5, in particular, albeit that Mr Espie accepts that such development will leave the prominent hillsides unaffected.

Our overall conclusion is that the proposal will have significant adverse landscape and visual effects and that the subdivision and development enabled by Plan Change 14 will not be consistent with the existing pattern of subdivision and development found in this locality at Ripponvale.

8.2 Effects on Open Space and Recreation

Effects on open space and recreation are addressed in Section G3.0 of the request document.

8.2.1 Open Space

The Structure Plan at Schedule 19.23 makes provision for open space in several forms. An Indicative Open Space and Stormwater Corridor is centrally located within Rural Lifestyle Area 1 with an extension in Rural Lifestyle Area 5 to connect to the ONL area; and this notation also applies to the 6,000m² irrigation dam that is fed by the Ripponvale Irrigation Company Limited water race and that is located in the south-west corner of the site (within Rural Lifestyle Area 2). The Flood Hazard Assessment at Section 1 indicates that the Indicative Open Space and Stormwater Corridor provides for a 20 metre width that will allow a 3 metre wide channel, 0.6 metres deep with 2:1 batters plus 7 metre berms on either side to assist in managing flooding at the site.

Other areas of open space provided on the Structure Plan include the ONL itself where Rule 4.7.6L(1) of the Operative District Plan controls activities including the erection of any structure; and the No Build areas shown on the Structure Plan being areas located on elevated portions of the Rural Lifestyle Area 4 and the Rural Lifestyle Area 5.

A network of roads, footpaths and walking tracks are also proposed across the site as shown on the Circulation Plan at Schedule 19.24. Given that public pedestrian access connections are proposed within the site we also consider that this network of roads, footpaths and walking tracks can be deemed to be part of the provision of open space on the site. We discuss the network of footpaths and walking tracks further below under Part 8.2.2 Recreation.

While open space is to be provided on the site as described in the previous paragraphs; the effect of Plan Change 14 will, overall, be to substantially reduce the openness of the site. This is because up to 160 allotments containing residential activity (with associated built development and plantings) are to be provided across the site within the Residential Lifestyle Areas 1-5 as depicted on the Structure Plan. Residential activity, on lots of varying sizes, will occur on the central portion of the site that is not subject to the Horticulture Area and ONL notations; albeit that built development is not to be permitted on those areas identified as Indicative Open Space and Stormwater Corridor and No Build on the Structure Plan. While we acknowledge that some provision is made for open space on the Structure Plan we consider, overall, that the proposal will have an adverse effect in terms of the openness of the site.

The net contribution to open space resulting from the ONL is limited, given that most of the ONL is currently subject to this notation and Rule 4.7.6L(1) in terms of the Operative District Plan.

8.2.2 Recreation

The request document at Section G3.0 notes that the plan change provides an opportunity to provide for the social wellbeing of the community and future residents within the Rural Resource Area (5) through providing public pedestrian access connections for recreation purposes over the rezoned land and over the Pisa Range ONL which the requestor considers has high natural value and opportunities for recreation activity.

The Circulation Plan at Schedule 19.24 identifies the location of footpaths adjacent to roads within the Rural Lifestyle Areas; and also provides for walking tracks to be established throughout the Rural Lifestyle Areas and the ONL. These walking tracks coincide with or provide a connection to the Indicative Open Space and Stormwater Corridor shown on the Structure Plan at Schedule 19.23.

As noted above Section G3.0 of the request document refers to “providing public pedestrian access” and proposed Rule 4.7.2(ii)(a)(vi) that requires that subdivision be undertaken in accordance with the Structure Plan also refers to such “public pedestrian access connections”. It is unclear whether the walking tracks, as identified on the Circulation Plan, are for pedestrian purposes only or may also be utilised by cyclists. We anticipate that this matter will be clarified at the hearing.

It is noted that the Circulation Plan bears the following note:

“Please note the walking tracks not within the ONL land are shown to generally align with existing/former water races on site. These are shown indicatively and require ground truthing at the time of subdivision and development.”

It is noted that the locations of the walking tracks as shown on the Circulation Plan are indicative only; and it is also unclear whether locating a walking track on the alignment of an existing water race creates any issues with respect to the maintenance of these races. Again the latter is a matter which we anticipate will be clarified by the requestor at the hearing.

The submissions by Connor William Atherton (3/1) and others supported by the Cromwell Mountain Bike Club (116.2) express conditional support for Plan Change 14 under the following circumstances:

- *The proposed recreation area be made available for mountain bike trail development by [Cromwell Mountain Bike Club (Cromtbc)]*
- *We aren't restricted to simply using existing trails on the land for mountain bike use.*
- *Cromtbc is allowed the space to design and build multiple trails in the recreational area.*
- *The trails built by Cromtbc will be accessible by anyone wishes to do so, not just Shannon Farm residents.*

The “proposed recreation area” referred to in the submission is understood to be the ONL. As noted above it is unclear whether the walking tracks proposed in the ONL are to be available for the use of both pedestrians and cyclists and this matter needs to be clarified.

Rule 4.7.6L(1)(b), that relates to ONLs, stipulates that no activity shall have the effect of cutting new tracks. A breach of Rule 4.7.6L(1)(b) is an unrestricted discretionary activity in terms of Rule 4.7.4(i) of the Operative District Plan. Constructing walking tracks within the ONL, as shown on the Circulation Plan that forms part of Plan Change 14, would require land use consent in terms of Rule 4.7.4(i) as Rule 4.7.6L(1)(b) of the Operative District Plan would be breached by cutting any new tracks on the ONL.

The “mountain bike trail development” including allowance of the Cromwell Mountain Bike Club “to design and build multiple trails in the recreational area” as promoted in the submission by Connor William Atherton (3/1) and others and supported by the Cromwell Mountain Bike Club (116.2) would require land use consent (or consents) in terms of Rule 4.7.4(i) of the Operative District Plan. This is acknowledged in the further submission by the Cromwell Mountain Bike

Club (116/2) that considers that the appropriate mechanism to allow the building of such trails “is amendment to Standard [Rule] 4.7.6L to provide that cutting of mountain bike trails and tracks, including associated earthworks, within the Outstanding Natural Landscape area as identified in the structure plan in Schedule 19.23 is a permitted or controlled activity, or a similar amendment with this effect.”

Such an amendment is beyond the scope of Plan Change 14 that proposes no change to Rule 4.7.6L(1). Furthermore it is unclear whether the walking tracks proposed are to be available to mountain bike users. We also consider that providing for the cutting of mountain bike trails and tracks across the ONL, as proposed by the submitter and further submitter, may have significant adverse effects on the ONL that are not assessed in the request documents or supporting technical reports relating to Plan Change 14.

Gordon McAlpine Stewart (83/4) considers that the proposal to place the hill block into a “public reserve” is meritorious and will be much appreciated by future generations. We are not aware of any suggestion in the request document or supporting technical reports to the effect that the hill block (which we understand is the ONL) is to be put into a public reserve. It is unclear whether Connor William Atherton (3/1) and others supported by Cromwell Mountain Bike Club (116/2) are also under this misapprehension given that that submission refers to a “proposed recreation area”.

In our view Plan Change 14 will have a positive effect in terms of enhanced recreational opportunities resulting from the provision to be made for footpaths along roads and, in particular, the provision of walking tracks as shown on the Circulation Plan. We consider this to be a positive effect of the proposal.

8.3 Transportation Effects

The requestor has provided a Transportation Assessment prepared by Carriageway Consulting Limited dated 23 May 2019 and a subsequent Response to Request for Further Information (RFI) also prepared by Carriageway Consulting Limited and dated 23 July 2019. The Transportation Assessment and the RFI are presented at Appendix J to the request document; and transportation effects are also discussed at Section G4.0 of the request document. It should be noted that technical details, as presented in Section G4.0 of the request document, are derived from the original Transportation Assessment; and that amended figures are now contained in the RFI.

The transportation reports for Plan Change 14 have been reviewed by Mr Antoni Facey of Avanzar Consulting Limited. A memo containing Mr Facey’s comments dated 21 April 2020 is attached to this report at **Appendix 3** for convenient reference.

The transportation reports for Plan Change 14 were previously subject to a peer review prepared by Mr Metherell of Stantec that is dated 9 August 2019. To date it does not appear that Carriageway Consulting has had the opportunity to respond to the contents of this peer review. A copy of Mr Metherell’s peer review is attached at **Appendix 4**.

8.3.1 Transport Network

The Structure Plan at Schedule 19.23 shows one road access point from the site onto Ripponvale Road. Ripponvale Road is classified as a Rural Collector Road in Schedule 19.7 of the Operative District Plan. The site access is located approximately 1.14 kilometres to the west of the nearest State Highway 6/Ripponvale Road intersection. State Highway 6 links Queenstown (to the west) with Wanaka and the West Coast (to the north); and is a Rural State Highway and Arterial Road as listed in Schedule 19.7 of the Operative District Plan.

Ripponvale Road has an inverted “L” configuration. The site has frontage to the east-west limb of the “L” and the north-south limb of the “L” provides an alternative connection to State Highway 6 to the south. Ripponvale Road is subject to a 100 kph speed limit albeit that a 35 kph advisory sign applies to the sharp bend in Ripponvale Road adjacent to the site (where the east-west limb connects to the north-south limb of Ripponvale Road). The east-west section of Ripponvale Road has a carriageway seal width of 5.8 metres with a centreline and no edge line markings. Swales and grassed verges are present on either side of the road.

The north-south limb of Ripponvale Road has a 5.5 metre sealed carriageway with a centreline and no edge line markings. Again swales and grassed verges are provided adjacent to the carriageway.

Traffic movements from the site to Cromwell are likely to be via the State Highway 6/Ripponvale Road intersection to the east of the site; and then via State Highway 6 and State Highway 8B to the Cromwell Town Centre or via State Highway 6 and McNulty Road to the Cromwell Industrial Area. An alternative route would be via Ord Road to McNulty Road. The State Highway 6/Ripponvale Road intersection to the east of the site is also likely to be the primary route towards Wanaka and Alexandra.

For traffic travelling towards Queenstown likely routes are the State Highway 6/Ripponvale Road intersection to the east of the site or alternatively the State Highway 6/Ripponvale Road intersection to the south.

There is no infrastructure provided for walking and cycling on the road network in the immediate vicinity of the site. A 1.5 metre wide sealed walkway has been provided between State Highway 6 and Waenga Drive to the north of the eastern State Highway 6/Ripponvale Road intersection; such walkway being approximately 400 metres to the north of Ripponvale Road opposite the Ripponburn Hospital & Home/Ripponburn Lifestyle Village.

It is acknowledged that the roading network is described in further detail in the Transportation Assessment and in the RFI.

8.3.2 Traffic Flow

Section 4.1 of the Transportation Assessment describes current traffic flows. The RFI (at Section 6.1.1) confirms that the traffic counts on State Highway 6 reproduced in the Transportation Assessment were recorded at a counter located on State Highway 6 to the west of Pearson Road. Section 6.2.3 of the RFI confirms that the average recorded traffic flows for 2018 were as follows:

- Morning peak hour, 7am to 8am: 335 vehicles southbound, 87 vehicles northbound; and
- Evening peak hour, 5pm to 6pm: 214 vehicles southbound, 373 vehicles northbound

The above demonstrates the “tidal flow” of traffic on State Highway 6, towards the direction of Queenstown in the morning and away from Queenstown in the evening. In Section 4.1.10 of the Transportation Assessment the observation is made that Ripponvale Road is lightly trafficked with peak hour flows of less than 30 vehicles (two way); which suggests daily volumes of no more than 300 vehicle movements.

The RFI in Section 6.3.1 advises that the MobileRoad website notes the following traffic flows on Ripponvale Road and Ord Road – Ripponvale Road (both limbs) 250 vehicles per day; and Ord Road 370 vehicles per day. The RFI advises that since the peak hour volume on a road is typically expected to be around 10% to 15% of the daily flow, that these daily volumes indicate the following peak hour flows:

- Ripponvale Road (east): 25 to 37 vehicles (two-way);
- Ripponvale Road (west): 25 to 37 vehicles (two-way); and
- Ord Road: 37 to 56 vehicles (two-way).

Carriageway Consulting advises at Section 6.3.3 of the RFI that its own survey of Ripponvale Road (east-west) showed a peak hour volume of 25-28 vehicles (two-way) which lies within the expected range as indicated above.

In Section 6.3.4 the RFI makes the following observation:

“These volumes equate to less than one vehicle movement per minute showing that they are very lightly trafficked. We also note that Ord Road serves the racecourse and the aerodrome, and traffic volumes are therefore higher than might be expected if the road simply served the rural residential development in the immediate area.”

The main entrance to the Cromwell Racecourse is off the east-west limb of Ripponvale Road opposite the proposed Horticulture Area on the site. We anticipate that traffic movements on Ripponvale Road are likely to be heavy when the Cromwell Racecourse is hosting race meetings. The racecourse is also used as a territorial army office and hosts large events such as Relay for Life. It is anticipated that some access to the racecourse land for other equestrian activities may well be achieved from Ord Road. We also note that the Heliview Flights scenic flight operation and several hangar buildings are accessed from Ord Road; and that Ord Road provides access to the substantial 45 South packhouse operation.

Mr Facey has noted that the Cromwell Racecourse may well host additional race meetings in future as a consequence of the Government’s current review of racecourses in New Zealand.

8.3.3 Traffic Generation

In the RFI Carriageway Consulting has adopted a rate of 8 vehicle movements per day per dwelling within the proposed Rural Resource Area (5). Given that a maximum of 160 dwellings are to be enabled for this equates to 1280 vehicle movements per day ($160 \times 8 = 1280$).

The RFI responds to comments made by Stantec following Stantec’s initial review of the Transportation Assessment; and again we note that a later peer review dated 9 August 2019 has been prepared by Mr Metherell of Stantec.

In Section 11.1.1 of the RFI Carriageway Consulting considers that the bulk of drivers will use the east-west limb of Ripponvale Road to travel to Queenstown via State Highway 6 rather than using the north-south limb. This is due to higher travel speeds being available on the state highway when compared to the north-south limb of Ripponvale Road and the RFI notes that the difference in travel time between the two routes is a matter of a few seconds and is insignificant.

Mr Metherell disagrees with the RFI and he considers, due to travel distance and time, that the north-south limb of Ripponvale Road will be “well utilised” by residents of the RuRA(5) travelling to and from Queenstown. Mr Metherell also notes that the southern intersection of Ripponvale Road and State Highway 6 has some existing sightline deficiencies.

Commencing at Section 11.3.1 of the RFI Carriageway Consulting has also responded to Stantec’s observation that an assumption has been made that all traffic to and from Cromwell will be via SH 8B. The RFI comments that SH 8B is by far the shortest route by distance to the town centre and is a slightly shorter route by distance to Cromwell College. Furthermore faster speeds result in a reduced travel time by utilising SH 8B. The RFI notes that the route via McNulty Road and Gair

Avenue is very slightly shorter by distance to the primary school, but when travel speeds are taken into account, the SH 8B route is faster. In Section 11.3.3 the RFI comments:

“On this basis, we do not expect that McNulty Road will be well-used as a route by traffic associated with the plan change. If it was to be used, then traffic flows will be very low and highly unlikely to materially affect the operation of the intersection.”

It is unclear whether this reference to the use of McNulty Road is in the context of travel to the primary school only, but to traffic in general. Again we note that McNulty Road provides access to the industrial areas of Cromwell and it is therefore anticipated that at least some residents of the Plan Change 14 site would utilise State Highway 6 and McNulty Road to achieve access to their employment in this locality.

It is clear that the 1.14 kilometres of Ripponvale Road between the site entrance and State Highway 6 will carry the majority of the traffic generated by the occupiers of dwellings in the proposed Rural Resource Area (5).

8.3.4 Ripponvale Road Upgrading

In Section 15.1.3 of the RFI Carriageway Consulting advises that the existing formation of Ripponvale Road is able to accommodate the expected traffic flows. As such it is not considered that a significant adverse effect would arise if it was to remain in its current width even with the plan change area being fully developed. Consequently Carriageway Consulting does not consider that widening of Ripponvale Road needs to be specified as a rule in the plan change provisions. Furthermore, in Section 15.1.4, Carriageway Consulting comments that the matter of widening Ripponvale Road can be addressed at the time of subdivision.

Carl Michael McNulty (55/1) considers that it would be good to have the section of Ripponvale Road down to State Highway 6 either widened or resealed with new camber.

Richard Murray Wallis & Catherine Mary Woods (87/3) have noted that there are significant flows of traffic and vehicles parking on the road during the fruit season/holiday period. The submitters also refer to cyclist groups who use Ripponvale Road to do laps during the summer. The submitters believe that the section of Ripponvale Road from the site to State Highway 6 should be improved to allow for the additional traffic anticipated on Ripponvale Road as a consequence of Plan Change 14 in combination from the current residential population at Ripponvale.

Mr Facey of Avanzar Consulting Limited has noted that the development will add between 960 and 1280 vehicles per day to Ripponvale Road in addition to the current traffic volume on Ripponvale Road in the vicinity of the development (say 300 vpd). Furthermore traffic flows on Ripponvale Road are seasonal depending on whether work is required on the cherry orchards in this vicinity. Mr Facey observes that this would result in a total of up to 1500 vehicles per day on Ripponvale Road if all travelled on the same link. Given that the peak hour traffic flows are typically 10% of the daily flow, peak hour flow would be about 150 vehicles per hour; and Mr Facey advises that this is well within the capacity of the existing road way.

Mr Facey has noted that Ripponvale Road is expected to become a collector road [in terms of its performance] with a traffic volume of somewhere between 1000-1500 as a result of the proposed development. He considers that Ripponvale Road will require an upgrade to the road to accommodate the additional traffic and increased level in the roading hierarchy.

Mr Facey notes that NZS 4404:2010 “Land Development and Subdivision Infrastructure” gives appropriate standards for a collector road in a rural area, in Figure E8 of Table 3.2. Mr Facey

considers that some of these standards are appropriate for application in Ripponvale Road as a result of the Plan Change 14 development. He advises that the Standard recommends that the movement lane should be 5.5 – 5.7 metres in width with 1.0 metre wide sealed shoulders. He considers this to be an appropriate minimum standard for traffic accessing the development.

We understand the situation to be that while Ripponvale Road is classified as a “Rural Collector Road” in Schedule 19.7 of the Operative District Plan, it has not been constructed to a collector road standard in terms of NZS 4404:2010. In our view it would be appropriate for Ripponvale Road to be upgraded in conjunction with any subdivision of the subject site (as provided for in proposed Plan Change 14); and for this matter to be explicitly provided for in a rule in the event that Plan Change 14 proceeds. Such upgrading will be required, in particular, with respect to the 1.14 kilometres of Ripponvale Road between the site entrance and the State Highway 6 intersection with the east-west limb of Ripponvale Road. Mr Metherell has also noted that some improvements may also be required to the north-south limb of Ripponvale Road.

8.3.5 Non-Car Modes of Travel

As previously noted there is no infrastructure provided for walking and cycling in the immediate vicinity of the site. The Transportation Assessment notes at Section 3.2.1 that the low traffic flows on Ripponvale Road mean that cyclists can safely share the carriageway with motorised vehicles and that the wide grassed berms can be used by pedestrians.

The Transportation Assessment contains a contradiction. At Section 7.2.1 the Assessment acknowledges that the subdivision is likely to result in increased levels of walking and cycling in the immediate area. The Assessment goes on to state that these will only be moderate “... because of the lack of destinations within the viable walking/cycling distance, meaning that most walking/cycling will occur for recreational use...” At Section 8.2.3 the Assessment states “... The location of the plan change area is around 2.8 km from Cromwell Town Centre meaning that it is within a practical cycling distance.” Accordingly it is understood that the Cromwell Town Centre is a destination that is within a viable cycling distance of the site.

In Section 13.1.3 of the RFI Carriageway Consulting advises that:

“We do not consider that additional infrastructure is needed on Ripponvale Road for cyclists. None is signalled within the Council’s Code of Practice for rural areas, and in practice we consider that the extent of cycling will be very limited due to the relatively small scale of development.”

Section 13.1.4 of the RFI notes that notwithstanding the above statement this is a matter that can be considered further at the time when subdivision consent is sought. The RFI also observes that there are no impediments to the provision of additional infrastructure if necessary due to the wide road reserve at Ripponvale Road and the flat/straight nature of the roading network.

Mr Facey notes that NZS 4404:2010 recommends that cyclists should ride on the sealed shoulder of collector roads; and that a footpath should be constructed on each side of Ripponvale Road. In this case he recommends however that a single footpath should be constructed that is 1.5 metres in width on the northern side of Ripponvale Road only.

Bob Tovey (85/5) considers that a cycle path/footpath should be incorporated into the plan so that this joins the area to the town centre without people having to ride along Ripponvale Road, which the submitter considers will obviously be a lot busier with this new development. The submitter considers that such provision will enable children to ride to school etc. through greenways [within Cromwell].

While Section 13.1.3 of the RFI (quoted above) advises that no provision for cyclists is signalled for rural areas; in this instance 160 dwellings are to be provided for in a concentrated residential development within the Rural Resource Area. While the RFI anticipates that cycling “will be very limited due to the relatively small scale of development” the submissions by Connor William Atherton (3/1) and others supported by Cromwell Mountain Bike Club (116/2) indicate that mountain bike use is anticipated at the site. It is anticipated that some of these mountain bikers may well cycle to the site from Cromwell. Furthermore the Cromwell Town Centre is within a practical cycling distance of the Plan Change 14 site.

Having regard to the above matters we consider that provision should explicitly be made for cyclists and pedestrians to share a footpath on the east-west limb of Ripponvale Road between the site entrance and the State Highway 6/Ripponvale Road intersection.

Mr Facey has noted that to provide an adequate pedestrian and cycle link between the development and the Cromwell township, a crossing of State Highway 6 will be required. As previously noted a sealed walkway exists between State Highway 6 and Waenga Drive about 400 metres to the north of the Ripponvale Road intersection (opposite the Ripponburn Hospital & Home/Ripponvale Lifestyle Village). Mr Facey notes that this would appear to be a safe and convenient location for pedestrians and cyclists to cross State Highway 6; and he recommends that a pedestrian footpath should be constructed between Ripponvale Road and the Ripponburn Lifestyle Village along with a formal crossing point for cyclists and pedestrians to be established adjacent to the village.

Our conclusion is that if Plan Change 14 is approved a rule should be inserted into the plan change to the effect that a pedestrian/cycle shared footpath be provided on the north side of the east-west limb of Ripponvale Road to provide access between the site entrance and the State Highway 6 intersection; and that a pedestrian/cycle footpath be provided to the north adjacent to State Highway 6 to connect to a crossing point outside the Ripponburn Lifestyle Village that in turn will connect to the sealed walkway to Waenga Drive in Cromwell.

In Section 4.2.2 the Transportation Assessment notes that there are no regular bus services that pass the site. The Transportation Assessment also notes that although several longer-distance services pass nearby on the highway, there are no bus stops provided within walking distance. It is unclear whether the reference to “regular bus services” also refers to school bus services; and no explicit reference to school bus services is mentioned in the Transportation Assessment or the RFI. If no school bus service is available at Ripponvale this would serve to reinforce the desirability of making provision for a shared footpath for pedestrians and cyclists on the verge of Ripponvale Road and on State Highway 6, as discussed above.

Providing safe pedestrian/cycle access from the Plan Change 14 site across State Highway 6 to the Cromwell Town Centre is consistent with the submissions by the NZ Transport Agency (65/13) supported by James Dicey (117/29), Horticulture New Zealand (130/5) and Kate & Rob Wardle (171.3/1); the Otago Regional Council (67/18) supported by James Dicey (117/29), Horticulture New Zealand (130/6), the NZ Transport Agency (149/1) and Public Health South (155/7); and Public Health South (68/7) supported by Horticulture New Zealand (130/7) and the NZ Transport Agency (149/2).

Public Health South (68/8) supported by Horticulture New Zealand (130/7) and opposed by the NZ Transport Agency (149/2) recommends the inclusion of an underpass from Ripponvale Road under State Highway 6 to allow a safe access for walkers and cyclists into Cromwell and to reduce the severance effect.

We note that provision for an underpass was made in the context of Plan Change 12 (Wooving Tree) that became operative on 20 February 2019. Rule 7.3.6(vi)(e) and Rule 8.3.6(xii)(b) of the Operative District Plan (both introduced by Plan Change 12) restricts new development on part of the Wooving Tree land until a pedestrian/cyclist underpass (incorporated into a roundabout) is completed and operational. We note that this roundabout is to serve the residential areas to the north of State Highway 8B; and we anticipate that the number of residential properties in that locality will substantially exceed the number of residential properties intended to be provided in the context of Plan Change 14. Accordingly we have not recommended the provision of an underpass under State Highway 6 for walkers and cyclists in the context of Plan Change 14.

8.3.6 Intersections

The effects of the additional traffic generated by up to 160 dwellings on the closest State Highway 6/Ripponvale Road intersection is assessed in Section 7 of the Transportation Assessment; and it is concluded at Section 7.1.6 that full development of the plan change site can easily be accommodated on the road network.

Intersection capacity is also addressed in Section 12 of the RFI. We note, in particular, that this analysis addresses all local intersections likely to be affected by increased traffic flows, including the intersection of State Highway 6 with the east-west limb of Ripponvale Road; the State Highway 6/State Highway 8B intersection; and the intersection of State Highway 6 and the north-south limb of Ripponvale Road and Pearson Road. At Section 12.2.7 the RFI concludes that the intersections continue to perform well in terms of this analysis and that the difference in queues and delays due to the plan change related traffic is very small. Mr Facey has commented that:

“Analysis of the two Ripponvale Road/SH 6 intersections shows that there is considerable capacity still within the intersections in the future with a high traffic growth rate and the proposed development traffic added. Therefore, it is not reasonable to recommend any intersection upgrades for capacity reasons ...”

Mr Metherell in his peer review dated 9 August 2019 has suggested, when addressing intersection capacity, that consideration should be given to a scenario where Plan Change 13 traffic is also present. We note in this context that Commissioners have declined Plan Change 13; and that the Plan Change 13 decision is subject to appeal. Given this situation we do not consider it appropriate for the combined effects of Plan Change 13 and Plan Change 14 on intersection capacity to be assessed.

The submission by the NZ Transport Agency (65/8) supported by James Dicey (117/29), Horticulture New Zealand (130/5), Public Health South (155/4) and Kate & Rob Wardle (171.3/1) observes that Plan Change 14 will increase traffic volumes entering/exiting State Highway 6 and would require the appropriate “safe systems upgrades” to intersections with State Highway 6 (Ripponvale Road and Ord Road). It is unclear what these “safe systems upgrades to intersections” would entail given that the intersection of the east-west limb of Ripponvale Road with State Highway 6 will perform well with the additional traffic (as stated in the RFI) and as considerable capacity exists at the intersections with State Highway 6 (as observed by Mr Facey).

Mr Facey has also noted that the Ord Road intersection is unlikely to be used by traffic generated from the Plan Change 14 to any great extent; and in his opinion both Ripponvale Road intersections are the most logical routes for traffic to move to and from the development. In these circumstances it is unclear why any upgrading of the Ord Road intersection with State Highway 6 would be required.

Our conclusion is that no upgrading of the intersections of Ripponvale Road with State Highway 6 or of Ord Road with State Highway 6 is necessary if Plan Change 14 proceeds.

8.3.7 Connection to McFelin Road

The submission by Daniel Scheibmair (74/1) has noted that Schedule 19.24 [the Circulation Plan] depicts a “Minor Road” extending to the northern boundary of the site that connects to the paper road end of McFelin Road. This submitter opposes any such connection and promotes that Schedule 19.24 be amended accordingly (with potentially an additional clause to Plan Change 14 to the effect that a through road connecting Ripponvale Road to Burn Cottage Road via McFelin Road cannot ever be formed).

Lindsay Charles Scott (75/1) supports Plan Change 14 but would like to see the Council make a determined effort to open the paper road over to McFelin Road.

The submission by Gordon McAlpine Stewart (83/1) has also noted the relationship of the Plan Change 14 site to the paper road extension of McFelin Road and the submitter considers that public access, at least for walking, biking or riding, should be granted to this so that in the future a trail may be formed linking with the formed part of McFelin Road.

The potential connection to McFelin Road has not been explicitly addressed in the Transportation Assessment or the RFI. Mr Facey agrees with the paper road provides potential access opportunities in the future and he considers that a link from the internal roading network [as shown in the Circulation Plan at Schedule 19.24] to the McFelin Road paper road on the site boundary should be created. Mr Facey suggests a practical link be provided that has a reserve width of 15 metres suitable for a trafficable road if required in the future to protect future network options. In the meantime he observes that such a connection would provide for potential recreational usage from the new development as a walking and cycling track for residents of the development as well as others if the McFelin Road paper road was upgraded to allow this.

The road connection to the northern boundary (as shown on the Circulation Plan) creates the opportunity for walking, cycling or riding between Ripponvale Road and Burn Cottage Road (via McFelin Road, part formed). We consider that this is a positive aspect of the proposal which creates the opportunity for a circuit to be created for the benefit of recreational users. Such provision would also be consistent with the interests of those submitters who have promoted mountain bike use on the ONL area within the site.

We note that the Council, as the roading authority, would be required to approve any opening up of the unformed legal road portion of McFelin Road to facilitate the movement of vehicular traffic from the Plan Change 14 site to Burn Cottage Road via McFelin Road. Again we note that such an arrangement is not referred to in the request document or the supporting Transportation Assessment/RFI. Connection at the northern boundary would therefore simply future proof the proposal by creating the potential for such a link to be established in future, if needed.

8.3.8 Roading Design

The Circulation Plan at Schedule 19.24 provides for a single point of access onto Ripponvale Road; with the Major Road within the site to be a loop road. Mr Metherell in Section 5.1 of his peer review has advised that the use of a single access has the potential to create resilience concerns for a development of the scale proposed. He observes that if, for example, the main access road is shut off for emergency or repair, there are no other opportunities to access the wider roading network. Mr Metherell has also noted that the Council’s roading standards suggest a cul-de-sac should provide access for up to 25 [sic – 20] dwellings only. While not explicitly addressed

in his report Mr Facey has raised in discussion with us the potential for a second access point to be created to Ripponvale Road.

Providing a second access point to Ripponvale Road would provide a second access option that would be available to serve the RuRA(5). The Horticulture Area has frontage to Ripponvale Road and it is anticipated that some direct orchard access may be provided from Ripponvale Road to the Horticulture Area. It may be that provision could be made for a secondary access from the Rural Resource Area (5) through the Horticulture Area to provide secondary access for residents in the event of an emergency. We anticipate that the requestor will address this further at the hearing.

Bob Tovey (85/4) considers that roads within the subdivision need to be wide enough for a car to be parked on each side and for traffic to be able to flow unlike Summerfields Estate [in Cromwell].

8.3.9 Conclusion : Transportation

The Transportation Assessment at Section 9.7 concludes that the plan change request can be supported from a traffic and transportation perspective; and that there are no traffic and transportation reasons why Plan Change 14 could not be approved. Mr Facey has concluded that the traffic and transport effects of granting the plan change application will be no more than minor with appropriate conditions. Those conditions relate to upgrading the east-west portion of Ripponvale Road between the site entrance and State Highway 6; and making provision for pedestrian/cycle traffic on the north side of the east-west limb of Ripponvale Road and along State Highway 6 to connect to a formal crossing point for cyclists and pedestrians adjacent to the Ripponburn Lifestyle Village on State Highway 6. We adopt Mr Facey's conclusion with respect to the transportation effects of Plan Change 14.

8.4 Effects on Service Infrastructure

An Infrastructure Report prepared by Paterson Pitts Limited Partnership dated 20 May 2019 is presented at Appendix F to the request document. Effects on service infrastructure are also addressed in Section G5.0 of that document. On 20 April 2020 we received comments from Mr Quinton Penniall in response to the Infrastructure Report; and these comments have informed our report. A copy of Mr Penniall's comments are attached at **Appendix 5** to this report. Attached to the Infrastructure Report at Appendix C and Appendix D are Wastewater and Water Impact Assessments prepared by Mott MacDonald, both reports being dated 10 September 2018.

8.4.1 Water Supply

The Infrastructure Report notes that the Water Impact Assessment commissioned by Mott MacDonald NZ Limited shows, through computer modelling, that the development can be adequately serviced without adversely affecting the existing Cromwell Town network reticulation.

The Infrastructure Report advises that the development will need to be connected to the Cromwell reticulation by a new 150mm watermain along Ripponvale Road to connect to the existing 200mm watermain at Waenga Drive in Cromwell. It is understood that there is sufficient capacity and pressure available to meet the anticipated demand up to an elevation of 250 metres above sea level; and to provide such service above this level on-pumping to a 90m³ reservoir located on the upper part of the site would be required. The Mott MacDonald report notes that the minimum elevation of development is 225 metres and that the maximum elevation of development is 440 metres. The 250 masl constraint would therefore not apply to development on the lower portions of the site towards Ripponvale Road.

The Infrastructure Report anticipates that the smaller lots within Rural Lifestyle Areas 1 and 2 will be serviced to Fire and Emergency New Zealand's (FENZ) SNZ PAS 4509:2008 standard requirements being an "on demand" high pressure fully reticulated service. The Infrastructure

Report anticipates that the larger lots [ie. 4000m²+] within Rural Lifestyle Areas 3-5 on the upper part of the site can be serviced to a rural supply standard with firefighting to FENZ's requirements for a rural dwelling ie. individual 30m³ storage tanks with FENZ compatible couplings within 90 metres of the dwelling, installed by the lot owner at the time of building a dwelling.

Final design decisions on the configuration of the water reticulation within the development will be made at the subdivision stage.

Mr Penniall has confirmed that in principle the development can be serviced from the Cromwell Town water supply. He advises that further modelling is required to address which zone the development could be served from. Mr Penniall advises that final design decisions for the water reticulation and level of service provided outside Cromwell's water supply boundaries will be made at the subdivision stage should the plan change progress.

Richard Murray Wallis & Catherine Mary Woods (87/5) consider given the significant number of sections to be created Plan Change 14, if approved, that a firefighting plan for hydrants should be allowed for in the subdivision. Sufficient pressure is proposed in the water network to provide for fire hydrants on the lower portions of the subdivision (where most residential activities are anticipated).

Fire and Emergency New Zealand (24/4) supported by Public Health South (155/1) advises that the provision of adequate firefighting water supply and firefighting access is critical. It is important to FENZ that any new dwelling or land use that does not have access to a reticulated water supply has access to an adequate firefighting water supply of some kind. FENZ considers that the best way to provide a consistent approach to mitigating the actual and potential effects of fire across the District is to include specific standards in District Plans. Accordingly the submitter promotes that Rule 4.7.2(ii)(a)(vi) is amended to add the following item that an application for resource consent for subdivision must provide:

- *A water supply connection to newly created lots or dwellings, that complies with the provisions set out in the New Zealand Fire Service Firefighting Code of Practice SNZ PAS 4509:2008.*

We anticipate that the requestor will respond to this suggestion at the hearing. Such an amendment appears appropriate given that residential activities on upper parts of the site are likely to rely on water tanks for a fire fighting water supply.

The provision promoted by FENZ would appear to satisfy the concerns of David James Griffin (29/4) supported by James Dicey (117/24) with respect to not having enough water in tanks to resolve the situation if an emergency such as a fire were to occur.

8.4.2 Wastewater

The Infrastructure Report observes that the Wastewater Assessment commissioned from Mott MacDonald NZ Limited has concluded, based on computer modelling, that the downstream pipework reticulation has sufficient capacity to cope with the wastewater flows from the development.

The Infrastructure Report confirms that there are three options outlined in the Mott MacDonald report to connect to the Cromwell wastewater reticulation. Two of these are pressurised options and one is a gravity option. These options are as follows:

- The development discharges into a pump station which pumps into the Cromwell reticulation via the existing 50mm rising main in Ripponvale Road.

- As above, but a new 50mm rising main is constructed down Ripponvale Road.
- A new 150mm gravity only connection is constructed down Ripponvale Road.

Each option provides for a connection to the Council's existing wastewater reticulation at Waenga Drive in Cromwell.

The request document confirms that the wastewater infrastructure will be constructed in accordance with Council's Code of Practice for Subdivision prior to assets being vested with Council thereby ensuring that new infrastructure will function to the intended level of service to minimise maintenance and operational costs.

The Infrastructure Report advises that within the development itself it is anticipated that there will be a combination of gravity wastewater reticulation for the smaller lots on the flatter part of the site within Rural Lifestyle Areas 1 & 2 and a "distributed" pumped supply for the larger lots on the higher parts of the site within Rural Lifestyle Areas 3-5. The Infrastructure Report advises that "distributor" systems utilise individual household wet wells with macerating pumps, pumping into a smaller diameter common rising main. The Infrastructure Report advises that such systems are now very common and enable reticulated sewage to difficult sites, no matter the terrain, slope, environmental sensitivities or complex topography. The Infrastructure Report observes that it is possible that the entire development will be serviced by a "distributor" scheme.

The Infrastructure Report advises that it may also be feasible for some of the larger more remote lots in the Rural Lifestyle Area 5 to dispose of wastewater on-site, subject to meeting the requirements of AS/NZS 1547:2012.

Mr Penniall notes that in principle Cromwell's reticulated wastewater network has sufficient capacity to accept the demand from up to 160 lots as proposed. He confirms that the Council's preference is for the system to be gravity system with larger lots potentially disposing of wastewater on-site. He notes that the modelling report (of Mott MacDonald) is high level and as indicated in the Infrastructure Report final design decisions will be made at the subdivision stage should the plan change progress.

8.4.3 Stormwater

The Infrastructure Report confirms that test pits and soakage (permeability) tests have been undertaken over the site. The Request Document confirms that soakage tests and test pitting show that the site is subject to highly variable sub soil conditions and permeability. Due to the large size of the allotments the Infrastructure Report advises that normal methods of stormwater disposal for a rural subdivision are considered to be appropriate.

The Infrastructure Report confirms that stormwater discharge from road carriageways can be disposed of by the usual methods for rural roads ie. side drains (water tables) and grassed swales discharging into natural drainage paths and/or rural rock sumps.

Low impact urban design and development (LIUDD) principles are proposed for the management of stormwater run-off from access roading and from roof/hardstand/driveways within allotments. The Infrastructure Report notes that the proposed lots are "large rural properties" (0.2 ha to 3.0 ha), so there is ample area available for discharge of stormwater to ground entirely within each lot by a variety of methods, or combination thereof. These methods include:

- Soakpits.
- Attenuation using storage tanks with irrigation discharge to garden and lawns.
- Discharge to natural drainage paths.
- Direct discharge to ground surface using dripper and soakage lines over the wider property (irrigation).

The Infrastructure Report notes that total hardstand from roading, driveways, dwellings etc is expected to be approximately 5% of the total area of the site [albeit that such development is concentrated to a greater density in the Rural Lifestyle Areas 1-3]; and that total hardstand will only have a marginal effect on overall peak stormwater flows off the site which is addressed in the Flood Hazard Assessment report prepared by GeoSolve Limited attached as Appendix H to the Request Document.

Mr Penniall notes that soakage tests have shown that normal methods of stormwater disposal for a rural subdivision will be satisfactory. He advises that should the development proceed stormwater conditions will be developed under the Council's current NZ 4404:2004 standard and July 2008 Addendum to NZS 4404:2004.

8.4.4 Power and Telecommunications

The Infrastructure Report advises that there are three possible options for a power supply to the development. These include:

- An Aurora Energy Ltd supply with Aurora owning the subdivision infrastructure.
- An “embedded” supply from an alternative provider connected to a dedicated feeder off Aurora's Zone substation or a feed off Aurora's distribution network, with the alternative provider owning the subdivision infrastructure.
- An independent supply from an alternative provider from a Grid Exit Point (GXP) off the Transpower Cromwell substation, with the alternative provider owning the subdivision infrastructure.

The request document also notes that off grid power supply options will also be considered.

In terms of the first option, above, Aurora Energy Limited has confirmed that a supply can be made available from its distribution network with Aurora owning the subdivision infrastructure. Written confirmation that Aurora can make a point of supply available for the development is contained in a letter dated 22 February 2019 that is presented as Appendix F to the Infrastructure Report.

The Infrastructure Report advises that Chorus New Zealand Limited has confirmed that suitable Air Blown Fibre (ABF) reticulation can be supplied to the proposed development. Written confirmation that Chorus can provide ABF telephone reticulation to the subdivision is contained in the letter from Chorus dated 27 November 2018 that is presented at Appendix E to the Infrastructure Report.

The Infrastructure Report notes that individual home owners will also have the alternative options of the cellular network and wi-fi providers for their telecommunications and computer media services.

Mr Penniall advises that there are no concerns with regards to the provision of power and telecommunications. He advises that conditions will be developed at the subdivision stage in accordance with the Council's engineering standards should the development proceed.

8.4.5 Costs of Maintaining Infrastructure

Werner Murray (64/17) supported by James Dicey (117/28) does not consider that extending services to this part of the Cromwell Basin at this point in time is economically viable for the community in the long run. Once installed the infrastructure will become a Council and ratepayer burden. Furthermore the submitter notes that the wastewater ponds capacity have not been

calculated (only speculated); and that insufficient evidence is provided with respect to their capacity; that infrastructure will be too expensive for a satellite development; and the submitter has raised the impact on community facilities and services, such as upon libraries, recreation areas, and swimming pools [and employment opportunities] which have not been taken into account.

8.4.6 Conclusion : Services

The information contained in the Infrastructure Report and appendices thereto confirms that water and wastewater services can be provided from the Cromwell town reticulation; that stormwater disposal can occur within the site; and that power and telecommunication services are available from the relevant providers. Our conclusion is that any adverse effects in terms of servicing the development enabled by Plan Change 14 will be limited.

8.5 Reverse Sensitivity Effects

Reverse sensitivity effects are addressed in Section 6.0 of the request document. It is also acknowledged that on 15 April 2020 the requestor provided a Noise Assessment report prepared by Tonkin & Taylor; such report being dated 5 April 2020. This report has been posted on the Council's website along with other Plan Change 14 documentation at the website address presented in Part 2.0 (above).

8.5.1 Noise

The Noise Assessment report assesses the noise effects associated with Plan Change 14 from existing sources of noise generation in the local area; and from future Plan Change 14 land uses (including reverse sensitivity). The report at Section 5.1 confirms that "reverse sensitivity" is the legal vulnerability of an established activity to complaint from a new land use.

The report notes that nearby properties (within 1 kilometre of the site boundary) are developed for pastoral/agricultural/horticultural use with associated dwellings and outbuildings. Pastoral farming occupies land adjoining the western and northern boundaries of the site. Cherry growing is the main horticultural land use surrounding the site and is located adjacent to the southern and eastern boundaries of the site. The report also notes that vines are also located in the surrounding area.

The plan at Figure 7.3 on page 23 of the Noise Assessment report identifies the six dwellings that are located generally to the south and east of the subject site. The plan at Figure 7.2 identifies the location of existing frost fans in the vicinity of the site and four proposed frost fans to be located within the Horticulture Area. Two existing frost fans are located on properties to the south of the subject site, on either side of the north-south limb of Ripponvale Road.

Reverse sensitivity effects have been raised in the submission by the Kimm Jamieson Family Trust (47/4) that has an orchard with a frost fan on the west side of Ripponvale Road close to the Plan Change 14 site. The submitter has promoted that Plan Change 14 be approved with modifications such that a 100 metre building setback be provided from all boundaries; and that the Amenity Edge plantings be carried out through the suggested 100 metre building setback. We anticipate that the requestor will respond to this suggestion at the hearing; and note that a 100 metre building setback is likely to preclude any residential activity from the Rural Lifestyle Area 4 adjacent to Ripponvale Road and site boundaries on the southern portion of the site; and would also reduce development opportunities in the RLA 1, 2 and 3 adjacent to the eastern boundary of the RuRA(5).

The main sources of noise considered in the Noise Assessment are the sound levels generated by frost fans, helicopter movements, bird scaring devices and to a lesser degree the noise from spraying. The report advises in Section 3.3 that all other sources of noise are either localised within the orchards or at such a low level that noise experienced off site would be negligible. We

note that the noise sources considered (with the exception of the Cromwell Racecourse, the Cromwell Aerodrome, Highlands Motorsport Park and State Highway 6) in the Noise Assessment report are essentially horticultural activities.

Several submitters have referred to their experience living in the vicinity of existing cherry growing areas at Letts Gully and O'Neill Lane near Alexandra. These submitters include Marg & Gerard Eckhoff (21/1) supported by James Dicey (117/18) and opposed in part by Horticulture New Zealand (130/2); Lynda Gray & Cam Dykes (28/2) supported by James Dicey (117/20); and Katie Angela Hill (36/2) supported by James Dicey (117/21) and opposed by Horticulture New Zealand (130/4). The current issues at Letts Gully near Alexandra are also referred to by Peter John Mead & Alistair David Stark as Trustees for the McKay Family Trust (60/3) supported by James Dicey (117/27); and by Alan Tony Smith (78/4).

The Letts Gully Road and O'Neill Lane localities are depicted on Map 42 of the Operative District Plan. Land at Letts Gully Road is subject to the Rural Residential notation where allotment sizes that have an average of 2 hectares are provided for. Residents of some of those properties are concerned at the noise effects generated from cherry orcharding on nearby land located in the Rural Resource Area. It is understood that such concerns are shared by residents of the Rural Resource Area (not subject to the Rural Residential notation) at O'Neill Lane. These concerns have resulted in the Council obtaining advice from Novo Group with respect to frost fans being operated on the cherry orchard at 91 Rockview Road. A report from Novo Group dated 17 October 2019 and an Addendum report dated 7 November 2019 (such reports being referred to in the Eckhoff and Gray/Dykes submissions) are attached to this report at **Appendix 6** for the information of the Commissioners and the parties. It is noted that the Novo Group Addendum dated 7 November 2019 concludes that the current noise effect from the frost fans at the cherry orchard is unreasonable after reconsidering the special audible characteristics of those frost fans.

While the Letts Gully/O'Neill Lane example and the Novo reports relating to that situation are not directly applicable to the frost fans proposed at the site (described below); they do highlight the difficulties that can arise with respect to noise and reverse sensitivity issues. The concerns that have led to the Novo reports relate to subdivision and development which has occurred in the Rural Resource Area (and on land subject to the Rural Residential notation); and not to a situation where large residential lots of 2000m² or greater are proposed to be created as is proposed in Plan Change 14.

Noise effects and potential reverse sensitivity effects associated with the Rockburn Winery (as raised in the submission by Rockburn Wines Limited (72/3 & 72/5)) have not been assessed. That submission notes that during the vintage, trucks and heavy machinery must access the winery at all hours of the night; and that the submitter is concerned about the potential incompatibility of residential development close to an existing winery that operates 24/7 during vintage.

The Noise Assessment report prepared by Tonkin and Taylor contains noise contour maps that are presented as Figures 7.1 and 7.2. Noise from frost fans, as experienced at the existing six dwellings in the vicinity of the site, are presented in Table 7.1. The operation of existing frost fans are modelled in Scenario 1; and the noise from existing frost fans and the four Frost Boss C59 (5 blade) frost fans proposed within the Horticulture Area are modelled in Scenario 2. Modelling for existing and future helicopter flight paths over the existing NZ Cherry Corp Orchard and the Horticulture Area are presented in Table 7.3.

Frost fans are used to mitigate against the adverse effects of frost damage to agricultural crops, in this instance fruit. Frost fans are turned on automatically before a critical frost occurs and the Noise Assessment report advises in Section 3.1.1 that normal hours of operation are between

4:00am and 6:00am on a seasonal basis. The report also advises that use of the frost fans will occur from early to mid September to mid to late November. The report discloses that in 2018 the NZ Cherry Corp frost fans were operated on the land to the east of the site on 22 occasions with an average operating time of 7.5 hours; and in 2019 on 18 occasions with an average operating time of 5 hours. We note the apparent discrepancy between the 7.5 – 5 hours reported; and the normal hours of operation between 4:00am and 6:00am (ie. 2 hours) referred to in Section 3.1.1 of the Noise Assessment.

The Noise Assessment report advises that NZ Cherry Corp does not use helicopters for frost fighting, although such use does occur by some orchards in the wider Ripponvale area which do not have frost fans. Helicopters are used by NZ Cherry Corp for drying fruit when there has been overnight rain and the air temperature is rising (typically around sunrise). Section 3.1.2 of the report confirms that helicopters are only used during the fruit harvest season (mid-December to end of January); and that during a typical harvest period a helicopter may be used on 8 to 12 occasions from anywhere between 30 minutes and 2 hours. Helicopters are used at other orchards in the Ripponvale area are for fruit drying.

In Section 7.2 the Noise Assessment report advises that future occupiers of the “residential area” [which we understand to be the Rural Resource Area (5)] will experience noise from a variety of sources; with frost fans, helicopters and audible bird scaring devices being the most dominant of these sources. Sound levels will be experienced both internally within the dwellings and externally within outdoor amenity spaces depending upon when the noise occurs. The report advises that the use of spatial separation (buffer areas), building orientation (shielding) and the sound insulation of dwellings are all effective measures to reduce the potential effects of reverse sensitivity.

The Noise Assessment report notes that the following buffer distances are proposed:

- Adjacent to the Horticulture Area, in the RLA 3 – 21m.
- Adjacent to the Horticulture Area, in the RLA 1, 2 and 4 – 25m.
- Adjacent to Ripponvale Road, [in the RLA 4] – 30m from road boundary.
- Adjacent to 146 Ripponvale Road [dwelling immediately west of site], in the RLA 4 – 25m from property boundary.

The report notes that the buffer distances referred to above are the minimum distance from the boundary where a building could be located; and that a dwelling will not necessarily be constructed at these minimum distances.

The Noise Assessment report notes that the orientation of buildings can be designed such that the main amenity areas are screened from the main noise sources which will occur to the east and south of the site. The report advises that a screened courtyard area, for example, can provide at least 10 dB of sound reduction compared to a location on an exposed part of the building. In Section 7.4 the Noise Assessment report also notes that mitigation measures could include the use of boundary treatment to provide additional noise reduction, for example bunding or noise walls (barriers). A bund or barrier would have to be located either close to the source of the noise (impracticable in this situation) or near the receiving location, ie. around each dwelling. The Noise Assessment report advises that to provide adequate protection at the receiving location the dimensions of the bund/barrier would have to be significant (ie. greater than 3m in height).

Figure 7.2 of the Noise Assessment report shows the predicted noise levels of frost fan noise across the Plan Change 14 site. The report advises in Section 7.2.1 that sound levels at the boundary of the residential area are lower than 60 dBL_{Aeq} (62 dB L_{A10}) reducing to 45 dB in the

north-eastern area of the site. These predicted noise levels assume frost fans on all surrounding orchards operate concurrently.

The Noise Assessment report notes that the nearest existing frost fan to the Plan Change 14 site (being the Frost Boss C49 fan unit on the Jakimm [Kimm Jamieson]) Orchard generates a noise of 65 dBL_{A10} at 100 metres; and that the noise generated would therefore be “compliant” with the Operative District Plan noise standard being Rule 4.7.6E(c).

It is unclear whether the modelling in the Noise Assessment includes an adjustment for the special audible characteristics of frost fans, as discussed in the Novo Group Addendum dated 7 November 2019 (**Appendix 6**).

We note that Rule 4.7.6E(c) of the Operative District Plan applies to the Rural Resource Area where an average lot area of 8 hectares is anticipated (generally) or an average area of 2 hectares is anticipated on land subject to the Rural Residential notation. This contrasts with the large lot residential subdivision and development anticipated within the Rural Resource Area (5). Again we note in this context that a minimum lot area of 2000m² is to be provided for within the Rural Lifestyle Area 1 and a minimum lot area of 3000m² is to be provided for in the Rural Lifestyle Area 2.

As noted in Section 5 of the Noise Assessment report the perception of unreasonable noise in the context of horticulture activities and the effects on residents living in the area is likely to be vary based on their expectation of the noise levels in the area. For example, residents who have connections to horticulture or viticulture may be less sensitive to noise in a rural environment compared to “new” residents who may be sensitive to certain activities, such as the use of frost fans. The expectation of the residents of the six existing houses in the vicinity at the site at Ripponvale Road and of the future occupiers of the allotments consented by RC 180121, being the Schooner Development subdivision of 112 and 114 Ripponvale Road to the west of the site (where an average lot area of 8.67 hectares and a minimum allotment area of 2.0 hectares is achieved), are likely to be significantly different from the expectations of those persons who choose to purchase one of the 2000m² or 3000m² large residential allotments to be enabled in the RLA 1 or RLA 2, say, on the Plan Change 14 site.

We do not consider that compliance with Rule 4.7.6E(c) provides any indicator of the acceptability of noise from frost fans to residents of large residential allotments, such as those proposed in Plan Change 14.

To protect future residents from the noise effects of frost fans, and to protect orchardists from potential reverse sensitivity effects, the Noise Assessment report recommends the following measures for bedrooms:

- For dwellings exposed to less than 55 dB L_{Aeq}, windows and glazed door systems should meet the minimum thermal performance requirements of the Building Code (4-12-4 IGU or similar acoustic performance).
- For dwellings exposed to sound levels in the range 55-60 dB L_{Aeq}, window and door systems should be installed which offer a higher level of sound insulation (4-14-6.4 IGU or similar).

The Noise Assessment report notes that sound levels are typically greater than 55 dB L_{Aeq} at a distance of less than 250 metres from the Plan Change 14 boundary. Sound levels of less than 55 dB L_{Aeq} would be experienced more than 250 metres from the boundary.

In Section 7.2.2 of the Noise Assessment report control measures are promoted to protect residents from helicopter noise when indoors; such helicopter noise associated with fruit drying on the NZ Cherry Corp orchard and the Horticulture Area; and to address the effects of helicopters being used for frost fighting nearby. The Noise Assessment report advises that as helicopters generate higher sound levels than frost fans, enhanced sound insulation of the complete building envelope (walls, windows, doors and ceilings/roof) is required which exceeds the standard recommended with respect to frost fans (above). In essence the noise rules with respect to helicopter use are more stringent than the recommended rules with respect to frost fans only.

The Noise Assessment report recommends that the following sound insulation standards should be incorporated into District Plan noise rules for the Plan Change 14 site to protect future occupiers of the dwellings from helicopter [and frost fan] noise:

- At distances less than 200m from the PC 14 orchard extension site boundary the sound insulation of habitable spaces should achieve 40 dB Rw+Ctr with the addition of mechanical ventilation to bedroom spaces. This is denoted as the orange highlighted area in Figure 7.6.
- At distances between 200m and 350m from the PC 14 orchard extension site boundary and at distances less than 250m from the Ripponvale Road site boundary the sound insulation of habitable spaces should achieve 35 dB Rw+Ctr with the addition of mechanical ventilation to bedroom spaces. This is denoted as the green highlighted area in Figure 7.6.
- At distances greater than 350m from the PC 14 orchard extension site boundary and at distances greater than 250m from the Ripponvale Road site boundary the sound insulation of habitable spaces should achieve 30 dB Rw+Ctr. This is denoted as the un-highlighted area in Figure 7.6.

The Figure 7.6 that is referred to appears on page 30 of the Noise Assessment report. The Noise Assessment report advises that with the measures presented above in place sound levels of less than 40 dB will be achieved indoors and, given the infrequent nature of helicopter operations, the noise effects will be less than minor. It is anticipated that the plan provisions at Appendix A to the request document are to be amended to include the recommended noise rules (as above).

Audible bird scaring devices are used by orchards in the Ripponvale area although the Noise Assessment report understands that the three adjacent orchards to the Plan Change 14 site do not use audible bird scaring devices. The report advises that the nearest potential orchard that may use these audible devices is approximately 500-600 metres from the Plan Change 14 boundary along Ripponvale Road, with 45 South (at Ord Road) being the primary user of bird scaring devices at a location that is over 1 kilometre to the south of the site.

The Noise Assessment report considers it likely that the audible bird scaring devices referred to would be “compliant” with the Operative District Plan noise rule being Rule 4.7.6E(b). The report also considers that the design measures outlined above [ie. noise rules specific to the Plan Change 14 site] would ensure that the noise generated by audible bird scaring devices will not result in adverse noise effects.

Again we have concerns with respect to relying on the noise rules which apply to the Rural Resource Area (in terms of compliance) for assessing the acceptability of noise from audible bird scaring devices to residents of large residential lots (as opposed to properties of the size provided for in the Rural Resource Area and on land subject to the Rural Residential notation).

It is also noted that the rules promoted in the Noise Assessment report relate to sound insulation inside dwellings; and no rules are proposed with respect to the mitigation of noise outdoors (albeit

that potential measures such as screened courtyard areas and bunds/barriers greater than 3 metres in height are discussed in the Noise Assessment report). Our conclusion is that while noise effects can be mitigated through the adoption of the rules promoted in the Noise Assessment report; it is likely that the introduction of up to 160 dwellings, many of which will be on large residential allotments, will result in a significant adverse effect in terms of reverse sensitivity.

We also note again that reverse sensitivity effects associated with the operation of the Rockburn Winery have not been addressed in the Noise Assessment report.

8.5.2 Agrichemical Spraying

Section G6.1 of the request document confirms that the users of agrichemicals are required to mitigate risk of spray drift from the application of agrichemicals. The request document states that the risk of spray drift can and should be avoided through limiting the potential spray drift hazard by ensuring that wind speed, wind direction, humidity, atmospheric stability, maximum height of release of agrichemicals, particle size, volatility of agrichemical, distance to sensitive area, buffer zone distance, presence of shelter belts and by considering the toxicity of the spray.

The request document notes that one method of addressing reverse sensitivity is via the use of setback requirements. It cites setback requirements from NZS 8409:2004 Management of Agrichemicals Part G6 as follows:

| Application method (of agrichemical) | Distance (metres) from sensitive areas | |
|--------------------------------------|--|-----------------|
| | With shelter | Without shelter |
| Boom sprayer | 2m | 10m |
| Air blast sprayer | 10m | 30m |
| Aerial application | 100m | 300m |

The request document anticipates that the predominant application method for agrichemicals within the surrounding area would either be boom spraying or air blast spraying. It is noted, in this context, that the Noise Assessment report at Section 3.1.4 advises that orchard spraying at the NZ Cherry Corp orchard is carried out with two tractors and Silvan 2000L fan dispersed crop sprayers; and that such spraying is intermittently carried out during most of the year, but more intensively during November, December and January. The Noise Assessment report advises that most spraying is carried out early in the morning to ensure no wind; and that such spraying can occur as early as sunrise and last for a couple of hours.

The request document notes that for existing properties along Ripponvale Road the buffer zone requirements of NZS 8409:2004 (as presented above) can be achieved for boom spraying. The setback for air blast spraying can also be achieved with the benefit of the east-west limb of Ripponvale Road that has a legal width of 20 metres; and through existing shelterbelts (for example at 109 Ripponvale Road) that reduces the required setback distance for air blast spraying from 30 metres to 10 metres.

Public Health South (68/6) opposed by Horticulture New Zealand (130/7) quotes from evidence presented by Public Health South's Air Quality advisor (in the context of the Plan Change 13 hearing) to the effect that NZS 8409:2004 Part G6 offers inadequate protection to avoid potential adverse effects from pesticide exposure from spray drift; and this is especially true of abnormal operation. That evidence expressed the opinion that a more reasonable separation distance between residences and agrichemical application (by air blast sprayer) would be at least 100

metres; and a buffer distance of at least 100 metres between the boundary of orchard activity and any residential activity has been promoted by the submitter. As noted in Part 8.5.1 a 100 metre building setback would reduce development opportunities adjacent to the eastern boundary of the RuRA(5).

The request document advises that the 15 metre wide Amenity Edge [as shown on the Structure Plan] will be planted prior to the development of rural living activity within the Rural Resource Area (5). Such Amenity Edge is provided adjacent to the Horticulture Area and to the Ripponvale Road boundary of the site. The request document notes that the Amenity Edge will help maximise separation distances between areas where the application of agrichemicals is to occur, and will effectively assist in mitigating potential spray drift onto the Rural Resource Area (5).

Our conclusion, having regard to the elements of Plan Change 14 discussed above, NZS 8409:2004 and the submission by Public Health South (68/6) opposed by Horticulture New Zealand (130/7) is that adverse reverse sensitivity effects associated with agrichemical spraying may well result from the proposal.

8.5.3 Cromwell Aerodrome

Reverse sensitivity effects with respect to the Cromwell Aerodrome are discussed in Section G6.3 of the request document. Figure 14, as presented in the request document, shows the orientation of the runways at the Cromwell Aerodrome.

As previously noted the land occupied by the Cromwell Aerodrome is designated D199 for “Aerodrome Purposes” on Map 44 of the Operative District Plan. The Noise Assessment report at Section 3.2 advises that the Aeronautical Information Publication (AIP) states the circuits pattern for light aircraft using the two runways. The Noise Assessment report advises that aircraft do not overfly the Plan Change 14 site, but turn away and perform circuits to the east towards Cromwell township or to the south (due to the rising land topography to the north and west). As aircraft using the Cromwell Aerodrome do not overfly the Plan Change 14 site noise from aircraft movements is unlikely to result in reverse sensitivity effects.

The Heliview Flights commercial helicopter operation is located at the southern edge of the Cromwell Aerodrome (with access off Ord Road). It is unlikely that helicopter operations based at Cromwell Aerodrome will have any particular effect in terms of future residential activity within the Rural Resource Area (5).

8.5.4 Conclusion : Reverse Sensitivity Effects

While the Noise Assessment report demonstrates that Rule 4.7.6E(c) is complied with with respect to existing frost fans in the locality and future frost fans proposed in the Horticulture Area it is likely that such frost fans and helicopter use in the vicinity of the site for fruit drying or frost fighting will be a source of annoyance to future residents on the Plan Change 14 site, as will audible bird deterrent devices in the locality that may also comply with Rule 4.7.6E(b). The provision for up to 160 dwellings on the Plan Change 14 site is likely to result in adverse effects in terms of reverse sensitivity to noise in this locality. Reverse sensitivity effects with respect to the operation of the Rockburn Winery have not been assessed in the Noise Assessment report. Such reverse sensitivity effects can also be anticipated given that the winery operates on a 24/7 basis adjacent to the Plan Change 14 site. Reverse sensitivity effects are also anticipated in the context of agrichemical spraying. Reverse sensitivity effects are not anticipated with respect to the operation of the Cromwell Aerodrome.

8.6 Geotechnical and Natural Hazards Effects

A Flood Hazard Assessment and Geotechnical Investigation report had been prepared by GeoSolve Limited, and these reports, dated 24 May 2019 and 23 May 2019, respectively, are attached at Appendix H and Appendix I to the request document. Mr Lee Paterson, Senior Geotechnical Engineer with Stantec New Zealand, has reviewed these reports and has provided comments that are attached at **Appendix 7** to assist in the assessment of these technical reports.

We discuss the findings of the Geotechnical Assessment and the Flood Hazard Assessment below; in the order that these matters are addressed in Section G7.0 of the request document.

8.6.1 Geotechnical Hazards

The Geotechnical Investigation report prepared by GeoSolve Limited identifies potential effects of natural hazards at the site including alluvial fan hazards, landslide hazards, seismic risks and liquefaction. Mr Paterson considers that the potential risks associated with natural hazards have been suitably assessed within the Geotechnical Investigation report which he considers to be an appropriate work to inform opinion on the plan change.

Section 1.1 of the Geotechnical Investigation report advises that the report is intended to assist preliminary master planning in support of the new zone that seeks to enable a greater density of rural-residential development over the property; and that more detailed geotechnical assessment for specific design will be required as part of future resource consent applications under the new zone framework and at the building consent stage [if Plan Change 14 proceeds].

8.6.1.1 Alluvial Fans

ORC hazard mapping indicates that there are 'active debris – dominated' and 'active flood water – dominated' alluvial fans within the site. GeoSolve notes that these are confined to the lower section of the property, where slopes are largely sub-horizontal with areas towards the far eastern bounds gently inclined.

GeoSolve Limited observes that there does not appear to be any evidence of recent activity and that the risk of future debris flow or debris floods is considered to be generally low. On this basis the report advises that no mitigation measures are required in respect of alluvial fan activity beyond those otherwise recommended for flood mitigation (discussed further in Part 8.6.2 – below).

8.6.1.2 Landslides

GeoSolve Limited has identified evidence of schist debris landslides on the property, on the northern and western slopes. GeoSolve Limited observes that the presence of colluvium and subsequent vegetation on the slopes suggests that the landslide activity is either dormant or very slow episodic creep, which is typical in similar landslides in the surrounding area. No evidence of recent slide activity was seen in the field, and survey monitoring would be required to quantify any long term creep movement in areas identified with potential for development.

GeoSolve Limited has identified areas with no potential for rural residential built form (ie. building sites); such areas being shaded in purple on the plan at Appendix A, Figure 2 of the Geotechnical Investigation report. These areas are generally located within the ONL or No Build areas as identified on the Structure Plan at Schedule 19.23.

GeoSolve Limited has also noted that all terrain mapped as schist debris or landslide in Appendix A Figure 1 and Figure 2 shaded in red could be developed. Areas of the landslide with potential for development will require further monitoring and investigation to confirm geotechnical requirements; and it is expected that this information will form part of future applications for

resource consent. We note that the areas shaded in red at Appendix A Figure 1 and Figure 2 to the Geotechnical Assessment are in part located within the ONL/No Build areas and are in part located within the Rural Lifestyle Area 5.

Mr Paterson has noted that the Geotechnical Investigation report anticipates that two areas of the foothills can reasonably be built on subject to further monitoring and investigation being required to confirm geotechnical requirements. Mr Paterson considers that it would be ideal if there could be a separate zoning or firm commentary that development of these specific locations would be subject to a site-specific geotechnical assessment confirming that the site is suitably stable; and that proposed works would not create or exacerbate natural hazards on this or adjacent property. At present there is no rule in the Plan Change 14 provisions that specifically addresses this matter; and we anticipate that this may be addressed further by the applicant at the hearing.

8.6.1.3 Seismic Hazard

GeoSolve Limited has noted that the active Pisa Fault is located at the foot of the Pisa Range which runs along the western extent of the site. It is anticipated that the Pisa Fault is the fault which relates to the “Active Geological Fault” notation that bisects part of the site as shown in Map 44 and Map 51 of the Operative District Plan.

GeoSolve Limited advises that due to the estimated 10,000 – 20,000 year average return period for earthquakes on this fault, that the seismic risk associated with it is considered to be low. Furthermore GeoSolve Limited notes that no active fault scarps have been observed on the site area. No limitations are recommended for any structures in the context of the active Pisa Fault apart from precautionary inspection of footings excavations, to ensure no subsurface evidence of the fault is present in the immediate vicinity. Risk associated with the Pisa Fault is considered to be very low.

GeoSolve Limited notes that the Alpine Fault, that is located approximately 120 kilometres to the north-west of the site, runs along the western foothills of the Southern Alps, and is likely to present a more significant seismic risk than the active Pisa Fault. GeoSolve advises that there is a high probability that a major earthquake of Mw8 or more will occur along the Alpine Fault within the next 50 years, and that such a rupture is likely to result in strong and prolonged ground shaking in the vicinity of Cromwell. GeoSolve Limited considers that appropriate allowance should be made for seismic loading during detailed design of any future buildings, foundations and retaining walls. GeoSolve Limited notes that due to the varying nature of the site a range of seismic design classes may be required, for detailed design.

8.6.1.4 Liquefaction

The plan presented at Figure 3 in Appendix B to the Geotechnical Investigation report maps the southern area of the property as “Possibly Susceptible” to liquefaction with a large area to the north-east being of “Low Susceptibility” to liquefaction. Given that the water table at the site is located at a depth of 33 metres GeoSolve Limited advises that liquefaction risk can now be recatergorised as being very low. GeoSolve Limited advises that perched water may be present locally after sustained rainfall, but that materials highly susceptible to liquefiable (loose uniform sands) are not expected to be widespread in this terrain.

8.6.1.5 Conclusion

GeoSolve Limited’s assessment of the site indicates that geotechnical hazards and risks are present within the property and that most will not provide any limitation on rural residential development, with a low risk attributed to most of them; and that remedial measures are available to reduce and remove others. GeoSolve Limited considers that the proposed zoning can be supported from a geotechnical perspective.

8.6.2 Flood Hazard Assessment

The Flood Hazard Assessment prepared by GeoSolve Limited (at Appendix H to the request document) evaluates flooding potential at the site.

The Flood Hazard Assessment notes that there are three main catchments identified on the site that total some 370 ha in area. Flood flows from these catchments have been estimated for a 1% AEP flood event.

The Structure Plan at Schedule 19.23 shows an Indicative Open Space and Stormwater Corridor which GeoSolve Limited advises provides for a 20 metre width that will allow a 3 metre bottom width channel, 0.6 metres deep, with 2:1 batters plus a 7 metre berm on either side. GeoSolve Limited also notes that the northern catchment flood channel zone is 20 metres in width; both areas to be a no-build zone. Reference is also made to an existing formed channel on the south-eastern boundary that directs flows along the boundary towards Ripponvale Road (as depicted in Image 2130 in the Flood Hazard Assessment). Appendix A to the report presents the existing flow paths and areas potentially subject to spill in flood conditions.

In Section 4.1 GeoSolve Limited advises that, in general, it will be possible to locate future building sites well away from and above active water courses. Most future lots will therefore only require a minimum level of flood protection to deal with localised shallow runoff, such as establishing minimum floor levels above surrounding ground. The report notes that the CODC minimum floor level is 300mm above natural ground; but in some cases this will need to be greater. Section G7.5 of the request document confirms that these matters will be addressed at the time of subdivision consent.

Building sites that are on slopes requiring excavation (cut and fill) should incorporate a stormwater catch drain placed at the base of the cut slope.

The Flood Hazard Assessment notes that old water races around the hill slopes can intercept runoff from the slopes above and redirect those flows. The report recommends that lowered sections of the downstream race bank be formed and grassed at larger water courses so that if the old races become full they can overflow at known and manageable locations. If building sites are located away from flood flow paths this will reduce the chances of them being affected by break out at unexpected locations.

The Flood Hazard Assessment notes that there are three small water storage dams present on the site. The report notes that these dams could present a flood hazard if they were to fail either during normal operation or during an extreme weather event. This flood hazard would be in addition to the hazard from stormwater runoff discussed above, although the incremental increase in hazard may only be small. The Flood Hazard Assessment notes that if these dams were retained they could have a positive effect by storing then gradually releasing flood water, reducing the impacts of flooding downstream (ie. stormwater retention basins). The report also notes that future building sites immediately downstream [from dams] may require specific engineering to manage flood risks posed by these dams; the largest of which stores about 8000m³ of water and is fed by a Ripponvale Irrigation Company Limited water race.

Mr Paterson of Stantec has reviewed the method used in the Flood Hazard Assessment to calculate flood effects, and considers this to be appropriate. Furthermore he advises that the risk from flooding to residential properties can generally be managed by minimal engineering; and that the exact extent of such works cannot be ascertained until the layout of any subdivision is known.

8.6.3 Conclusion

Our conclusion, having considered the Geotechnical Investigation report and the Flood Hazard Assessment is that potential risks associated with natural hazards have been suitably assessed; and that any effects associated with natural hazards can be managed through the subdivision design (and consenting) and building consent stages. We therefore conclude that any adverse effects associated with geotechnical considerations and natural hazards will be no greater than minor.

8.7 Effects on Ecological Values

No technical report has been prepared by an ecologist or botanist in support of the request. The Landscape and Visual Assessment Report prepared by Rough & Milne Landscape Architects (Appendix E to the request document) at paragraph 45 summarises the ecological values of the site as follows:

"... Generally, the ecological integrity of the application site is relatively poor due to the prevalence of exotic species and lack of native vegetation. The west gully is the main ecological feature of the application site as it holds a mix of native scrub vegetation and an ephemeral stream. The majority of the vegetation on the lower slopes and farmland basin consist of exotic pasture grasses and exotic trees, including fruit orchards, poplar, willow, alder, and wilding pine. The upper slopes consist of tussock grasses, native cushion plants, wilding pine, coprosma, grasses, and wild rose hip."

Much of the west gully, being the main ecological feature at the site, is currently subject to the ONL notation; and such notation is to be extended as part of Plan Change 14. The remainder of the site has been used for pastoral farming and orcharding purposes. The plan presented at Figure 3 to the Preliminary Site Investigation prepared by WSP Opus is informative in this respect. This plan shows the locations of various orchards which are present or have been present on the site in the past. Given the presence of exotic pasture grasses (and orchards) it is accepted that the part of the site to be located in the Rural Lifestyle Areas 1 – 5 has little ecological value.

The requestor has noted that planting of native species is proposed in the stormwater corridor and in the 15 metre planted Amenity Edge adjacent to the Horticulture Area, as well as being among recommended species for landscape planting within individual lots. It is also anticipated that native species will be established in the Amenity Edge along the Ripponvale Road frontage of the site. Such plantings will provide a minor positive effect in terms of ecological values.

Given that most of the west gully is subject to the ONL notation and the associated restriction on activities contained in Rule 4.7.6L; we consider that a minor ecological benefit will also result from the extension of the ONL notation on the site.

The requestor has noted that the Rural Resource Area permits activities such as farming and horticulture that can occur as of right without any reference to ecological values. While we concur with this statement we also observe that permitting subdivision down to a minimum area of 2000m² may well reduce habitat values (for native and exotic species) when compared to the 8 hectare average lot area required in the Rural Resource Area.

Our overall conclusion is that the proposal will have a minor positive effect in terms of ecological values.

8.8 Effects on Soil Resource

Attached to the request document at Appendix L is an evaluation of the soils mapped at the site prepared by Ian Lynn Senior Scientist/Capability Leader at Manaaki Whenua Landcare Research. Mr Lynn finds that none of the 5 soils mapped at the site meet the criteria required to be classified

as “high class” soils. Mr Lynn advises that high class soils are versatile soils capable of growing a wide range of crops. Mr Lynn states that:

“Although some of the soils within the block are currently growing specialty high value crops (pip and/or stone fruit, grapes etc.) they are not suitable for intensive arable cropping due to the combinations of soil depth, potential rooting depth, topsoil stoniness, profile available water and depth to a stony layer criteria and therefore fail to be classified as high class soils.”

It appears that while Mr Lynn has evaluated whether the soils at the site can be classified as “high class soils” ie. being suitable for intensive arable cropping; he has not assessed the suitability of the soils present at the site for other forms of horticulture particularly fruit growing. As previously noted land immediately to the east of the site has been developed as a substantial orchard; and orcharding is an established activity at varying scale to the south of the site and throughout Ripponvale.

The submission by Horticulture New Zealand (38/4) supported by James Dicey (117/26) and Kate Wardle (170/1) describes the extent and economic value of orcharding that utilises the soils found at Ripponvale. The submitter advises that there is approximately 217 ha of orchards in the Ripponvale area; including 82 ha of cherries and 135 ha of other fruit namely: cherry plums, plums, peaches, nectarines, apricots, apples and pears. The submitter also advises that the value of the fruit produced in the Ripponvale area in the 2017/2018 season was approximately \$19.2 million; albeit that this was reduced by frost by approximately 40% to \$11.52 million in the 2018/2019 season. Horticulture New Zealand (38/12) has emphasised that production of quality fresh produce requires access to versatile rural production land.

The submission by DJ Jones Family Trust & Suncrest Orchard Limited (45/3) supported by James Dicey (117/22) notes that orchard areas around the Cromwell township have a unique mix of local soil conditions, available water supply and an ideal micro climate that provides suitable winter chilling and dry summer conditions that are essential for summer fruit growing. The submitter notes that there is a limited amount of land such as this, with appropriate [Operative District Plan] zoning, available in the Cromwell Basin.

Andrew Grant McFarlane (52/4) observes that in this day and age there is an increasing awareness of the need to preserve areas suitable for growing food as this land is limited. The submitter observes that a large percentage of the land under consideration for development is of a quality and gradient suitable for horticulture and should be used as such.

Residents for Responsible Development Cromwell (70/7) consider that Plan Change 14 will result in a loss of productive land; and Rockburn Wines Limited (72/15) is concerned about the loss of good horticultural land in Central Otago to housing, and the submitter considers that land suitable for horticultural production should not be converted to houses. Rockburn Wines Limited (72/16) considers that the best production land on the site is the existing orchard on the alluvial fan close to Rockburn Winery; and that this land (in the RLA 2 and RLA 4) should be shown as “H” Horticulture [Area] with no houses permitted.

The New Zealand Land Resource Inventory Worksheets (published by the former National Water and Soil Conservation Organisation) identify land inventory units which are homogeneous at the scale of mapping (1 inch to 1 mile) for the main physical factors governing land use. Sheet S133 of the Worksheets (reproduced and enlarged at **Appendix 8**) confirms that an area that approximates the blue area shown on Mr Lynn’s Figure 1 is in Land Inventory Unit IIIc3; and that land immediately to the east and west of the blue area (shown in brown and fawn at Figure 1) is in

Land Inventory Unit IIIc6. The latter land inventory unit also applies to much of the land developed for orcharding on the east and west side of Ripponvale Road, south of the site.

The Land Use Capability Extended Legend describes these land inventory units, and discusses present and potential land uses, as follows:

| UNIT | UNIT DESCRIPTION | LAND USE | |
|-------|--|--|--|
| | | PRESENT | POTENTIAL |
| IIIc3 | Flat to undulating terraces and fans with moderately deep to deep soils in Central Otago | Intensive grazing. Forage cropping. Cereal cropping. Orcharding | Cropping. Orcharding. Intensive grazing. |
| IIIc6 | Moderately shallow and/or stony soils of medium to high fertility on plains and terraces in dry inland areas with cold winters | Intensive grazing. Forage cropping. Cereal cropping. Orcharding | Cropping. Orcharding. Intensive grazing. |

Orcharding is identified as a present and potential land use for the land in Land Inventory Units IIIc3 and IIIc6; these land inventory units relating to the Farmland Basin and much of the Farmland Terraces at the site.

It is clear that the lower portions of the site to the north of Ripponvale Road are suitable for horticultural development and particularly orcharding. The requestor’s proposal to establish a 29 hectare orchard within the Horticulture Area on the site confirms that this is the case. The land to be subdivided most intensively for residential purposes in Rural Lifestyle Areas 1 and 2 contains the same soil types and land inventory units as those to be developed for horticultural purposes in the Horticulture Area. This also appears to be the case for portions of Rural Lifestyle Areas 3-5.

In Section G9.0 of the request document it is acknowledged that rezoning (as provided for through Plan Change 14) will lead to an inevitable loss of some of the soil resource, but not one that contains “high class” or versatile soils. The request document states on page 86 that:

“... the density of the allotments still provides the ability for the soil resource to be utilised within the allotments, areas of open space are also to be provided for and an area of approximately 29 hectares of flat land is to be planted in a cherry orchard and used for horticultural support activities... The planting of this land [Horticulture Area] will result in a more intensive use of the soil resource consequentially resulting in benefits for productive capacity. Planting of this orchard will ensure the sustainable management and ongoing potential economic benefits that result from the use of this land/soil resource for productive purposes...”

We question, in the first instance, whether the density of the allotments provides the ability for the soil resource to be utilised within the allotments for any meaningful productive use. Again we note that minimum allotment areas in the Rural Lifestyle Areas 1-3 are 2000m², 3000m² and 4000m², respectively. This is essentially large lot residential subdivision; and little productive use can be observed at existing residential properties having comparable areas elsewhere in the Cromwell Basin.

While Indicative Open Space and Stormwater Corridor areas are identified on the Structure Plan at Schedule 19.23 there is no indication that these areas are to be utilised to make productive use of the soil resource.

Emphasis has also been placed on the development of 29 hectares of land for a cherry orchard to ensure sustainable management and the ongoing potential economic benefits that result from the use of the land/soil resource for productive purposes. An effect of the proposal is that a substantial area of land to the west of the Horticulture Area that is comparable in terms of soil type and/or land inventory unit is to be used for large lot residential purposes; and this land/soil resource will not be available for use for productive purposes if Plan Change 14 proceeds.

While the Horticulture Area is to be used for the development of an orchard it is observed that such development is provided for under the current planning regime (ie. by the provisions of the Rural Resource Area) irrespective of whether Plan Change 14 proceeds.

The request document in Section G9.0 also observes that from a practical perspective, within Central Otago, an important factor to consider when determining the effects on productive land use is the amount of water potentially available for plant growth. The request document considers that the availability of water for plant growth at a productive scale is a relevant limiting factor in this instance.

There is no clear statement contained in the request document with respect to the potential availability of water to irrigate that part of the site in Land Inventory Units IIIc3 and IIIs6.

The Flood Hazard Assessment prepared by GeoSolve Limited (Appendix H to the request document) confirms in Section 1.2 that the flatter land at the site is irrigated by border dykes and spray irrigation; with a number of the orchard blocks being spray irrigated. That report advises that most of the irrigation water is supplied by the Ripponvale Irrigation Company Limited race that utilises a pumped supply from the Kawarau River [Lake Dunstan]. The report also notes that a number of water races are present throughout the property; and that these can intercept runoff from land above and divert this to other parts of the property. Such runoff could be irrigation runoff water or overland flow after rainfall.

The Preliminary Site Investigation (PSI) report prepared by WPS Opus (Appendix K to the request document) also confirms in Section 3.2 that a well was installed on the site in June 2014, and that this well is utilised for irrigation, stock water and drinking purposes. A copy of the relevant water permit being RM 14.291.01 originally dated 17 April 2015 is attached at page 50 of the PSI.

Our conclusion is that the proposal will have a significant adverse effect as it will enable the use of a substantial area of land that is suitable for horticultural development (particularly orcharding) for large lot residential subdivision and development. We acknowledge in this context that land suitable for horticultural development for orcharding is a finite resource; and that the loss of the potential to utilise this land for these purposes is a significant adverse effect.

8.9 Effects on Land Supply and Growth

Attached to the request document at Appendix G is a Demand & Supply Assessment prepared by Ms Hampson of Market Economics Limited (ME). The effects on land supply and growth are also addressed in Section G10.0 of the request document.

8.9.1 Structure of District Plan

Before discussing the contents of the ME report it is appropriate to briefly review the structure of the Central Otago District Plan in terms of zoning. In essence the Rural Resource Area relates to

the rural environment of the District. Parts of the Rural Resource Area are subject to the Rural Residential notation where Rule 4.7.2(ii)(a)(i) permits subdivision as a controlled activity where an average allotment size of no less than 2 hectares is achieved. Elsewhere in the Rural Resource Area (with the explicit exception of the Rural Resource Area (1) – (4)) an average lot area of no less than 8 hectares and a minimum allotment area of no less than 2 hectares is required for subdivision to qualify as a discretionary activity in terms of Rule 4.7.4(iii)(b).

Urban areas of the District (as defined in Section 18 of the Operative District Plan at page 18:12) include the Residential, Business, Industrial and Rural Settlement Resource Areas. The minimum size of allotments in the Residential Resource Area generally is 250m² where a reticulated sewerage system is available and 800m² where a reticulated sewerage system is not installed or available, such subdivision being a discretionary (restricted) activity in terms of Rule 7.3.3(i)(a) or (b). Within the Residential Resource Area specific areas have been identified where it is appropriate to apply different standards for subdivision allotment sizes in recognition of their particular characteristics.

These specific areas are the Residential Resource Areas (1) – (13). The minimum and/or average lot areas required in the Residential Resource Area (1) – (13) are specified in Rule 7.3.3(i)(c) that provides for such subdivision as a discretionary (restricted) activity. For example the Residential Resource Area (4) at Bannockburn requires a minimum lot area of 1500m² and an average lot area of 2000m²; the Residential Resource Area (5) at Lowburn has a minimum lot area of 3000m²; and the Residential Resource Area (6) that applies, *inter alia*, to the Bell Avenue area at Cromwell has a minimum lot area of 4000m². Another example in the immediate vicinity of Cromwell is the Residential Resource Area (2) which applies to Panners Cove Lane and to other land to the south on the east side of Bannockburn Road, and to subdivision at Cairnmuir Road above Bannockburn Inlet; and a minimum lot area of 4000m² and an average lot area of 1 hectare is required in the Residential Resource Area (2).

It is emphasised that the Residential Resource Areas (1) – (13) are part of the Residential Resource Area, being an “Urban area” as defined in the Operative District Plan.

8.9.2 Terminology

In our view it is important to understand the basis for the terminology that has been used in the Demand & Supply Assessment report as this provides the basis for its findings.

The Introduction to the Demand & Supply Assessment report confirms in Section 1 that:

“... This report is focussed on assessing future demand for rural residential and rural lifestyle properties (lots) in Cromwell’s rural surrounds, so that the proposed private plan change can be considered in that context ...”

In Section 1.2 the Demand & Supply Assessment describes what is meant by “rural residential” and “rural lifestyle” and provides some quantification of lot area derived from work undertaken elsewhere in New Zealand in the Far North District.

The Demand & Supply Assessment report advises that “rural residential” properties can be generally characterised as large dwellings with spacious grounds (often all landscaped and actively maintained); and that these households have a larger property than typically offered in residential zones. The report also advises that “rural lifestyle” properties are larger again and can generally be characterised as containing large dwellings with spacious grounds that are often landscaped and maintained in association with a house site in addition to land that may be used for small scale

(hobby) farming or horticultural (orchard) activities albeit that such primary production might not be the key source of income.

The Demand & Supply Assessment notes that 4Sight Consulting has concluded from a literature review that “rural residential” lots commonly varied between 3000m² and 2 ha; and that “rural lifestyle” lots commonly vary between 2-10 ha. In the context of the planning rules and historical supply patterns in the Far North District 4Sight Consulting considered a range of 2000m² – 2 ha was more applicable for “rural residential” and 2-8 ha was more applicable for “rural lifestyle”, in the context of that District.

In the Central Otago District that the Rural Residential notation provides for subdivision that creates allotments having an average area of 2 hectares. If a 4 hectare (10 acre) property were subdivided flexibility exists to create two allotments of the same or quite different areas, provided the 2 hectare average area is achieved. For, say, any lot of 2000m² a corresponding lot having an area of 3.8 hectares would be required. This mechanism provides for rural residential and rural lifestyle activity to occur in the context of the Central Otago District. It is also noted that the normal subdivision rules that apply across the Rural Resource Area provide, as a discretionary activity, for the creation of lots having an average area of 8 hectares and a minimum area of 2 hectares, effectively providing for rural lifestyle development to some extent.

The Demand & Supply Assessment report applies the “rural residential” and “rural lifestyle” categorisations described in that report to the Cromwell Ward. Of particular note is that the report defines the subdivision and development found in some areas of the Residential Resource Area as “rural residential”. This includes, for example, the Residential Resource Area (5) at Lowburn and the Residential Resource Area (6) at Cromwell. The report considers that rural residential lots currently range from 3000m² to 1 ha in size.

Rural lifestyle lots are described as those currently being in the range of 1 ha to 8 ha. As previously noted an average lot area of 1 hectare is required for the Residential Resource Area (2) at Bannockburn Road and Cairnmuir. The Demand & Supply Assessment report advises that anything less than or equal to 1500m² is considered as “residential” or “urban” land use, albeit at a low density when the minimum is 1500m².

The terms “rural residential”, “residential” and “rural” as used in the Demand & Supply Assessment report depart significantly from the use of that terminology in the Operative District Plan. Again it is noted that the Rural Residential notation in the Operative District Plan provides for lots to be created that have an average area of 2 hectares; activity on such lots being subject to the Rural Resource Area provisions of the Operative District Plan. The description of “rural residential” is applied in the Demand & Supply Assessment report to areas within the Residential Resource Area where larger residential allotments are provided for, subject to the rules which relate to the Residential Resource Area. In most instances these areas within the Residential Resource Area have little if any actual association with rural activity which is not surprising given that these are urban areas.

The Demand & Supply Assessment report categorises the Rural Lifestyle Areas 1–5, as provided for in Plan Change 14, based on the “rural residential” and “rural lifestyle” categorisations. In essence the Rural Lifestyle Areas 1, 2 and 3 are deemed to be “rural residential” and the Rural Lifestyle Areas 4 and 5 are deemed to be “rural lifestyle”. Based on the existing structure and content of the Operative District Plan the Rural Lifestyle Areas 1-4 can aptly be described as large lot residential given that the minimum lot areas proposed better equate to the minimum or average lot areas specified for the Residential Resource Area (4) – average 2000m²; the Residential

Resource Area (5) – minimum 3000m²; the Residential Resource Area (6) – minimum 4000m²; and the Residential Resource Area (2) – average 1 ha as discussed in Parts 7.2 and 8.9.1 (above).

Our conclusion is that the Residential Lifestyle Areas 1-4 are essentially providing for larger lot residential subdivision and development. By coining the term “rural residential” and “rural lifestyle” in the Demand & Supply Assessment report ME Consulting is, in substantial part, assessing the demand and supply for large residential allotments rather than allotments that have a rural character or association.

In our view caution must be exercised in considering the findings of the Demand & Supply Assessment report in the context of Plan Change 14 given that the Purpose of the Proposal as presented in Section B5.0 of the request document is:

“... to meet demand for rural lifestyle development outside of urban Cromwell;...”

8.9.3 Growth in Demand for Housing

In Section 2.2 the Demand & Supply Assessment discusses past dwelling growth in the Cromwell Ward by location. The diagram at Figure 7 shows the historical growth in dwellings in the Cromwell CAU (being the approximate urban area of Cromwell) and in the Cromwell Ward as a whole. The area of the Cromwell Ward beyond the Cromwell CAU is described as the “rural fringe/rural area” as depicted in Figure 4. In our view it is important to note that this “rural fringe/rural area” includes both rural and urban areas. For example the township of Bannockburn and the residential settlements of Lowburn and Pisa Moorings/Perriam Cove fall within the “rural fringe/rural area”. The Demand & Supply Assessment report advises that between the years ending June 1994 and June 2018 the count of dwellings in Cromwell’s rural fringe/rural area has increased by 847 or 618%, being an average annual increase of 35 dwellings.

At the conclusion of Section 2.3 the Demand & Supply Assessment report provides a breakdown of the number of titles created since 2013 in the “rural fringe/rural area” [being the Cromwell Ward outside the Cromwell CAU] as follows:

- “● *54% of rural residential lots (as defined in this report) in the rural fringe/rural area were created (or modified) since 2000. 15% were created since 2013.*
- *72% of rural lifestyle lots in the rural fringe/rural area were created (or modified) since 2000. A significant 25% were created since 2013.*
- *75% of residential lots (those less than 2,000sqm for the purpose of this report) in the rural fringe/rural area were created (or modified) since 2000. A significant 31% were created since 2013.”*

Again we note that care is required in interpreting the terms used in the above analysis. The “rural residential” and “rural lifestyle” lots will include lots within specific areas of the Residential Resource Area as will many of the “residential” lots. Again it is noted that the term “rural fringe/rural area” includes urban areas such as Bannockburn, Lowburn and Pisa Moorings/Perriam Cove. No breakdown is provided with respect to what proportion of the lots referred to are located in the Rural Resource Area (including on land subject to the Rural Residential notation) being the rural environment as distinct from the urban areas that includes specific areas of the Residential Resource Area as provided for in the Operative District Plan.

In Section 3.1 the Demand & Supply Assessment report provides a breakdown of titles by area for the Cromwell CAU, the Cromwell rural fringe/rural area, and the Cromwell Ward in total. Overall between 42% and 50% of parcels in Cromwell’s rural fringe/rural area [ie. the Cromwell Ward

outside the Cromwell CAU] are currently “rural residential” or “rural lifestyle” size titles. Again it is noted that this analysis will include land in specific areas of the Residential Resource Area.

Figure 13 in Section 3.2 of the Demand & Supply Assessment report is informative as it shows the location of “rural residential” and “rural lifestyle” titles in Cromwell and environs. This plan depicts the concentration of “rural residential” lots within the Residential Resource Area (4) at Bannockburn, the Residential Resource Area (5) at Lowburn and the Residential Resource Area (6) at Cromwell, in particular; along with “rural residential” and “rural lifestyle” lots in the Business Resource Area, the Business Resource Area (1) and the Industrial Resource Area at Cromwell. By comparison we note that there is a relative absence of “rural residential” sites at Ripponvale in the immediate vicinity of the site subject to Plan Change 14.

The demand for future dwellings in the Cromwell Ward is assessed in Section 4.3 of the Demand & Supply Assessment report. The report considers that of key relevance to the plan change is that the rural fringe/rural areas of Cromwell Ward are expected to have a significantly faster dwelling growth rate than the Cromwell Urban Area. In absolute terms the report advises that the Rationale projections have disclosed that approximately 860 additional dwellings will be required in the rural fringe/rural areas of the Cromwell Ward by 2043; and that just under half (47%) of all dwelling growth projected across the Cromwell Ward will be in the rural fringe/rural area. Again we emphasise that the “rural fringe/rural area” includes all of the Cromwell Ward excluding the Cromwell CAU ie. this includes urban areas beyond the town of Cromwell.

The Demand & Supply Assessment report confirms that there will be a substantial demand for dwellings into the future; and that a substantial part of the dwelling growth is anticipated to occur outside the town of Cromwell in the Cromwell Ward. The Demand & Supply Assessment report advises in Section 5 that based on Council’s total dwelling growth projections, Plan Change 14 would cater for approximately 18% of long term demand projected between 2016 and 2043 [outside the Cromwell CAU.]

A key resource management issue to be addressed is whether it is better to provide for the demand for large lot residential development at the subject site or elsewhere, perhaps by expanding existing specific areas within the Residential Resource Area that provide for larger lot residential subdivision and development. Another alternative would be to meet the demand for dwellings by consolidating such development within existing urban areas. We question the appropriateness of providing an additional supply of larger residential allotments at an enclave within the rural environment as proposed through Plan Change 14.

8.9.4 Conclusion : Land Supply and Growth

Notwithstanding the above comments we acknowledge that a positive effect of Plan Change 14 would be to provide for growth in the supply of housing stock on larger residential lots in the Cromwell Ward. As previously noted Plan Change 14 would provide for a maximum of 160 dwellings within the Rural Lifestyle Areas 1-5 in the proposed Rural Resource Area (5).

8.10 Effects on Heritage Values

While no technical report with respect to heritage values is provided in support of the request; the requestor has advised that it has consulted with Dr Matthew Schmidt of Heritage New Zealand Pouhere Taonga for advice on the water races present on the site.

Dr Schmidt has advised that any surviving water races on the property date from at least the 1870s and that the races will be in varying degrees of preservation. It is anticipated that this refers to part of the Ripponvale Settlers Water Race that bisects the site. The requestor has noted that, as usual, an archaeological authority would be required to modify the historic water races located at the site.

The requestor proposes that should future development affect the historic water races that an application would be made for an archaeological authority in addition to the resource consent application to the CODC. These are the mechanisms by which any effects on the water races are to be assessed.

No heritage sites contained in the NZ Heritage List are present at the site; and no heritage items are identified as being on the site in the Operative District Plan.

The requestor has noted in Section C1.3 of the request document that there is a stone building located centrally within the site that has been used as a storage building for hazardous goods. The requestor considers that this building has “heritage aesthetics” and advises that it is to be preserved as a feature within the eventual development if it is possible to relocate the building. The PSI prepared by WSP Opus in Section 4.1 lists the various buildings on the site and identifies their location. The building deemed to have “heritage aesthetics” is the stone pesticide storage shed identified as Item J that is depicted on the photograph at page 64 of the PSI; such building being depicted in the visualisation at Sheet 20 of the Graphic Supplement to Landscape and Visual Assessment (at Appendix E to the request document).

There appears to be no specific rule that requires the retention of this building in the proposed amendments to the Operative District Plan presented at Appendix A to the request document. We consider that any positive effects associated with the possible relocation and retention of this building are uncertain given that there appears to be no mechanism to ensure that such relocation and retention occurs.

It appears that the only heritage values relevant to the site are the 19th century water races and the stone building with “heritage aesthetics” that has been identified by the requestor. Our overall conclusion is that any adverse effects in terms of heritage values associated with Plan Change 14 will be no greater than minor.

8.11 Effects on Cultural Values

The requestor has noted that no sites of significance for Kai Tahu ki Otago are identified on the site in the Operative District Plan.

No consultation is acknowledged with Kai Tahu in Section B7.0 of the request document albeit that the requestor anticipated that Kai Tahu would have the opportunity to formally submit on Plan Change 14 at the time that it was publicly notified. We confirm that no submission has been received from Kai Tahu in response to Plan Change 14.

The requestor has advised that the Heritage New Zealand Pouhere Taonga Archaeological Discovery Protocol will be adhered to indirectly through the matters of control for subdivision. We note in this context that while no reference appears to be made to an accidental discovery protocol in the matters with respect to which control is to be exercised (in proposed Rule 4.7.2(ii)(a)(vi)); the potential exists for an applicant to volunteer such a condition.

In all the circumstances we consider that Plan Change 14 will have no particular effects in terms of cultural values.

8.12 Potential Soil Contamination

A Preliminary Site Investigation (PSI) dated 14 May 2019 has been prepared by WSP Opus that is attached to the Request Document at Appendix K. The PSI has been undertaken to assess the potential for soil contamination at the site.

Section 3.1.4 of the PSI advises that discussions with Mr Leyser (who is described as the current site owner) indicate that the property has been in his possession since approximately 1973; and that since then the paddocks on the site have been used for various farming purposes including grazing by various livestock (sheep, cattle and deer) and orchards. The PSI notes that much of the current pastoral land present at the site was at some stage planted with fruit trees including pears, apples and stone fruit. Figure 3 in Section 3.1.5 is informative as this shows where orchards have historically been located (or may have been located) on the site. This includes much of the Farmland Basin and part of the Farmland Terraces as identified in Sheet 17 of the Graphic Supplement to the Landscape and Visual Assessment presented in Appendix E to the request document.

Section 4.1 of the PSI advises that a site walkover was undertaken on 23 March 2018; and that the site inspection centred on activities undertaken in the central part of the site where the majority of the site buildings were located. Table 4 summarises the activities identified, including where potential sources of contaminants exist. It is noted that the denser subdivision and residential activity to be enabled by Plan Change 14 is concentrated on that portion of the site that coincides with the location of existing and former orchards and site buildings.

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES) came into force on 1 January 2012. The site is a piece of land as defined in Regulation 5(7) of the NES as activity or industry described in the Hazardous Activities and Industries List (HAIL) is being or has been undertaken on it. The PSI confirms that the following HAIL activities apply to the site:

A10: Persistent pesticide bulk storage or use including sports turfs, market gardens, orchards, glass houses or spray sheds

A13: Petroleum or petrochemical industries or bulk storage of petroleum or petrochemicals above or below ground

A17: Storage tanks or drums for fuel, chemicals or liquid waste

G3: Landfill sites

G5: Waste disposal to land

Knowledge of the presence of the HAIL activities listed above at the site has resulted from the assessment of the activities undertaken on the site, including a review of site history, anecdotal evidence, historical aerial photography, and the site inspection. In Section 5.4 the PSI notes that no records exist of the type of pesticides historically used in conjunction with production activity [orcharding and pastoral farming] but that it is considered plausible, given its age, that older pesticides may have been used at the site.

No soil or ground water samples have been taken for the PSI investigation. The PSI advises that in the absence of any soil sampling data identifying the potential presence of heavy metals in soils it is unclear if contaminants exist in the soils. Therefore a data gap exists regarding the actual risks should earthworks be undertaken at the site in terms of human health. At Section 5.4 the PSI also notes that hydrocarbon storage was noted within the central 'hub' of the site in and around the buildings. Spillage over a number of years appears to have occurred adjacent to these locations and the integrity of the underground storage tank could not be ascertained during the site inspection. The PSI notes that there is therefore a risk of exposure to workers on site from hydrocarbon contaminated soils and, should these soils remain, the exposure risk to site occupiers must also be considered.

The PSI also advises in Section 5.4 that groundwater beneath the site is considered to be a more sensitive aquifer with extractions occurring along Ripponvale Road for both irrigation and domestic consumption. Migration of contaminants from the site should therefore be considered as the local granular soils are likely to enable migration to occur.

The PSI advises that a Detailed Site Investigation (DSI) would be required to fill these data gaps and refine the conceptual site model if earthworks or a change in land use were proposed at the locations identified in Table 4 [and presumably on land that has been or may have been used for orcharding].

In Section 7 of the PSI the risks to human health with respect to the various historic activities which may have occurred on the site are assessed. The conclusion expressed in the PSI is that it is considered more likely than not that the risk to human health and groundwater associated with potential contamination derived from historic and ongoing activities across the site as a whole is Moderate to High.

The PSI recommends in Section 8.1 that within the Rural Resource Area (5) a DSI should be undertaken on the site areas where HAIL activities have been identified. The PSI more specifically describes the required investigations as follows:

- “● **Orchards:** Investigation of the historic areas of orchard activities be undertaken where rural residential rezoning is proposed to determine the risks posed to human health with respect to potential future ground disturbance. Taking into consideration the large areas of land involved with this proposed rezoning, investigations should be designed to give a broad overview of potential contaminants initially with a more detailed second phase of investigation undertaken on areas highlighted as being a risk to human health within the initial screening assessment.
- **Petroleum storage:** Investigation and/or removal of the buried fuel storage tank should be undertaken in order to assess whether leakages to groundwater have occurred and to remove the source of any potential ongoing contamination from this tank.
- **Pesticide Storage and mixing:** Site specific investigation of the areas where pesticide storage and more importantly mixing occurs should be undertaken as these areas have an increased likelihood of concentrated contaminants being present.
- **Unlicensed landfilling:** Further assessment of areas where landfilling has been undertaken should be undertaken. This assessment should take in to consideration potential ground gas and groundwater contamination issues associated with unlicensed landfilling with consideration given to remediation/removal of landfilling materials.
- **Offal Pits:** At this stage no further investigation of the offal pits are considered necessary due to their depth of burial. Should these areas be proposed for deeper excavation in the future, such as for foundation solutions then this recommendation should be reassessed to protect workers coming in to contact with possible microbial contamination.
- **Livestock storage and spraying:** The areas where livestock have been held within pens, particularly close to the buildings in the central area of the site, should be investigated to assess if spray race activities have been undertaken in these areas.”

The PSI makes further recommendations to the effect that:

1. Should any other ground conditions be encountered that are not covered by the PSI a Suitably Qualified and Experienced Practitioner in contaminated land assessment should be consulted in order to assess the risks to human health and sensitive receptors.
2. Prior to any demolition being carried out an assessment of the buildings should be undertaken by a specialist asbestos in building assessor in order to determine the risks posed prior to any demolition on site. The PSI notes that compliance with this recommendation would effectively reduce the potential for soil contamination associated with asbestos containing materials in later stages of development and protect the demolition contractors from the release of un-investigated potentially hazardous materials.

The PSI has found that the risk to human health derived from historic and ongoing activities across the site is Moderate to High; and recommends that a DSI should be undertaken where HAIL activities have been identified within the Rural Resource Area (5).

The NES provides for the DSI and site remediation processes; and it is acknowledged that preparation of a DSI must precede the subdivision and development of the site for residential activity. For completeness we note that in the absence of a DSI any subdivision or disturbance of soil under proposed residential buildings would default to an unrestricted discretionary activity in terms of Regulation 11(2) of the NES.

We consider that the DSI/soil remediation processes, as provided for in accordance with the NES, will serve to avoid or mitigate any actual and potential effects associated with soil contamination across the site.

8.13 Integrated Location

Several supporting submitters such as Stacey John Bailey (4/1) opposed by James Dicey (117/2) support the proposal as being a logical location for lifestyle/rural residential use being within the close proximity to Cromwell township. Max Edward Bruhns (7/1) opposed by James Dicey (117/3) considers that the development forms a well-planned transition from urban land use in Cromwell town/township to surrounding pastoral and horticultural land uses. In his support of the submission by Basil John Lister (49/1) Carl Michael McNulty (145/1) states that this is a logical and desirable location for such a development.

Werner Murray (64/2) supported by James Dicey (117/28) considers that the proposed development is out of centre and is not integrated into the community. The submitter does not consider that Plan Change 14 is a logical progression for residential development (noting that “rural residential” development has been applied for) for Cromwell. The NZ Transport Agency (65/11) supported by James Dicey (117/29), Horticulture New Zealand (130/5) and Kate & Rob Wardle (171.3/1) notes that the subject site is located outside of the areas identified for future growth in the Spatial Plan [an outcome of the Cromwell Masterplan process discussed in Part 10.2.4 (below)] and is on the opposite side of State Highway 6 to the Cromwell Town Centre. The submitter notes that if rezoned the area will become a remote satellite residential enclave primarily reliant on private vehicles to travel.

The Otago Regional Council (67/12) supported by James Dicey (117/30) and Horticulture New Zealand (130/6) observes that State Highway 6 provides a logical boundary to urban Cromwell and also a strong barrier to integration between the Plan Change 14 site and urban Cromwell. The submitter considers that Plan Change 14 is essentially urban development beyond the existing township of Cromwell. Public Health South on behalf of Southern District Health Board (68/7) opposed by Horticulture New Zealand (130/7) and supported by the NZ Transport Agency (149/2) has expressed concern about the lack of connectivity of the site with the established urban

environment of Cromwell. Residents for Responsible Development Cromwell (70/6) consider that the proposal is inconsistent with containing future growth within Cromwell.

We consider that the proposal provides, to a substantial degree, for large lot residential development, being a form of urban development. It is again noted in this instance that the Residential Resource Area is defined as being part of the Urban area (in Section 18 of the Operative District Plan); and that allotments proposed in the Rural Lifestyle Areas 1-4 are comparable to average or minimum lot areas required in specific areas within the Residential Resource Area.

It is noted that no provision has been made in the Operative District Plan for any part of the Ripponvale area (to the west of State Highway 6) to be subdivided and developed for urban purposes by the application of a Residential Resource Area or any other status that provides for subdivision and development to an equivalent density.

We consider that the subdivision and development enabled by Plan Change 14 will be a residential enclave separated from the existing Cromwell township by State Highway 6, and by the established and proposed orchards and the Cromwell Racecourse Recreation Reserve on either side of Ripponvale Road.

While the potential exists to provide connectivity for various modes of transport including pedestrians, cyclists and motor vehicles, this will not achieve physical integration of the substantially urban subdivision and development proposed in Plan Change 14 with the existing urban area of Cromwell.

Our conclusion is that the proposal will have a significant adverse effect in terms of its lack of integration with the existing urban area at Cromwell.

8.14 Effects on Rural Character

The existing rural character of properties at Ripponvale Road, including the subject site, is confirmed in Clause 6.2.3 of the Assessment of Landscape and Visual Effects presented at Appendix E to the Request Document.

Several submitters have expressed concern at the effect of the proposal on the rural character that is apparent at Ripponvale Road. David James Griffin (29/2) supported by James Dicey (117/24) considers that providing for sections as small as 2000m² as proposed in Plan Change 14 would change the whole aesthetic appeal of Ripponvale Road and that this would start to suggest that Ripponvale Road was becoming more residential than rural. Ian & Bev Henderson (35/3) seek no further subdivision activity that creates residential size allotments on and close to Ripponvale Road that will impede on their rural lifestyle and their orchard business.

Horticulture New Zealand (38/29) supported by James Dicey (117/26) considers that Plan Change 14 seeks considerably smaller lot sizes and would result in higher density with different character to that provided for the Operative District Plan. The submitter notes that 71% of the development enabled by Plan Change 14 will be 4000m² or less, increasing the density and enabling residential lifestyle development that will impact upon the established rural character of the site and the surrounding environment. Werner Murray (64/8) supported by James Dicey (117/28) considers that the appropriate policy test for Plan Change 14 is the conversion of rural land to urban residential land in a receiving environment completely surrounded by rural development. The submitter also considers (64/4) that a residential subdivision allowing for a minimum lot area of 2000m² is disguised under the name of "rural residential" in the Rural Resource Area.

The NZ Transport Agency (65/8) supported by James Dicey (117/29), Horticulture New Zealand (130/5), Public Health South (155/4) and Kate & Rob Wardle (171.3/1) considers that the minimum lot size proposed in Plan Change 14 will essentially generate residential activities within the Rural Resource Area.

The Otago Regional Council (67/10) supported by James Dicey (117/30) and Horticulture New Zealand (130/6) notes that clearly some of Plan Change 14 promotes density options that are essentially urban, or at least suburban.

Alan Tony Smith (78/2) considers that providing for subdivision with lots smaller than 2 hectares is creating nothing more than a large residential section; and Richard Murray Wallis & Catherine Mary Woods (87/2) consider that to allow lots as small as 2000m² is virtually a residential section in a rural area, and that such sections will not be viable to achieve any rural type activity.

In our view Plan Change 14, which provides for large residential allotments in an area of established rural character, will have a significant adverse effect in terms of loss of rural character values in this area of Ripponvale.

8.15 Provision of Rural Lifestyle Properties

Joanna Margaret Cooper (12/1) opposed by James Dicey (117/16) considers that Plan Change 14 will provide much needed lifestyle properties close to Cromwell.

Chante Fleming (25/1) opposed by James Dicey (117/15) and Horticulture New Zealand (130/3) considers that it will be great to have some rural lifestyle blocks on the market [as a result of Plan Change 14]. John Hare (32/1) also supports Plan Change 14 on the basis that it provides for growth and demand for rural/lifestyle blocks within an area experiencing growth pressure.

M & BC Zareh (94/6) consider that the proposal will provide another offering to the market (for rural lifestyle lots) within the Cromwell area and that the five Rural Lifestyle Areas provide a range of future rural lifestyle living opportunities.

Other supporting submitters on this topic include Abbey Louise Deroles (17/1) opposed by James Dicey (117/14), and Irene Dale Smith (79/1) who consider that the proposal will provide greater supply and diversified stock/section sizes for the local housing market.

Trevor Lyndon Carline (9/1) opposed by James Dicey (117/9) and Peter John McGrath (53/1) consider that Plan Change 14 provides a better alternative to more subdivision in the Rural Resource Area where significant areas have been developed into 8 hectare lifestyle blocks and where large areas of land are being inefficiently used.

Again it is noted that in substantial part large residential allotments and associated residential activity are to be enabled by Plan Change 14; and that whilst located in a rural locality the resulting allotments may be too small for residents to enjoy a rural lifestyle in the normal sense ie. participating in some form of productive rural activity in association with residential activity on the site. Furthermore it is noted that the most productive portion of the site is to be closely subdivided (as enabled by the RLA 1 – 3 provisions); and that the larger lots on the upper portions of the site (in the RLA 4 and 5) may be constrained as to productive use given the limited land use capability of this land being Land Inventory Unit V1e19 [that has the present and potential land uses of Grazing] and possible limitations with respect to the availability of irrigation water at higher elevations at the site.

Our conclusion is that any positive effect in terms of providing rural lifestyle opportunities will be limited given the minimum size of allotments proposed in the RLA 1 – RLA 3, in particular. It is also noted, in the context of the Carline and McGrath submissions, that an average lot area of 8 hectares remains as a requirement for subdivision elsewhere in the Rural Resource Area of the District irrespective of whether Plan Change 14 proceeds.

8.16 Expansion of Cherry Orchard and Provision for Workers Accommodation

Several supporting submissions such as Robert John Chatfield (11/1) opposed by James Dicey (117/11) have expressed support for the expansion of the cherry orchard along with increased employment opportunities. Plan Change 14 provides in Rule 4.7.2(ib)(c) for the Horticulture Area as shown on the Structure Plan to be at least 60% planted prior to the grant of resource consent for residential activity in the Rural Resource Area (5).

Planting of the Horticulture Area as an orchard is a positive aspect of the proposal and complements horticultural development that exists immediately to the east, to the north of Ripponvale Road, and to the south of the site. Such horticultural development is a permitted activity in the Rural Resource Area and could proceed irrespective of whether Plan Change 14 is approved. As previously noted land to be subdivided into large residential allotments as enabled by Plan Change 14 will occupy land suitable for horticultural development at the site.

The submissions by Stephanie Davey (16/1) opposed by James Dicey (117/13) and Horticulture New Zealand (130/1), Chante Fleming (25/1) opposed by James Dicey (117/15) and Horticulture New Zealand (130/3), Basil John Lister (49/1) supported by Carl Michael McNulty (145/1) and Toby Frederick Wallis (88/1) have referred to the provision of worker accommodation as a positive element of Plan Change 14.

We have found no explicit reference to worker accommodation in the request document (albeit that “horticultural support activities” are referred to in the context of the Horticulture Area on page 86). The opposing submissions by Horticulture New Zealand (130/1 & 130/3) note that Plan Change 14 as drafted provides no certainty that worker accommodation will be provided. The further submitter has noted that such accommodation is not identified on the Structure Plan or in the proposed plan provisions.

Rule 4.7.3(viii) provides for seasonal workers accommodation to accommodate a maximum of 60 persons as a discretionary (restricted) activity in the Rural Resource Area. This is a provision of the Operative District Plan that provides for workers accommodation at the site irrespective of whether Plan Change 14 is approved. Seasonal workers accommodation for more than 60 persons in the Rural Resource Area is an unrestricted discretionary activity in terms of Rule 4.7.4(x).

Our conclusion is that expansion of the cherry orchard and workers accommodation is already provided for in terms of the current rules of the Operative District Plan.

8.17 Precedent

David James Griffin (29/5) supported by James Dicey (117/24), the DJ Jones Family Trust and Suncrest Orchard Limited (45/3) supported by James Dicey (117/22), the NZ Transport Agency (65/14) supported by James Dicey (117/29), Horticulture New Zealand (130/5) and Kate & Rob Wardle (171.3/1), the Otago Regional Council (67/15) supported by James Dicey (117/30), Horticulture New Zealand (130/6) and the NZ Transport Agency (149/1), and Alan Tony Smith (78/6) have all raised issues with respect to the setting of a precedent for other developers to purchase orchards at Ripponvale or land in other orcharding areas around Cromwell, and then to subdivide that land into sections as small as 2000m².

Plan Change 14 relates specifically to the property at 144 Ripponvale Road that is subject to the requested plan change. Plan Change 14 will therefore have no bearing on the rules that relate to the subdivision and development of other land in the Rural Resource Area. We do not consider that Plan Change 14 establishes a precedent for the subdivision and development of other land in the Rural Resource Area at Ripponvale or elsewhere in the Cromwell locality.

While Plan Change 14 does not establish a precedent in itself it can be envisaged that a proponent of a future plan change could cite Plan Change 14, if approved, as the basis for promoting planning provisions that enable the subdivision and development of land for large residential allotments elsewhere at Ripponvale or in the Cromwell environs. The “like as like” principle could be advanced to justify a request or requests for a plan change(s) on the basis that Plan Change 14 has been approved. It is emphasised that any such future request for a plan change would have to be determined on its particular merits; and it may well be that Plan Change 14 could be distinguished in some manner from such future requests.

We consider that precedent is not a relevant consideration in this instance.

8.18 Sound Resource Management Practice

Werner Murray (64/11 & 64/15) supported by James Dicey (117/28) has promoted that given that the Council is currently going through a plan change process Plan Change 14 should be rejected on the grounds that the request (or part of the request) is not in accordance with sound resource management practice. The submitter has also noted that Cromwell is going through a process of a Masterplan and a District Plan Review year at great cost in both time and money to the community and that Plan Change 14 will undermine that process.

It is simply noted that the Cromwell Masterplan (discussed in Part 10.2.4 below) is not a statutory document and that no proposed plan changes have yet resulted from the Masterplan process. Furthermore there is no proposed District Plan Review at this time. In the absence of any proposed plan change or proposed District Plan Review there is no statutory planning document formally proposed by the Council that has any bearing on Plan Change 14. Therefore we reject the contention that Plan Change 14 is not in accordance with sound resource management practice (in this context).

8.19 Air Quality

The Otago Regional Council (67/3) supported by James Dicey (117/30), Horticulture New Zealand (130/6) and Public Health South (155/5) has advised that under the Regional Plan : Air for Otago (Air Plan) Plan Change 14 is classified as Air Zone 3. The submitter advises that Policy 9.1.3(a) of the Air Plan requires all new heating appliances on properties in Air Zone 3 less than 2 hectares in size to meet stringent emission and thermal efficiency standards. Reference is also made in the submission to Policy 9.1.4 of the Air Plan that promotes clean heating in new residential areas where discharges are likely to have an adverse effect on air quality in Air Zones 1 or 2, or degrade ambient air quality. The submitter has noted that the proposed development is near Cromwell’s Air Zone 1 in the Air Plan and that use of solid fuel heating systems could exacerbate ambient air quality, both within the new development and the existing Cromwell urban area.

The Otago Regional Council (67/4 & 67/5) supported by James Dicey (117/30), Horticulture New Zealand (130/6) and Public Health South (155/5) has recommended that if Plan Change 14 is approved, that the use of low or no emission heating systems within the Plan Change 14 area be required; and that low emission communal heating systems be promoted for developments of this type.

We anticipate that the requestor will respond to these suggestions. Given the scale of the development envisaged within the Rural Resource Area (5), and particularly given the lot sizes provided for in the RLA 1 – 4, it would appear appropriate to require the use of low or no emission heating systems as promoted by the Otago Regional Council, if Plan Change 14 is approved.

8.20 Pest Control

The submission by Gordon McAlpine Stewart (83/4) notes that the control of rabbits and possums will be required on the hill block [ONL]; and that some grazing of this area will be required to reduce fire risk.

Donald Alan Young (93/1) refers to the boundary fence of the “western park area” [ONL] and the “road proposal” through to Burn Cottage Road. The submitter expresses support for Plan Change 14 on the condition that the hill park area [ONL] and the road are fenced off with new rabbit netting fencing.

We anticipate that the requestor will respond to these submissions at the hearing. In particular we anticipate that the requestor will clarify whether the requestor is to retain ownership of the ONL; whether this area will be managed as part of one of the future adjacent lots (within the RLA 5); or whether the ONL will be managed under some other regime. It is also anticipated that the requestor will clarify whether rabbit netting fencing is to be provided at the external boundary of the ONL and the RuRA(5) and along the road line within the subdivision. It would not be appropriate to require the requestor to provide rabbit proof fencing adjacent to the unformed portion of McFelin Road that is outside the Plan Change 14 site.

8.21 Positive Effects

Various positive effects associated with the proposal are listed in Section G13.0 of the request document and in the letter dated 29 May 2019 which contained the formal request for Plan Change 14.

The requestor considers that rezoning the land as provided for in Plan Change 14 will provide an opportunity to meet the future growth demand for rural residential/rural lifestyle land within the Cromwell Ward.

The majority of the 160 lots to be created for residential activity will be located in RLA 1 – RLA 4 where minimum lot areas vary between 2000m² and 1 hectare. As previously noted allotments of this area are explicitly provided for in the Cromwell area in specific areas of the Residential Resource Area; and we consider that the RLA 1 – RLA 4 will essentially provide for the development of large lots for residential purposes rather than meeting demand for rural lifestyle development (being the purpose of Plan Change 14). The minimum allotment areas proposed in RLA 1 – RLA 3, in particular, are unlikely to contain sufficient area for hobby farming type activity such as running stock, establishing a small orchard or vineyard, as is found in the context of rural lifestyle development elsewhere in the Cromwell Ward.

Our conclusion is that any positive benefit in terms of meeting future growth demand for rural residential/rural lifestyle land will be limited; albeit that the proposal would have a positive effect in terms of increasing the housing stock on larger residential lots in the Cromwell Ward.

Concentrating a substantial number of allotments in one location, as proposed, has benefits in terms of providing for subdivision and development in a coordinated manner. This is a consequence of providing for a substantial number of allotments in one location. Again we note in this context that many of the allotments are likely to simply be large residential allotments and no

particular imperative exists to locate such an enclave of large lot residential development in a rural environment such as that found at Ripponvale.

Plan Change 14 proposes that the Pisa Range ONL be extended as depicted on the Structure Plan at Schedule 19.23. Such extension has a relatively slight positive effect (as advised by Mr Espie) and we again acknowledge that most of the land concerned is already subject to the ONL notation in terms of the Operative District Plan.

The requestor proposes that provision be made for public access via walking tracks within the ONL and elsewhere on the site. The provision of this additional recreational opportunity will have a positive effect for the community. As previously noted it is unclear whether this opportunity is to extend to both cyclists (including mountain bikers) and walkers, and we anticipate that this will be confirmed at the hearing.

As previously noted the proposal will have a minor positive benefit in terms of ecological values. The proposal to establish native plantings within the buffer strips and elsewhere on the site will enhance ecological values.

The requestor has advised that Plan Change 14 will secure horticultural planting of the Horticulture Area. In essence a 29 hectare expansion of the existing cherry orchard is proposed on land located between the existing cherry orchard and Rural Lifestyle Areas 1 – 4. We again note that while the planting of 60% of this area is required as a precursor to residential activity; that such horticultural development is provided for as a permitted activity under the current Rural Resource Area provisions of the Operative District Plan.

The development of the site as facilitated by Plan Change 14 has the potential to result in job creation associated with site works and building, as does the expansion of horticulture in the area. Horticultural expansion is provided for in terms of the current Operative District Plan provisions that relate to the Rural Resource Area. Job creation associated with the construction of built development would result wherever such development occurs in the District.

Our conclusion is that Plan Change 14 will have some positive effects but that such positive effects are limited.

8.22 Conclusion : Effects on Environment

Plan Change 14 will enable the subdivision and development of land at Ripponvale such that an enclave of predominantly large lot residential development will result.

We consider that the proposal will have significant adverse landscape and visual effects; significant reverse sensitivity effects with respect to existing established activities, particularly orcharding; significant adverse effects in terms of loss of land with productive potential; significant adverse effects in terms of lack of integration with the existing urban area of Cromwell; and significant adverse effects in terms of loss of rural character values in this area of Ripponvale.

Limited positive effects will result in terms of expanding the ONL; providing enhanced recreational opportunities particularly the provision of walking tracks across the site; providing enhanced ecological values; and for providing for growth in housing stock (on larger residential lots).

We conclude that traffic and transport effects, effects on service infrastructure, geotechnical and natural hazard effects, effects on heritage values, effects on cultural values, potential soil contamination effects, and any effects in terms of air quality and pest control will be no more than

minor, and can be appropriately managed through plan change rules and/or conditions of any future subdivision or land use consents.

Our overall conclusion is that Plan Change 14 will have significant adverse effects on the environment; and that these adverse effects are not outweighed by positive effects associated with the plan change.

9.0 CONSIDERATION OF ALTERNATIVES

Section 74(1)(d) and (e) of the Act confirm that a change is to be in accordance with the Council's obligation (if any) to prepare and have particular regard to an evaluation report prepared in accordance with section 32. Section 32 establishes requirements for preparing and publishing evaluation reports on a proposed plan change as follows:

"32. Requirements for preparing and publishing evaluation reports

- (1) *An evaluation report under this Act must-*
- (a) *examine the extent to which the objectives of the proposal being evaluated are the most appropriate way to achieve the purpose of this Act; and*
 - (b) *examine whether the provisions in the proposal are the most appropriate way to achieve the objectives by-*
 - (i) *identifying other reasonably practicable options for achieving the objectives; and*
 - (ii) *assessing the efficiency and effectiveness of the provisions in achieving the objectives; and*
 - (iii) *summarising the reasons for deciding on the provisions; and*
 - (c) *contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal.*
- (2) *An assessment under subsection (1)(b)(ii) must-*
- (a) *identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions, including the opportunities for-*
 - (i) *economic growth that are anticipated to be provided or reduced; and*
 - (ii) *employment that are anticipated to be provided or reduced; and*
 - (b) *if practicable, quantify the benefits and costs referred to in paragraph (a); and*
 - (c) *assess the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions.*

... "

Part F of the request document includes an evaluation of the objectives, policies, rules and other methods under section 32. This is supported by the more detailed evaluation that is presented at Appendix C to the request document.

9.1 Plan Change 13 Objectives

Section F1.0 of the request document notes that section 32(6) of the Act defines "objectives" in the context of section 32 as follows:

- "(a) for a proposal that contains or states objectives, those objectives;*
- (b) for all other proposals, the purpose of the proposal"*

In this instance Plan Change 14 does not seek to introduce objectives into the Operative District Plan, rather it relies on existing objectives. Therefore, for the purposes of section 32(1), it is the purpose of the proposal that must be evaluated when examining the extent to which the proposal is the most appropriate way to achieve the purpose of the Act.

The purpose of the proposal is stated in Section B5.0 of the request document as follows:

“Purpose of the Proposal:

To enable the subdivision, use and development of approximately 142 hectares of land located at 144 Ripponvale Road to provide a mix of different land use densities to meet demand for rural lifestyle development outside of urban Cromwell; recognise and provide for the natural landscape values of the Pisa Range; and facilitate use of a further approximately 29 hectares of land for horticultural development... ”

(Emphasis Added)

We have concluded that Plan Change 14, which provides for an indicative yield of 107 lots for residential activity having minimum areas between 2000m² and 4000m² in the Rural Lifestyle Areas 1 – 3 and 29 lots for residential activity having a minimum area of 1 hectare in the Rural Lifestyle Area 4, essentially creates large residential lots for residential activity. In these circumstances Plan Change 14 will not “meet demand for rural lifestyle development” outside of urban Cromwell but instead will enable an enclave of large lot residential subdivision and development that will constitute a satellite urban area at Ripponvale.

In all the circumstances we consider that the purpose of the proposal (being Plan Change 14) is not the most appropriate way to achieve the purpose of the Act; and that the provisions of Plan Change 14 are not the most appropriate way to achieve the purpose of the proposal.

9.2 Operative District Plan Objectives

The objectives of the Operative District Plan provide the basis for the existing pattern of development within the District including in the Rural Resource Area and the Urban areas (defined as meaning the Residential, Business, Industrial and Rural Settlement Resource Areas in Section 18 of the Operative District Plan).

9.2.1 Objectives for Rural Resource Area

The land subject to Plan Change 14 is currently within the Rural Resource Area in terms of the Operative District Plan. The objectives that apply to the Rural Resource Area will continue to apply to the Rural Resource Area (5) and to the balance of the site subject to Plan Change 14. Objectives of particular relevance include the following:

- 4.3.1 **Objective - Needs of the District’s People and Communities**
To recognise that communities need to provide for their social, economic and cultural wellbeing, and for their health and safety at the same time as ensuring environmental quality is maintained and enhanced.
- 4.3.2 **Objective – Outstanding Natural Landscapes and Outstanding Natural Features, and Land in the Upper Manorburn/Lake Onslow Landscape Management Area**
To protect the Districts outstanding natural landscapes and outstanding natural features, and land in the Upper Manorburn/Lake Onslow Landscape Management Area (including landforms) from the adverse effects of inappropriate subdivision, use and development.
- 4.3.3 **Objective - Landscape and Amenity Values**

To maintain and where practicable enhance rural amenity values created by the open space, landscape, natural character and built environment values of the District's rural environment, and to maintain the open natural character of the hills and ranges.

- 4.3.4** **Objective – Recreation Reserve**
To maintain and enhance the quality of the District's recreation resources and public access to those resources.
- 4.3.7** **Objective - Soil Resource**
To maintain the life-supporting capacity of the District's soil resource to ensure that the needs of present and future generations are met.

Following our consideration of the effects of the proposal in Part 8.0 of this report; we consider that the proposal is consistent with Objective 4.3.2 to the extent that the ONL notation is to be extended; and that the proposal is consistent with Objective 4.3.4 as public access is to be provided to tracks and footpaths within the development (albeit that the construction of tracks in the ONL may be contrary to Objective 4.3.2).

In our view the proposal is inconsistent with Objective 4.3.3. The enabling of large residential lots for residential activity is not consistent with maintaining and (where practicable) enhancing rural amenity values created by the open space, landscape, natural character and built environment values of the District's rural environment including that found at Ripponvale; and to maintaining the open natural character of the hills and ranges, including land currently subject to the SAL notation at the site.

The proposal, in part, achieves Objective 4.3.7 as the Horticulture Area is to be utilised for orcharding purposes. The proposal is inconsistent with Objective 4.3.7 as it will not maintain the life-supporting capacity of the soil resources over much of the lower portion of the site; as Plan Change 14 enables the subdivision and development of this land for large lot residential purposes.

On balance Plan Change 14 is not consistent with Objective 4.3.1 as it does not ensure that environmental quality is maintained and enhanced. Again it is emphasised that this objective applies to the Rural Resource Area and that the proposal, in substantial part, constitutes enabling an enclave of large lot residential activity within the Ripponvale rural environment.

9.2.2 Objectives for Section 6 : Urban Areas

In our view Objectives 6.3.1-6.3.4 (and the associated Policies 6.4.1 and 6.4.2) are relevant to Plan Change 14 given that the density of subdivision and residential activity to be enabled in the Rural Resource Area (5) is, in large part, consistent with that found in urban areas elsewhere in the Cromwell Basin, including in the Residential Resource Areas (2), (4), (5) and (6). These provisions state as follows:

- 6.3.1** **Objective - Needs of People and Communities**
To promote the sustainable management of the urban areas in order to:
- (a) Enable the people and communities of the district to provide for their social, economic and cultural wellbeing and their health and safety; and
 - (b) Meet the present and reasonably foreseeable needs of these people and communities
- 6.3.2** **Objective - Amenity Values**
To manage urban growth and development so as to promote the maintenance and enhancement of the environmental quality and amenity values of the particular environments found within the District's urban areas.

- 6.3.3 **Objective - Adverse Effects on Natural and Physical Resources**
To avoid, remedy or mitigate the adverse effects of urban areas on the natural and physical resources of the District.
- 6.3.4 **Objective - Urban Infrastructure**
To promote the sustainable management of the District's urban infrastructure to meet the present and reasonably foreseeable needs of the District's communities.
- 6.4.1 **Policy - Maintenance of Quality of Life within Urban Areas**
To maintain and, where practicable, enhance the quality of life for people and communities within the District's urban areas through:
- (a) Identifying and providing for a level of amenity which is acceptable to the community; and
 - (b) Avoiding, remedying or mitigating the adverse effects on the community's social, economic and cultural wellbeing and health and safety which may result from the use, development and protection of natural and physical resources, and
 - (c) Recognising that change is inevitable in the use of land to enable the community to provide for its wellbeing.
- 6.4.2 **Policy - Expansion of Urban Areas**
To enable the expansion of urban areas or urban infrastructure in a manner that avoids, remedies or mitigates adverse effects on:
- (a) Adjoining rural areas.
 - (b) Outstanding landscape values.
 - (c) The natural character of water bodies and their margins.
 - (d) Heritage values.
 - (e) Sites of cultural importance to Kai Tahu ki Otago.
 - (f) The integrity of existing network utilities and infrastructure, including their safe and efficient operation.
 - (g) The life supporting capacity of land resources.
 - (h) The intrinsic values of areas of significant indigenous vegetation and habitats of significant indigenous fauna.

In terms of Objective 6.3.1 we do not consider that Plan Change 14 will promote the sustainable management of the urban area of Cromwell given the lack of integration of the Rural Resource Area (5) with the existing town of Cromwell. We also note, in terms of Objective 6.3.3, that Plan Change 14 will result in adverse effects on the natural and physical resources of the District including reverse sensitivity effects on the established land use activities in the immediate vicinity; and in terms of the loss of the productive potential of soils.

We also consider, in terms of Policy 6.4.1(a), that Plan Change 14 will not provide a level of amenity acceptable to the community having regard to the effects of the established and proposed land uses in the immediate vicinity of the Rural Resource Area (5); and that Plan Change 14 will not enable the expansion of urban areas in a manner that avoids, remedies or mitigates adverse effects on the adjoining rural areas or on the life supporting capacity of land resources (in terms of Policy 6.4.2(a) and (g)).

9.3 Consideration of Alternatives

There are several options potentially available to the Commissioners including the three options identified in Section F2.0 of the request document.

Options 1-3 as identified by the requestor include the status quo – retaining the current zoning and relying on the resource consent process to determine the most efficient use of the land or await the District Plan Review; rezone the site as a Residential Resource Area; and rezone the site to a new Rural Resource Area with guidance through a Structure Plan (the proposal).

The requestor considers that Option 3, being the proposal, is the preferred option. The evaluation of the costs and benefits of this option are presented in Section F2.3 of the request document.

In our view the proposal to provide large residential allotments via Plan Change 14 is not compatible with the rural character of the site and surrounds; and will not meet the demand for rural residential/rural lifestyle living (on the basis that most of the allotments are large lot residential rather than rural lifestyle in nature). We consider that any benefits in terms of the ONL are limited as the ONL notation applies to part of the site at present; and as Mr Espie considers that extending the ONL boundary, as proposed, will bring a relatively slight positive effect.

While horticultural development is proposed within the Horticulture Area; such development is permitted in terms of the Operative District Plan. The use of other suitable land within the site for horticultural activities will generally be precluded as a consequence of the density of subdivision and development that is proposed. The proposal will provide a benefit in terms of the provision of public walking tracks over parts of the site.

Our conclusion is that the status quo (Option 1) is the preferred option in this instance.

9.4 Conclusion : Alternatives

Our conclusion, following our consideration of the alternatives, is that the status quo option is the most appropriate alternative.

10.0 OTHER STATUTORY CONSIDERATIONS:

10.1 Statutory Provisions

The purpose of district plans is stated in section 72 of the Act:

“72. Purpose of district plans – The purpose of the preparation, implementation, and administration of district plans is to assist territorial authorities to carry out their functions in order to achieve the purpose of this Act.

It is also noted that section 74(1)(a) directs that a territorial authority must prepare and change its district plan in accordance with its functions under section 31. The functions of territorial authorities under the Act are stated in section 31 as follows:

“31. Functions of territorial authorities under this Act – (1) Every territorial authority shall have the following functions for the purpose of giving effect to this Act in its district:

- (a) The establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district:*
- (aa) the establishment, implementation, and review of objectives, policies, and methods to ensure that there is sufficient development capacity in respect of housing and business land to meet the expected demands of the district:*
- (b) the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of -*
 - (i) the avoidance or mitigation of natural hazards; and*

...

- (iia) *the prevention or mitigation of any adverse effects of the development, subdivision, or use of contaminated land:*
- (iii) *the maintenance of indigenous biological diversity:*
- ...
- (d) *The control of the emission of noise and the mitigation of the effects of noise:*
- (f) *Any other functions specified in this Act.*
- (2) *The methods used to carry out any functions under subsection (1) may include the control of subdivision.*”

Having regard to the above, we consider that making provision for the Rural Resource Area (5), as proposed through the provisions of Plan Change 14, will not serve to achieve integrated management of the effects of the use, development or protection of land and associated natural and physical resources of the District, being a function of a territorial authority in terms of section 31(1)(a) of the Act.

In terms of section 31(1)(aa) sufficient development capacity in respect of housing, at least in the short to medium term, is currently available in Cromwell; with potential for providing more land for housing within the existing urban limits of the town in the long term. The Cromwell Masterplan process (discussed in Part 10.2.4 below) has resulted in the identification of additional development capacity at Cromwell, which we understand is to be advanced through the plan change process.

It is again noted that contaminated land (section 31(1)(b)(iia)) has been addressed in the PSI prepared by WSP Opus presented at Appendix K to the request document (discussed in Part 8.12 of this report); and that such effects can be addressed via the DSI process in terms of the NES.

In terms of section 31(1)(d) Plan Change 14 does not adequately mitigate the effects of noise from established land use activities in the vicinity; and this is likely to result in reverse sensitivity effects from the use of land in the Rural Resource Area (5).

Plan Change 14 will not serve to assist the territorial authority to carry out its functions in order to achieve the purpose of the Act.

10.2 Proposed Regional Policy Statement & Other Statutory Documents referred to in Section 74(2) & (2A)

Section 74 of the Act sets out the matters to be considered by a territorial authority when preparing or changing a district plan. Section 74(2) and (2A) state as follows:

- “(2) *In addition to the requirements of section 75(3) and (4), when preparing or changing a district plan, a territorial authority shall have regard to-*
- (a) *Any –*
- (i) *Proposed regional policy statement; or*
- ...
- (b) *Any –*
- (i) *Management plans and strategies prepared under other Acts;*
- and*
- ...
- (2A) *A territorial authority, when preparing or changing a district plan, must take into account any relevant planning document recognised by an iwi authority and lodged with the territorial authority, to the extent that its content has a bearing on resource management issues of the district.*
- ... ”

10.2.1 Proposed Regional Policy Statement

The Proposed Regional Policy Statement for Otago was publicly notified on 23 May 2015. Decisions on submissions on the Proposed Regional Policy Statement were issued on 1 October 2016; and the Partially Operative Regional Policy Statement for Otago became operative on 14 January 2019.

While most provisions of the Proposed Regional Policy Statement as notified in 2015 are now operative; Chapter 3 in Part B entitled “Otago has high quality natural resources and ecosystems” remains part of the Proposed Regional Policy Statement.

Objective 3.1 and its associated Policy 3.1.7 and Objective 3.2 and its associated Policies 3.2.17 and 3.2.18 as presented in the decisions version of the Proposed Regional Policy Statement are relevant. These state as follows:

“Objective 3.1 The values of Otago’s natural resources are recognised, maintained and enhanced

Policy 3.1.7 Soil values

Manage soils to achieve all of the following:

- a) Maintain or enhance their life supporting capacity;*
- b) Maintain or enhance soil biological diversity;*
- c) Maintain or enhance biological activity in soils;*
- d) Maintain or enhance soil function in the storage and cycling of water, nutrients, and other elements through the biosphere;*
- e) Maintain or enhance soil function as a buffer or filter for contaminants resulting from human activities, including aquifers at risk of leachate contamination;*
- f) Maintain or enhance soil resources for primary production;*
- g) Maintain the soil mantle where it acts as a repository of historic heritage objects unless an archaeological authority has been obtained;*
- h) Avoid the creation of contaminated land;*
- i) Control the adverse effects of pest species, prevent their introduction and reduce their spread.*

Objective 3.2 Otago’s significant and highly-valued natural resources are identified, and protected or enhanced

Policy 3.2.17 Identifying significant soil

Identify areas of soil that are significant according to one or more of the following criteria:

- a) Land classified as land use capability I, II and IIIe in accordance with the New Zealand Land Resource Inventory;*
- b) Degree of significance for primary production;*
- c) Significance for providing contaminant buffering or filtering services;*
- d) Significance for providing water storage or flow retention services;*
- e) Degree of rarity.*

Policy 3.2.18 Managing significant soil

Protect areas of significant soil, by all of the following:

- a) Avoiding significant adverse effects on those values which make the soil significant;*
- b) Avoiding, remedying or mitigating other adverse effects;*
- c) Recognising that urban expansion on significant soils may be appropriate due to location and proximity to existing urban development and infrastructure;*
- d) Controlling the adverse effects of pest species, preventing their introduction and reducing their spread.”*

Method 4 which relates to Policy 3.1.7 refers, in the context of District Plans, to Method 4.1.4 and Method 4.1.5; and Method 4 that relates to Policy 3.2.18 also refers to Method 4.1.5. The corresponding provisions to Methods 4.1.4 and 4.1.5 of the Proposed Regional Policy Statement, as presented in the Partially Operative Regional Policy Statement, are Methods 4.1.5 and 4.1.6, respectively, which state as follows:

- “4.1.5 Policies 3.1.7, 3.1.8 and 5.4.1: by including provisions to manage the discharge of dust, and silt and sediment associated with earthworks and land use;*
- 4.1.6 Policies 3.1.7, 3.2.18, 4.5.1, and 5.3.1: by managing urban growth and development and the subdivision of land to protect significant soils.”*

It is also noted that Method 5 Research, Monitoring and Reporting which relates to Policy 3.2.17 refers to Method 5.1.3c and Method 5.2.1d. Method 5.1.3c (as stated in both the Proposed Regional Policy Statement and the Partially Operative Regional Policy Statement) states as follows:

- “5.1 Identification of important resources*
- 5.1.3 Regional council will:*
- ...*
- c. Identify significant soils;*
- ...”*

Method 5.2.1d (as stated in the Proposed Regional Policy Statement only) states as follows:

- “5.2 Research*
- 5.2.1 The regional council will:*
- ...*
- d. Investigate and provide guidance on:*
- i. The inventory and mapping of soil resources;*
- ii. The location and extent of significant soil;*
- iii. Identification of threats to the life-supporting capacity of soil resources;*
- ...”*

It is understood that to date the Otago Regional Council (ORC) has not identified significant soils as provided for in Method 5.1.3c. It is again noted, however, that the soils on the lower portions of the site are the same as those soils that have been developed for horticultural purposes elsewhere at Ripponvale. Furthermore it is noted that Horticulture New Zealand (38/27) supported by James Dicey (117/26) and Kate Wardle (170/1) has noted that based on the significance of horticulture in Central Otago; that the productive soils in Central Otago should be classed as significant for primary production. It is also noted that the submission by the DJ Jones Family Trust and Suncrest Orchard Limited (45/3) supported by James Dicey (117/22) notes that orchard areas around Cromwell have a unique mix of local soil conditions, available water supply and an ideal microclimate that provides suitable winter chilling and dry summer conditions that are essential for summer fruit growing.

In our view Plan Change 14 is not consistent with Policies 3.1.7 and 3.2.18 of the Proposed Regional Policy Statement and the associated Method 4.1.6 (as now presented in the Partially Operative Regional Policy Statement); as Plan Change 14 will not serve to manage urban growth and development and the subdivision of land to protect significant soils.

10.2.2 Otago Southland Regional Land Transport Plans

The combined Otago Southland Regional Land Transport Plans have been prepared under the Land Transport Management Act 2003. This is a document is to be had regard to pursuant to section 74(2)(b)(i) of the Act.

Section 3.4 of the Otago Southland Regional Land Transport Plans contain land transport policies. Policies 7 and 8 are of relevance and these state as follows:

7. *When needed to ensure resilience, prompt a change in travel behaviour towards increased walking, cycling and public transport use in urban areas, by:*
 - *managing traffic to maintain certain levels of congestion*
 - *adapting the supply and pricing of car parking over time*
 - *promoting multi-model journeys.*
8. *Support and promote growth in cycle and pedestrian trips and in public transport patronage."*

No provision is to be made currently for infrastructure to provide for walking and cycling trips between the Rural Resource Area (5) and the commercial and community facilities located at Cromwell. The absence of such provision is not consistent with Policies 7 and 8 of the Otago Southland Regional Land Transport Plans. In our view if Plan Change 14 were to proceed provision should be made for cycling and walking via a dedicated footpath along the north side of the east-west limb of Ripponvale Road connecting to a new footpath to extend to the north on State Highway 6, to an appropriately designed crossing that links to the existing sealed walkway opposite the Ripponburn Hospital & Home/Ripponburn Lifestyle Village.

10.2.3 Kāi Tahu ki Otago Natural Resource Management Plan 2005

The Kāi Tahu ki Otago Natural Resource Management Plan 2005 is a relevant planning document recognised by an iwi authority. This document appears to have no particular relevance to the current proposal and we acknowledge that Kāi Tahu has not submitted in response to Plan Change 14.

10.2.4 Cromwell Masterplan Spatial Framework

The "Cromwell 'Eye to the Future' Masterplan Spatial Framework Stage 1 : Spatial Plan" document is dated 5 June 2019. We consider this document to have status as a strategy prepared under the Local Government Act 2002 that has been funded by the Central Otago District Council albeit that the Spatial Plan will primarily be implemented in the context of the RMA by plan changes (and/or the District Plan Review).

The Stage 1 : Spatial Plan document has been produced as part of the Cromwell Masterplan with input from the community and includes a co-ordinated approach to managing growth at Cromwell over the next 30 years. The District Plan and strategic management processes within the Long Term Plan are key implementation tools for the Cromwell Masterplan.

Section 2.3.1 of Stage 1 : Spatial Plan document presents the spatial framework objectives. This includes Objective 1 and supporting statements as presented below:

- "Objective 1 : sense of place – protecting and celebrating Cromwell's valued landscape, conservation and heritage setting***
- *Enable consolidated urban development, predominantly accommodating future growth within existing Cromwell (including the town centre and nearby localities) at a higher density of development than is currently occurring.*

- *Use an identifiable and enduring urban boundary for Cromwell that recognises the valued productive and landscape setting, and protects the wider Basin from encroaching development.*
 - *Plan for growth consistent with landscape, heritage and amenity values.*
 - *Protect and reinforce key views within the surrounding landscapes and waterscapes.*
- ... ”

We consider that the proposal, which is to provide for large residential allotments at Ripponvale, does not serve to enable consolidated urban development within existing Cromwell. Furthermore we note that the Spatial Plan presented in Part 3 of the document (which we have attached as **Appendix 9** to this report) shows that existing and future residential development at Cromwell is to be located to the east of State Highway 6.

Section 3.3.1 relates to “Delineating the Urban Area” and this confirms that State Highway 6 delineates the outer (western) frame to the urban area [of Cromwell]. The final bullet point in Section 3.3.1 states as follows:

- “▪ *West of SH6 rural productive environments are retained and appropriately zoned in recognition of their ‘special character’, economic significance, landscape values, reverse sensitivity factors, and as allied to a sustainable, diversified future.*”

It also occurs to us that if consolidated urban growth is to occur within Cromwell in future that nearby areas with rural character, such as Ripponvale, will assume increasing importance for urban dwellers who may wish to recreate in and enjoy this rural environment that exists close to Cromwell.

Our conclusion is that the proposal is inconsistent with consolidating urban development to the east of State Highway 6 at Cromwell; and with retaining the rural productive environments west of State Highway 6 (that are likely to assume increasing importance for urban dwellers in future) in an appropriate zone, being the existing Rural Resource Area (or similar). We concur with the submission by Robin Henry Maguire Dicey (19/2) supported by James Dicey (117/17) that Plan Change 14 does not accord with the Masterplan, and particularly the Spatial Framework as expressed in the Stage 1 : Spatial Plan document.

It is emphasised that while the Spatial Plan has been prepared under the Local Government Act 2002 the provisions of that document have yet to be formalised in, say, a proposed plan change under the RMA. Given that the Spatial Plan proposals have not yet been subject to the statutory submission and appeal process provided for by the RMA we consider that limited weight can be given to the Spatial Plan in the context of the consideration of Plan Change 14.

10.3 Policy Statements and Plans listed in Section 75(3) & (4)

Section 75(3) and (4) of the RMA provide statutory direction with respect to the contents of district plans as follows:

- “(3) *A district plan must give effect to –*
- (a) *any national policy statement; and*
 - ...
 - (b) *a national planning standard; and*
 - (c) *any regional policy statement.*
- (4) *A district plan must not be inconsistent with –*
- ...
 - (b) *a regional plan for any matter specified in section 30(1).*
 - ...
- ... ”

10.3.1 National Policy Statement on Urban Development Capacity 2016

The Preamble to the National Policy Statement on Urban Development Capacity 2016 (NPSUDC) confirms that all objectives and policies PA1 – PA4 as stated in the NPSUDC apply to all local authorities, including the Central Otago District Council. For the avoidance of doubt it is noted that the Central Otago District does not contain any high-growth urban area or medium-growth urban area as defined in the NPSUDC as it has no urban areas with a resident population (or combined resident population and visitor population) of over 30,000 people.

The NPSUDC is discussed in Section E1.1 of the request document. The Preamble to the objectives as stated in the NPSUDC states as follows:

“The following objectives apply to all decision-makers when making planning decisions that affect an urban environment.”

We also note that the Preamble to Policies PA1 to PA 4 state as follows:

“Policies PC1 to PA4 apply to any urban environment that is expected to experience growth.”

The term “urban environment” is defined in the NPSUDC as follows:

“Urban environment means an area of land containing, or intended to contain, a concentrated settlement of 10,000 people or more and any associated business land, irrespective of local authority or statistical boundaries.”

In 2013 Cromwell (excluding outlying urban areas and rural areas in the Cromwell Ward) had a resident population of 4,143. It appears that the existing urban area of Cromwell, as provided for in the Operative District Plan, does not contain and is not intended to contain a concentrated population of 10,000 people.

While the existing urban area of Cromwell will not contain 10,000 people growth projections prepared by Rationale Limited in the context of the Cromwell Masterplan process forecast a Resident Population for the Cromwell Ward of 10,200 by 2033 and 12,150 by 2048. It is emphasised that these projections are for the Cromwell Ward that contains both Cromwell and other urban areas located in the Upper Clutha Valley. The town of Cromwell may not contain a population of 10,000 by 2048 and therefore Cromwell may not be an urban environment for the purposes of the NPSUDC.

Accordingly, while the objectives and policies PA1 – PA4 of the NPSUDC apply to all local authorities; if Cromwell is not an urban environment (as defined in the NPSUDC) the objectives and policies of the NPSUDC would be of no relevance in the context of Plan Change 14.

Notwithstanding that the NPSUDC may not be relevant to Plan Change 14 we acknowledge that ensuring that there is sufficient development capacity in respect of housing and business land is a function of territorial local authorities in terms of section 31(1)(aa) of the Act, as presented in Part 10.1 of this report.

Given that the NPSUDC is discussed in the request document, and to address a situation whereby evidence is presented to the Commissioners that establishes that Cromwell is an urban environment for the purposes of the NPSUDC, we have chosen to give consideration to the proposal in terms of the objectives and policies of the NPSUDC.

Objectives OA1, OC1 and OD1 of the NPSUDC state as follows:

“OA1: Effective and efficient urban environments that enable people and communities and future generations to provide for their social, economic, cultural and environmental wellbeing.

OC1: Planning decisions, practices and methods that enable urban development which provides for the social, economic, cultural and environmental wellbeing of people and communities and future generations in the short, medium and long-term.

OD1: Urban environments where land use, development, development infrastructure and other infrastructure are integrated with each other.”

In our view Plan Change 14 will not provide for the environmental wellbeing of people, communities and future generations in terms of objectives OA1 and OC1 having regard to the effects of established neighbouring land uses including, in particular, the orchards and the Rockburn Winery. We also consider that the proposal fails to meet objective OD1 given that the Rural Resource Area (5) will not be integrated with the existing town of Cromwell.

Policies PA1 and PA2 of the NPSUDC are concerned with ensuring that there is sufficient housing and business land development capacity in the short, medium and long term; and that infrastructure required to support urban development is likely to be available.

Policies PA3 and PA4 of the NPSUDC state as follows:

“PA3: When making planning decisions that affect the way and the rate at which development capacity is provided, decision-makers shall provide for the social, economic, cultural and environmental wellbeing of people and communities and future generations, while having particular regard to:

- a) Providing for choices that will meet the needs of people and communities and future generations for a range of dwelling types and locations, working environments and places to locate businesses;*
- b) Promoting the efficient use of urban land and development infrastructure and other infrastructure; and*
- c) Limiting as much as possible adverse impacts on the competitive operation of land and development markets.*

PA4: When considering the effects of urban development, decision-makers shall take into account:

- a) The benefits that urban development will provide with respect to the ability for people and communities and future generations to provide for their social, economic, cultural and environmental wellbeing; and*
- b) The benefits and costs of urban development at a national, inter-regional, regional and district scale, as well as the local effects.”*

Again we consider that the proposal is not consistent with providing for the environmental wellbeing of people, communities and future generations in terms of Policy PA3 having regard to the established land use activities that exist in the immediate environs of the land subject to Plan Change 14. The proposal will not serve to consolidate urban development to the east of State Highway 6 at Cromwell; and what will be, to a substantial extent, a large lot residential enclave

and a satellite urban development is not considered to be efficient due to the lack of integration with Cromwell.

10.3.2 Other National Policy Statements

The National Policy Statement on Electricity Transmission 2008, the National Policy Statement for Renewable Electricity Generation 2011 and the National Policy Statement for Freshwater Management 2014 are of no particular relevance to Plan Change 14.

10.3.3 National Environmental Standards

The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health has been addressed in the WPS Opus PSI (Appendix K to the request document) and is discussed in Part 8.12 of this report.

There are no other National Environmental Standards in force that are of any particular relevance to Plan Change 14.

10.3.4 Operative Regional Policy Statement 1998

The Regional Policy Statement for Otago became operative on 1 October 1998. Given that there is now a new Partially Operative Regional Policy Statement we have chosen here to only address those provisions of the 1998 Operative Regional Policy Statement which do not appear to have been superseded by the Partially Operative Regional Policy Statement.

Objectives 5.4.1 and 5.4.2 relate to the land resource and state as follows:

- “5.4.1 To promote the sustainable management of Otago’s land resources in order:*
- (a) To maintain and enhance the primary productive capacity and life-supporting capacity of land resources; and*
 - (b) To meet the present and reasonably foreseeable needs of Otago’s people and communities.*
- 5.4.2 To avoid, remedy or mitigate degradation of Otago’s natural and physical resources resulting from activities utilising the land resource.”*

Policies 5.5.2 and 5.5.3 state as follows:

- “5.5.2 To promote the retention of the primary productive capacity of Otago’s existing high class soils to meet the reasonably foreseeable needs of future generations and the avoidance of uses that have the effect of removing those soils or their life-supporting capacity and to remedy or mitigate the adverse effects on the high class soils resource where avoidance is not practicable.*
- 5.5.3 To maintain and enhance Otago’s land resource through avoiding, remedying or mitigating the adverse effects of activities which have the potential to, among other adverse effects:*
- (a) Reduce the soil’s life-supporting capacity*
 - (b) Reduce healthy vegetative cover*
 - (c) Cause soil loss*
 - (d) Contaminate soils*
 - (e) Reduce soil productivity*
 - (f) Compact soils*
 - (g) Reduce soil moisture holding capacity.”*

The term “high class soils”, being the term used in Policy 5.5.2, is defined in Appendix B : Glossary to the Operative Regional Policy Statement as follows:

“High Class Soils

Soils that are capable of being used intensively to produce a wide variety of plants including horticultural crops. The definition requires good soil and other resource features that in combination are capable of producing a wide range of crops. It does not include areas that may be suited to one or two specialist crops, largely due to the climate rather than soil quality.”

In this instance the southern part of the site is in the same land inventory units as adjacent land that has been developed for orchards. While the Landcare Research Soil Investigation presented at Appendix L to the request document finds that the soils are not suitable for intensive arable cropping and technically fail to be classified as high class soils; it appears that the soils are capable of being used intensively to produce a wide variety of plants including horticultural crops. On this basis Policy 5.5.2 of the Operative Regional Policy Statement is relevant in this instance. It is also noted that Policy 5.3.1(c) of the Partially Operative Regional Policy Statement requires that activities in rural areas be managed to minimise the loss of significant soils. For completeness it is again noted that the Proposed Regional Policy Statement (discussed in Part 10.2.1 above) contains Policy 3.2.18 that is to protect areas of significant soil; and it is noted that the term “high class soils” has not been carried through and used in the PRPS.

Policy 5.5.3 requires the maintenance and enhancement of Otago’s land resource through avoiding, remedying or mitigating the adverse effects of activities, including reducing soil productivity. The Rural Resource Area (5) provides for large lot residential subdivision and development on soils within the subject site and Plan Change 14 and is therefore contrary to Policy 5.5.3 of the Operative Regional Policy Statement.

We consider that Plan Change 14 does not give effect to the provisions of the Operative Regional Policy Statement as presented above.

10.3.5 Partially Operative Regional Policy Statement 2019

The Partially Operative Otago Regional Policy Statement 2019 became operative on 14 January 2019. Objectives and policies presented in Part B Chapter 4 and Chapter 5 of the Partially Operative Regional Policy Statement are relevant.

Objective 4.3 and Policy 4.3.3 relate to infrastructure and state as follows:

“Objective 4.3 Infrastructure is managed and developed in a sustainable way

Policy 4.3.3 Functional needs of infrastructure that has national or regional significance

Provide for the functional needs of infrastructure that has regional or national significance, including safety.”

State Highway 6 is infrastructure that has regional or national significance. An effect of the proposal is that local traffic travelling between the Rural Resource Area (5) and the commercial and community facilities at Cromwell will utilise State Highway 6. This is contrary to the primary role of the state highway that is to carry through traffic.

Objective 4.5 and its associated policies relate to urban growth and development. Objective 4.5 states as follows:

“Objective 4.5 Urban growth and development is well designed, occurs in a strategic and coordinated way, and integrates effectively with adjoining urban and rural environments”

Plan Change 14 provides for the Rural Resource Area (5) to apply to much of the subject site; and we do not consider that the urban development comprising the large residential lots to be enabled by Plan Change 14 will integrate effectively with the adjoining rural environment or with the urban area of Cromwell as required by Objective 4.5 of the Partially Operative Regional Policy Statement. In essence a large lot residential enclave, being essentially a satellite urban area, is proposed that will not integrate with the existing urban area at Cromwell.

Policy 4.5.1 of the Partially Operative Regional Policy Statement relates to providing for urban growth and development and states as follows:

“Policy 4.5.1 Providing for urban growth and development

Provide for urban growth and development in a strategic and co-ordinated way, including by:

- a) Ensuring future urban growth areas are in accordance with any future development strategy for that district.*
- b) Monitoring supply and demand of residential, commercial and industrial zoned land;*
- c) Ensuring that there is sufficient housing and business land development capacity available in Otago;*
- d) Setting minimum targets for sufficient, feasible capacity for housing in high growth urban areas in Schedule 6*
- e) Coordinating the development and the extension of urban areas with infrastructure development programmes, to provide infrastructure in an efficient and effective way.*
- f) Having particular regard to:

 - i. Providing for rural production activities by minimising adverse effects on significant soils and activities which sustain food production;*
 - ii. Minimising competing demands for natural resources;*
 - iii. Maintaining high and outstanding natural character in the coastal environment; outstanding natural features, landscapes, and seascapes; and areas of significant indigenous vegetation and significant habitats of indigenous fauna;*
 - iv. Maintaining important cultural or historic heritage values;*
 - v. Avoiding land with significant risk from natural hazards;**
- g) Ensuring efficient use of land;*
- h) Restricting urban growth and development to areas that avoid reverse sensitivity effects unless those effects can be adequately managed;*
- i) Requiring the use of low or no emission heating systems where ambient air quality is:

 - i. Below standards for human health; or*
 - ii. Vulnerable to degradation given the local climatic and geographical context;**
- j) Consolidating existing coastal settlements and coastal urban areas where this will contribute to avoiding or mitigating sprawling or sporadic patterns of settlement and urban growth.”*

Plan Change 14 does not provide for urban growth and development in a strategic and coordinated way. The Spatial Plan produced as part of the Cromwell Masterplan process provides a future development strategy with respect to the Cromwell area within the District. The proposal is inconsistent with Policy 4.5.1a) as it fails to enable consolidated urban development; is to the west of State Highway 6 that delineates the outer frame to the Cromwell urban area; and does not serve to retain land that is part of the rural productive environment to the west of State Highway 6 at Ripponvale.

In terms of Policy 4.5.1d) we note that Schedule 6 of the Partially Operative Regional Policy Statement states as follows:

“Schedule 6 : Housing capacity

This schedule will be amended in accordance with the NPS Urban Development Capacity requirements. Refer to Policy 4.5.1(c) Providing for urban growth and development.”

We note again in this context that Cromwell may not be an urban environment as identified in the NPSUDC (as discussed in Part 10.3.1).

In terms of Policy 4.5.1f)i. the proposal will not serve to minimise adverse effects on significant soils and activities which sustain food production. Land at the site is in the same land capability units as those which support neighbouring orchards; and soils at the site can be regarded as significant soils.

The proposal is contrary to Policy 4.5.1h). In this instance reverse sensitivity effects (with respect to existing and proposed orchards and the Rockburn Winery, in particular) will not be avoided; and those effects cannot be adequately managed. It is again noted in this context that the Rural Resource Area (5) will accommodate up to 160 allotments to be used for residential activity in close proximity to neighbouring incompatible existing land uses.

Policy 4.5.3 of the Partially Operative Regional Policy Statement relates to urban design and states as follows:

“Policy 4.5.3 Urban design

Design new urban development with regard to:

- a) A resilient, safe and healthy community;*
- b) A built form that relates well to its surrounding environment;*
- c) Reducing risk from natural hazards;*
- d) Good access and connectivity within and between communities;*
- e) A sense of cohesion and recognition of community values;*
- f) Recognition and celebration of physical and cultural identity, and the historic heritage values of a place;*
- g) Areas where people can live, work and play;*
- h) A diverse range of housing, commercial, industrial and service activities;*
- i) A diverse range of social and cultural opportunities.”*

In terms of Policy 4.5.3a), b) and g) the subject site has significant constraints having regard to the established land use activities in the immediate vicinity including the existing and proposed orchards and Rockburn Winery, in particular. Noise associated with the orchards, in particular, will significantly compromise residential amenity by compromising outdoor living within the Rural Resource Area (5). Policy 4.5.3d) requires that urban development be designed to provide good access and connectivity within and between communities. We do not consider that good access and connectivity is to be provided between the Rural Resource Area (5) and the commercial and community facilities that exist at Cromwell.

The subject site is currently located within the Rural Resource Area and rural activities are established in the immediate vicinity of the site. We therefore consider that Objective 5.3 and its associated Policy 5.3.1 as presented in the Partially Operative Regional Policy Statement are relevant. These state as follows:

“Objective 5.3 Sufficient land is managed and protected for economic production

Policy 5.3.1 Rural activities

Manage activities in rural areas, to support the region’s economy and communities, by:

- a) Enabling primary production and other rural activities that support that production;*
- b) Providing for mineral exploration, extraction and processing;*
- c) Minimising the loss of significant soils;*
- d) Restricting the establishment of incompatible activities in rural areas that are likely to lead to reverse sensitivity effects;*
- e) Minimising the subdivision of productive rural land into smaller lots that may result in a loss of its productive capacity or productive efficiency;*
- f) Providing for other activities that have a functional need to locate in rural areas.”*

In this instance the proposal will result in the use of significant soils, which are able to be developed for horticultural use, for large residential lots; and the proposal will result in the establishment of incompatible activities in this existing rural area. The proposal is therefore contrary to Objective 5.3 and Policies 5.3.1a), c), d) and e) of the Partially Operative Regional Policy Statement. Plan Change 14 is not supported by Policy 5.3.1f).

Orchards have a functional need to locate in rural areas; require substantial areas of land; and need to be separated from residential areas. Plan Change 14, with its associated reverse sensitivity effects, is not consistent with providing for these other activities which have a need to locate in rural areas in terms of Policy 5.3.1f) of the Partially Operative Regional Policy Statement.

It is emphasised that we have not addressed all of the objectives and policies presented in the Partially Operative Regional Policy Statement 2019. In our view the objectives and policies presented above are those which are most relevant to the Commission’s consideration of Plan Change 14; and we consider that Plan Change 14 does not give effect to those provisions of the Partially Operative Regional Policy Statement presented above.

10.3.6 Regional Plan

Relevant regional plans are the Regional Plan : Air for Otago that became operative on 1 January 2003; and the Regional Plan : Water for Otago which became operative on 1 January 2004.

10.3.6.1 Regional Plan : Air

Policy 9.1.4 of the Regional Plan : Air is as follows:

“9.1.4 To promote clean heating in new residential areas where discharges are likely to have an adverse impact on air quality in Air Zones 1 or 2, or degrade high quality ambient air.”

Air Zone 1 at Cromwell includes the Ripponburn Hospital & Home/Ripponburn Lifestyle Village site and several other properties located to the west of State Highway 6 between Ripponvale Road and State Highway 8B (but not extending to Ripponvale Road). While the subject site is not in Air Zone 1 the Otago Regional Council (67/3) supported by James Dicey (117/30), Horticulture New Zealand (130/6) and Public Health South (155/5) has advised that the use of solid fuel heating systems could exacerbate ambient air quality, both within the new development and the existing urban area. We also note that Policy 4.5.1i) of the Partially Operative Regional Policy Statement requires the use of low or no emission heating systems where ambient air quality is below standards for human health; or is vulnerable to degradation given the local climatic and geographical context. The use of low or no emission heating systems within the Rural Resource Area (5) (as promoted by the Otago Regional Council (67/4) supported by James Dicey (117/30),

Horticulture New Zealand (130/6) and Public Health South (155/5) and discussed in Part 8.19 of this report) is consistent with Policy 9.1.4 of the Regional Plan : Air.

10.3.6.2 Regional Plan : Water

In Section E2.2 of the request document the requestor notes that the development does not rely on consents under the Regional Plan : Water in relation to water supply and wastewater disposal. Water and wastewater is to be reticulated to the Cromwell town systems; with some of the larger lots in the Rural Lifestyle Area 5 possibly disposing of wastewater on site in accordance with AS/NZS 1537:2012. The requestor also advises that stormwater disposal will be possible without consent under the Regional Plan : Water.

We concur with the requestor that Plan Change 14 is consistent with the Regional Plan : Water.

10.4 Part 2

10.4.1 Primacy of Part 2

Section 74(1)(b) of the Act confirms that a change to a district plan is to be in accordance with the provisions of Part 2; and we again note that achieving the purpose of the Act (section 5 in Part 2) is the purpose of the preparation, implementation and administration of district plans in terms of section 72.

Part 2 includes sections 5, 6, 7 and 8 that are presented with our corresponding comments, and a conclusion with respect to Part 2, below.

10.4.2 Purpose of Act:

“5. Purpose – (1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

*(2) In this Act, **sustainable management** means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while-*

- (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and*
- (c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment.”*

Plan Change 14 will not serve to promote the sustainable management of natural and physical resources. We note in particular that the plan change will not sustain the potential for natural and physical resources to meet the reasonably foreseeable needs of future generations or to safeguard the life supporting capacity of soil; and we acknowledge again in this context that the land within the site is in the same land capability units as neighbouring land that has been developed for orcharding, and that the site contains significant soils. Plan Change 14 will also not serve to avoid, remedy or mitigate adverse effects of the activities on the environment, including landscape and visual amenity effects; reverse sensitivity effects as these relate to the effects of established neighbouring land uses including orchards in particular; the loss of productive land; the lack of integration with the existing urban area of Cromwell; and the loss of rural character values in the area of Ripponvale.

10.4.3 Matters of National Importance

*“6. **Matters of national importance** – In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:*

- (a) The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*
- (b) The protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:*
- (c) The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*
- (d) The maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:*
- (e) The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.*
- (f) the protection of historic heritage from inappropriate subdivision, use, and development.*
- (g) the protection of recognised customary activities.*
- (h) the management of significant risks from natural hazards.”*

Plan Change 14 provides for the extension of the existing ONL notation to include the entire face of the West Slope within the site. Extension of the ONL notation, as proposed, is consistent with section 6(b) of the Act albeit that Mr Espie considers this to be a relatively slight positive effect in relation to the appropriate management of the District’s ONLs.

It is noted, in the context of section 6(e), that an accidental discovery protocol is to be provided for. In terms of section 6(f) we acknowledge that the requestor has consulted with Heritage New Zealand Pouhere Taonga that has confirmed that an archaeological authority would be required to modify historic irrigation races at the site; and that the requestor proposes to preserve a stone building with heritage aesthetics. In terms of section 6(h) there appear to be no significant risks associated with natural hazards that cannot be satisfactorily managed; and we again note that geotechnical recommendations will serve to inform the subdivision and building consent stages. No other matters listed in section 6 appear to be relevant to Plan Change 14.

10.4.4 Other Matters

*“7. **Other matters** – In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to-*

- (a) Kaitiakitanga:*
 - (aa) The ethic of stewardship:*
- (b) The efficient use and development of natural and physical resources:*
 - (ba) The efficiency of the end use of energy:*
- (c) The maintenance and enhancement of amenity values:*
- (d) Intrinsic values of ecosystems:*
- (e) Repealed.*
- (f) Maintenance and enhancement of the quality of the environment:*
- (g) Any finite characteristics of natural and physical resources:*
- (h) The protection of the habitat of trout and salmon.*
- (i) the effects of climate change:*

- (j) *the benefits to be derived from the use and development of renewable energy.*”

In our view the proposal, which is to provide for the use of land with productive potential in substantial part for large lot residential purposes is not consistent with section 7(b) being the efficient use and development of natural and physical resources. We also consider that enabling large lot residential subdivision and development in a locality where there are established land uses that will compromise residential amenity values, along with the subdivision and development of part of the SAL, is not consistent with section 7(c) and (f) that relate to the maintenance and enhancement of amenity values, and the maintenance and enhancement of the quality of the environment. We also consider that avoiding reverse sensitivity effects upon neighbouring orchards and the Rockburn Winery is consistent with having particular regard to any finite characteristics of those natural and physical resources (in terms of section 7(g)).

10.4.5 The Treaty

“8. Treaty of Waitangi – In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).”

In our view the Treaty has no particular relevance to Plan Change 14.

10.4.6 Conclusion : Part 2

Our conclusion is that Plan Change 14 is not consistent with the purpose of the Act (section 5); and that the proposal is not consistent with the principles of the Act stated in sections 7(b), (c), (f) and (g).

We consider that aspects of Plan Change 14 are relevant in the context of section 6 (as discussed in Part 10.4.3 above). Section 7 (apart from section 7(b), (c), (f) and (g)) and section 8 are of limited or of no particular relevance in this instance.

10.5 Conclusion : Other Statutory Provisions (Including Planning Documents)

We consider that requested Plan Change 14 is not consistent with the function of the Council to achieve integrated management of the effects of the use, development or protection of land and associated natural and physical resources of the District in terms of section 31. In terms of sections 74 and 75 the proposal is contrary to the Proposed Regional Policy Statement (2016), to the Otago Southland Regional Land Transport Plans and to the Cromwell Spatial Plan [part of the Cromwell Masterplan]; and Plan Change 14 does not give effect to the NPSUDC (if it is relevant), to the Regional Policy Statement (1998) or to the Partially Operative Regional Policy Statement (2019). We also consider that Plan Change 14 is not in accordance with the purpose and relevant principles of the Act as stated in Part 2; and it is again noted that achieving the purpose of the Act (as stated in section 5 in Part 2) is the purpose of District Plans in terms of section 72.

11.0 RECOMMENDATIONS

Clause 29(4) in Part 2 of Schedule 1 to the Act provides as follows:

- “(4) After considering a plan or change, undertaking a further evaluation of the plan or change in accordance with section 32AA, and having particular regard to the evaluation, the local authority-*
- (a) may decline, approve, or approve with modifications the plan or change;*
 - and*
 - (b) must give reasons for its decision.”*

Following consideration of the requested Plan Change 14 and the submissions and further submissions received, we recommend as follows:

1. That the submission by **Christian Alberton (1/1)** and the other **54 submissions that support Plan Change 14** (including further submissions lodged in support thereof) be **rejected**.
2. That the submission by **Connor William Atherton (3/1)** and the other **14 submissions that conditionally support Plan Change 14** (including any further submissions lodged in support thereof) be **rejected**.
3. That the submission by **James Dicey (18/1 – 18/7)** and the other **20 submissions that oppose Plan Change 14** (including any further submissions lodged in support thereof) be **accepted**.
4. That the submission by the **Otago Regional Council (67/1 – 67/20)** that **neither supports nor opposes Plan Change 14** (including further submissions lodged in support thereof) be **accepted in part** to the extent that the submission has been taken into consideration albeit that Plan Change 14 is not recommended for approval.
5. That the submission by **Rockburn Wines Limited (72/1 – 72/18)** and the other **submission that opposes in part Plan Change 14** be **accepted in part** to the extent that the submissions oppose Plan Change 14.

For the avoidance of doubt where we have recommended the rejection of further submission in support of a submission above; we correspondingly **recommend** that any further submission in opposition to that submission by **accepted**. Similarly were we have recommended that a further submission in support be accepted; we **recommend** that any further submission in opposition to the submission concerned be **rejected**.

Consistent with the above recommendations we **recommend** that requested Plan Change 14 be **declined**.

JOHNSTON WHITNEY



W D WHITNEY
Planning Consultant

4 May 2020

LANDSCAPE AND VISUAL EFFECTS ASSESSMENT - PEER REVIEW

CODC PC 14 – NZ CHERRY CORP – SHANNON FARM

PROPOSED PLAN CHANGE TO CREATE A RURAL LIVING RESOURCE AREA AT RIPPONVALE

Ben Espie (Landscape Planner)

vivian+espie

27th April 2020

INTRODUCTION

- 1 New Zealand Cherry Corp have requested a Private Plan Change in relation to the Operative Central Otago District Plan (CODP). The proposed Plan Change (PC14) seeks to create a Rural Resource Area 5 (RuRa5) over an area of land at Ripponvale Road in order to create a rural living area. A Structure Plan is proposed and a number of specific provisions.
- 2 Appendix E of the PC14 request is a Landscape and Visual Assessment Report dated the 20th of May 2019, prepared by Rough and Milne (the R&M Report). The R&M Report comprises:
 - the report itself,
 - Appendix 1 – Definitions and Methodology,
 - Appendix 2 – Plant List,
 - a Landscape Strategy and Structure Plan document,
 - a Graphic Supplement to the Landscape and Visual Assessment document.
- 3 The Plan Change Request document prepared by Town Planning Group has also been reviewed. It is understood that the Landscape Strategy and Structure Plan document that is appended to the R&M Report is primarily a site analysis and design document and therefore is not directly part of the Plan Change request (although, it is understood that the Structure Plan and Indicative Circulation Plan do form part of the Plan Change request).
- 4 This report is a peer review of the R&M Report. This report was prepared during April 2020, when New Zealand was at Alert Level 4 in relation to the Covid-19 virus. Consequently, site visits to

consider landscape and visual effects in the field were not possible. Notwithstanding that, the authors are familiar with the vicinity of the site in general and have visited the vicinity many times in the past.

- 5 Through reviewing the R&M Report, all potential effects of PC14 on landscape character and visual amenity have been considered. Full findings of an assessment are not set out in this report. This report gives review comments on the R&M Report and discusses its methodology, findings and conclusions. For the sake of conciseness, this report does not repeat the aspects of the R&M Report that are agreed with. More explanation is given in relation to areas of disagreement. This report generally uses the headings of the R&M Report as a structure to the review comments.
- 6 This report also gives comments on issues raised by public submissions that relate to effects on landscape character and visual amenity.

METHODOLOGY AND THE ROUGH AND MILNE REPORT IN GENERAL

- 7 The R&M Report is very comprehensive and thorough and follows a clear structure. Its graphic attachments (the Landscape Strategy and Structure Plan and the Graphic Supplement to the Landscape and Visual Assessment) mean that the report is very clear and understandable.
- 8 Appendix 1 of the R&M Report sets out the assessment methodology that has been used. The described methodology largely draws on a methodology set out in a document by the landscape architect Bridget Gilbert that was submitted as evidence to the Environment Court in 2019 in relation to appeals on the Queenstown Lakes Proposed District Plan¹. Ms Gilbert's document represents a concise synthesis of current professional practice in relation to the assessment of effects on landscape character and visual amenity. The authors of this report fully agree with the methodology of Ms Gilbert's document; therefore, we very largely find the methodology of the R&M Report appropriate.
- 9 Some additional aspects of the R&M methodology as set out in Appendix 1 are drawn from a 2018 methodology document prepared by the multi-disciplinary consultancy Boffa Miskell. The authors of this report are not familiar with the Boffa Miskell document and it is not attached to the R&M

¹ ENV-2018-331-000019, 'Supplementary Statement of Evidence of Bridget Mary Gilbert for Queenstown Lakes District Council, Topic 2 – Rural Landscapes', dated 29 April 2019.

Report. However, the parts of the Boffa Miskell document that are cited in Appendix 1 of the R&M Report are clear and appear appropriate.

- 10 It is considered that the discussion of the use of the term "significant" when describing effects that is included in Appendix 1 of the R&M Report is potentially problematic. This discussion is taken from a well-established UK assessment guidance text² and therefore does not take account of the way in which the term significant is used in the RMA. However, this issue is not relevant in relation to the assessment of PC14.

THE EXISTING ENVIRONMENT

- 11 The existing environment is described comprehensively by the R&M Report in its Section 3. When describing the landscape setting at a broad scale, reference to the district-wide landscape assessment conducted in the mid-2000s by LA4 Landscape Architects would have been useful³. That district-wide landscape assessment sets out descriptions and categorisations of the district's landscapes and informed the identification of Outstanding Natural Landscapes (ONL) and Significant Amenity Landscapes (SAL) that is part of the CODP.
- 12 The section of the R&M Report that deals with the existing environment gives ample information on the site itself and also the broad Cromwell Basin context. However, it is relatively brief in relation to the landscape character of the Ripponvale Road area into which development enabled by PC14 will be inserted. Paragraph 49 of the R&M Report discusses the Ripponvale Road area and describes it as "rural lifestyle" in terms of character. A more comprehensive discussion of the Ripponvale Road area would have been useful. It is considered that productive horticultural and agricultural land uses dominate this area.
- 13 Sheet 8 of the Graphic Supplement to the R&M Report shows the existing ONL and SAL boundaries. Clearly, at a fine scale, they do not follow lines of landform or any other significant lines within the landscape. They have been drawn at a broad scale, as is often the case in relation to district plan maps. The ONL boundary line is discussed briefly in the Section 3.5.1 of the R&M Report. The proposed ONL and SAL boundary lines are not so clearly described, although they are shown on page 36 of the Landscape Strategy and Structure Plan document. Roughly

² UK Landscape Institute and Institute of Environmental Management and Assessment Guidelines for Landscape and Visual Impact Assessment (3rd ed, Routledge, Oxford, 2013).

³ Central Otago District Rural Review Landscape Assessment Report and Recommendations, July 2008

speaking, the proposed ONL and SAL boundary lines appear to appropriately follow landform / landscape character lines; however, from the perspective of an analysis of existing landscape character, more detail on why the existing landscape boundary lines are inappropriate and what alignment is more appropriate and why would be useful. Detailed contour information may have assisted this.

- 14 At paragraph 47, the R&M Report defines landscape character as an overall visual impression that gives a landscape an identity and "sense of place".
- 15 The UK landscape assessment guidance defines landscape character as the "*distinct and recognisable pattern of elements in the landscape that make one landscape different from another, rather than better or worse*"⁴. Landscape effects or character effects are defined as "... the effects of change and development on landscape as a resource. The concern here is with how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character."⁵
- 16 The above definitions of landscape character from the UK guidance are reflected in Section 9.1.4 of the methodology document appended to the R&M Report. They also are reflected in the definition of landscape character that the R&M Report gives at paragraph 74. It is considered that paragraph 47 of the R&M Report is somewhat at odds with these definitions of landscape character since it describes landscape character as an overall visual impression. It is considered that landscape character is derived from the patterns, elements and processes that make up the landscape, rather than from views of them or a visual impression of them; landscape character issues being separable from issue of views and visual amenity.

THE PROPOSAL

- 17 Section 4 of the R&M Report describes the proposed Structure Plan and this is shown in the Graphic Supplement. The Plan Change Request document sets out the proposed provisions that give weight to the Structure Plan.
- 18 Paragraph 61 of the R&M Report describes some of the features of the Landscape Strategy and Structure Plan document. It is understood that proposed provisions to be inserted into the CODP

⁴ The Countryside Agency & Scottish Natural Heritage Landscape Character Assessment: Guidance for England and Scotland (2002) at 9.

⁵ Landscape Institute and Institute of Environmental Management and Assessment Guidelines for Landscape and Visual Impact Assessment (3rd ed, Routledge, Oxford, 2013) at paragraph 5.1 and Glossary.

refer to the Structure Plan, the Indicative Circulation Plan and the Indicative Planting Schedule and therefore give some weight to these. However, other than these parts, the Landscape Strategy and Structure Plan document is an analysis and design document that, while informative, is not directly part of proposed PC14.

RELEVANT STATUTORY DOCUMENTS

- 19 Section 5 of the R&M Report sets out that the RMA and the CODP have been considered. It is agreed that the landscape-related Objectives and Policies of Section 4 of the ODP are of primary importance; any proposed area of rural zoning (such as is sought) should sit comfortably with these. The R&M Report does not refer to Section 2.3.1 of the CODP, which provides a helpful overview of landscape issues within the district. In any event, compatibility with the relevant provisions of Section 4 will confirm compatibility with Section 2.3.1.
- 20 The R&M Report does not refer to the landscape-related parts of the Operative or Proposed Otago Regional Policy Statement (RPS). The landscape-related provisions of the Proposed RPS are subject to Environment Court Appeals that are in the process of being resolved. In very general terms, these parts of the Proposed RPS require the identification of ONLs and highly valued landscapes and set policies in relation to their management. Given that these provisions are subject to appeal, and given that it is considered that the relevant ODP provisions are consistent with the decisions version of the Proposed RPS, it is not considered that the R&M Report has omitted anything of relevance.
- 21 As mentioned in paragraph 11 above, reference to the district-wide landscape assessment I completed in the mid-2000s (although not a statutory document) may have provided useful background information.

ASSESSMENT OF LANDSCAPE AND VISUAL EFFECTS

- 22 The R&M Report appropriately discusses landscape effects (or landscape character effects) separately from visual effects.

Landscape Effects

- 23 The discussion of effects on landscape character is divided into the consideration of effects on the Pisa ONL, on the adjacent SAL, on the landscape character and quality of the receiving

environment and on the landscape character and quality of the application site. A summary is then given.

- 24 In relation to the ONL, it is understood that no activities will be enabled in the ONL that are not currently enabled. Therefore, it appears that the PC14 will avoid effects on the ONL, rather than "mitigate or avoid", as stated in paragraph 79 of the R&M Report. Additionally, PC14 will extend the ONL, although relatively slightly in terms of area. It is understood that this ONL extension is perhaps best thought of as a correction of an ONL boundary line that has been drawn inaccurately. Therefore, it is considered that PC14 will bring a (relatively slight) positive effect in relation to the appropriate management of the district's ONLs and will have no adverse effects on the relevant ONL.
- 25 In relation to the SAL, PC14 seeks to amend its boundary line as it crosses the subject site. The proposed SAL boundary line is shown on page 36 of the Landscape Strategy and Structure Plan document that is appended to the R&M Report but is not shown on the Structure Plan. It appears that that RL4 Activity Area and part of the RL5 Activity area are within the proposed SAL. If this is correct, it is understood that the CODP's SAL Policies would apply to these Activity Areas and the specific provisions of these Activity Areas would sit beneath those Policies. In any event, it is considered that the amended SAL boundary line should be shown on the Structure Plan for clarity.
- 26 Section 6.2.2 of the R&M Report discusses effects on the SAL. Again, reference to the district-wide landscape assessment would have been helpful to give some description of the attributes of this SAL so that effects on it could be explained in more detail. This section of the R&M Report explains that native vegetation is to be used for mitigation of residential activities within the SAL, presumably in relation to the control given by proposed provision 4.7.2(ib). While more detail on the existing character of the SAL and explanation of the proposed boundary of it would be helpful, it is considered that the conclusion of the R&M Report, that effects on the visual amenity values of the SAL will be avoided or mitigated, is agreeable.
- 27 In relation to the quality and character of the site and the receiving environment, The R&M Report effectively concludes that the site itself will change considerably but in a way that has been sensitively designed. At a broader scale, development enabled by PC14 will be consistent with the character of the landscape within which it sits and in this regard its effects on landscape character will not be adverse. The R&M Report identifies a low degree of adverse effect on natural

character within the non-ONL parts of the site; the areas that will change from a farming use to a rural living use.

- 28 A more comprehensive discussion on the effects of the proposal on the Ripponvale Road area would have been useful. This is the area that will have its landscape character most affected by PC14. It is considered that the R&M Report does not clearly note that PC14 will create an area of residential density that is quite a departure from the current character of the Ripponvale Road area. The flatter part of the subject site will accommodate a significant area of large-lot suburban land use; a new node of population in the rural land surrounding Cromwell. While a node of this sort is not necessarily significantly adverse, a discussion of how and why development fits into existing landscape character should be given.
- 29 Broadly speaking, the conclusions of the R&M report appear agreeable; some low-degree adverse effects on landscape character will eventuate but in a way that is relatively confined and in terms of broad-scale patterns of landscape character, the changes brought by PC14 are considered to be consistent with their setting. However, more consideration of the Ripponvale Road area is needed.

Visual Effects

- 30 The R&M Report uses 10 selected viewpoints to set out its discussion of effects on views and visual amenity. As well as discussing each viewpoint, general comments on visual effects are given. The Graphic Supplement document then shows the location of each viewpoint and includes a marked-up photograph from each. All selected viewpoints are public places. Paragraphs 97 and 99 the R&M Report set out that:

"The most salient viewpoints are those at which a tourist, visitor or local is likely to stop and appraise the mountain setting in the foreground of which the application site located. These are likely to be the most sensitive views given that people undertaking commercial or farming activities are likely to be less sensitive to seeing human modifications within this landscape"; and

"An assessment of visual effects for each viewpoint is undertaken with consideration of the amenity conveyed by the existing environment, the current zoning, as well as the sensitivity of the viewer"

- 31 The above comments are appropriate and are reflected in the methodological information in Appendix 1 of the R&M Report and also in the UK landscape assessment guidance text previously referred to⁶. However, these methodological documents also set out that residents at home that appreciate a particular view are also particularly sensitive to change. Therefore, private views also need to be considered. Often this is done in relation to public submissions that are received.
- 32 It is unexpected that no viewpoints on Ripponvale Road, close to, or adjacent to, the subject site are included. The northwest to southeast running section of Ripponvale Road is the public area that will be most affected in a visual sense. Observers on this stretch of road will be close to the densest area of development enabled by PC14; the large-lot suburban area that will sit on the flat part of the subject site. The proposed "Amenity Edge" will front part of (but not all of) this stretch of road. It appears that the visual experience of an observer on this stretch of road will change significantly. Some examination and commentary on this should be included.
- 33 In relation to each of the 10 chosen viewpoints, the R&M Report gives a finding regarding the magnitude of change to the relevant view, and then also a finding regarding the degree of effect on visual amenity. It is important to note that these are not the same thing. The visibility of some change in the landscape is not an adverse effect in itself. A new element only brings an adverse effect on visual amenity if it discords with, or degrades the visual amenity that would otherwise be experienced.
- 34 When evaluating the degree of a visual effect, the R&M Report uses the scale given in the table on page 44 of its Appendix 1. These findings of the R&M Report are given in the following table.

| Viewpoint | R&M finding regarding magnitude of change | R&M finding regarding degree of effect on visual amenity |
|-----------|---|--|
| 1 | mod-low | mod-low |
| 2 | mod | mod |
| 3 | mod | mod |
| 4 | low | low |
| 5 | mod | mod |
| 6 | mod | mod |
| 7 | mod | mod |
| 8 | mod | mod |
| 9 | mod | mod |
| 10 | very low | very low |

⁶ UK Landscape Institute and Institute of Environmental Management and Assessment; 2013; 'Guidelines for Landscape and Visual Impact Assessment – 3rd Edition'; Routledge, Oxford. Paragraphs 6.32 to 6.35.

- 35 The R&M Report's discussion of the visual amenity effects for each viewpoint does not include a discussion of whether or not the effect is adverse in relation to the view in question. The table on page 45 of Appendix 1 of the R&M Report sets out a definition of what constitutes an adverse, neutral and positive effect on visual amenity. Only at the end of its assessment of effects on views and visual amenity (paragraph 139) does the R&M Report give the finding that:

"it is considered that the effects of the proposal in the receiving landscape will not be at odds with the existing patterns of development in the surrounding environment and will not represent an adverse change".

- 36 It is considered that the R&M Report's discussion of effects on views and visual amenity would have been more effective if, in relation to each viewpoint, an assessment was made of the magnitude of visual change, and then whether the visual change will affect visual amenity in an adverse, neutral or positive way, and to what degree. That is to say that the assessment of the degree of an effect on visual amenity should be made in combination with an assessment of whether the effect is adverse or not.

- 37 As a consequence of the above issue, the R&M Report's findings on effects on visual amenity may be misinterpreted. In its paragraphs 100 to 138, it sets out the effects on visual amenity as given in my table above. Often the degree of effect is described as moderate. Then in its paragraph 139, the R&M Report gives the statement above, that the effects of the proposal are not at odds with existing patterns and therefore, in relation to visual amenity, are not adverse.

- 38 In relation to each of the 10 chosen viewpoints, the R&M Report includes a labelled photograph and a small viewshed map. Looking at the photographs, it is sometimes difficult to determine what parts of the activity areas of PC14 are visible in each view. Some visual representation of the activity areas in each view would be useful; for example, a colour-coded version of the Structure Plan draped over topography.

- 39 With reference to paragraph 4, the authors of this peer review report have not visited the site or the various viewpoints. However, based on knowledge of the vicinity and on the photographs of the R&M Report's Graphic Supplement, the following tentative comments are given.

| Viewpoint | Peer review comment |
|-----------|---|
| 1 | It appears that the parts of the PC14 site that are visible in this view are very largely no-build areas. A small part of upper RL5 appears visible which may lead to visible built form and a decrease in the visual simplicity and naturalness of the slopes but this would be difficult to discern. An adverse effect on visual amenity of a very low degree. |
| 2 | Some visibility of RL3 and RL5 as part of the treed valley floor part of the site. An increase in visual busyness but in a way that ties in relatively well with existing patterns in the landscape. The RL5 area will be seen to decrease simplicity and naturalness of the northeastern gully part of the site (which is within the SAL). The overall scene that is taken in from this viewpoint (and similar ones) is complex. An adverse effect on visual amenity of a moderate-low degree. |
| 3 | Very similar to Viewpoint 2. Some loss of simplicity and naturalness of a midground element. An adverse effect on visual amenity of a moderate-low degree. |
| 4 | It appears that upper parts of RL4 and RL5 may be visible on what are currently open slopes. These activity areas provide for low density rural living such that they will comprise ample open space. From this viewpoint it appears that any visual change will be hard to discern and an adverse effect on visual amenity will be of a very low degree. (It appears that viewpoints on Ripponvale Road between Viewpoints 1 and 4 may actually be more affected than these two viewpoints. Some examination of that issue should be included). |
| 5 | Visibility of the valley-floor activity areas RL1, 2 and 3 will visually tie in well with the existing treed valley floor patterns. RL4 and 5 will be seen to alter the northeastern gully, decreasing the open simplicity of these SAL hill slopes. Again, RL4 and 5 provide for low density rural living with ample open space; therefore, not a particularly built type of visual pattern. Visual amenity will be affected adversely, to a moderate-low degree. |
| 6 | Much of the site is visible in this view but at a considerable distance and as part of a very broad scene. Development provided for by PC14 will increase the visual complexity of the midground/background of the view but at this distance, the change will blend in considerably with its context. An adverse effect on visual amenity of a low degree. |
| 7 | Similar to Viewpoint 6 but less of the site is visible and very little of the activity areas that will provide for development. Any adverse effect on the visual amenity of an observer will be of a very low degree at most. |
| 8 | Similar to Viewpoints 6 and 7 but only particularly small parts of RL5 will be visible and at long distances as part of a complex scene. A very low degree of adverse effect on visual amenity at most. |
| 9 | Much of the site is visible in this view. Development enabled by RL1, 2 and 3 will potentially be discernable but will tie in well with other horizontal valley floor elements such that it accords well with existing patterns. Much of RL5 that spreads up to higher elevations is hidden, thus the hillslopes will remain very largely as they currently are. Again, the site is a small part of a complex scene. Adverse effects on the visual amenity of an observer will be of a low degree. |
| 10 | No development enabled by PC14 will be visible. Visual amenity will not be affected. |

- 40 It is considered that setting out findings regarding effects on visual amenity as per the table above is perhaps more useful than measuring the degree of effect in relation to each viewpoint and then making an overall finding about whether the effects are adverse or not. In any event, we do not see significant disagreement with the ultimate findings of the R&M Report regarding effects on visual amenity in relation to the 10 viewpoints discussed above, however, it is considered that from some viewpoints there will be adverse effects on visual amenity that sometimes range up to a moderate-low degree. These effects are generally derived from a loss of visual simplicity and naturalness of the slopes that are within the SAL.
- 41 As mentioned previously, visual effects as experienced from the parts of Ripponvale Road close to the site have not been assessed in any detail. Additionally, one of the more affected viewpoints discussed above is Viewpoint 2 at the southern end of Ord Road. In relation to Viewpoint 2, it appears that there will visibility to the site and enabled development that is very similar to Viewpoint 2 (or perhaps even plainer views) from a stretch of SH6 that runs approximately between Ord Road and McNulty Road, particularly to a northbound traveller. Obviously, SH6 is a very well used road. More consideration of the potential adverse effects on these highway users should be given.

LANDSCAPE AND VISUAL EFFECTS IN RELATION TO RELEVANT STATUTORY PROVISIONS

- 42 The R&M Report appropriately comments on how the outcomes of PC14 sit with the landscape-related Objectives and Policies of Section 4, 12 and 16 of the CODP. Many of the issues raised in relation to these Objectives and Policies have already been discussed and this section of the R&M Report is generally agreed with. Notwithstanding that, the following comments are made.
- 43 In relation to Objective 4.3.3 (and associated Policies), the R&M Report notes that PC14 has been carefully designed in response to topography and elevation. This is agreed with, but it should be acknowledged that some development (albeit at a low density) will be enabled on the hillslopes that are within the SAL (both as it exists now and as amended by PC14). Therefore, it is considered that there will be some effect on the *"open natural character of hills and ranges"*, although for the various reasons that have been discussed, this effect will be of a low degree.

- 44 In relation to Objective 4.3.4, the R&M Report notes that public access will be provided at subdivision stage. This appears to be a reference to the third bullet-point of proposed provision 4.7.2(ii)(vi) and to Schedule 19.24. It should be made clear on Schedule 19.24 that all roads, footpaths and tracks shown will allow access for the general public, if indeed this is the case.
- 45 Subject to the above and to the other comments within this report (particularly regarding the potential landscape character effects on the Ripponvale Road area and visual effects on Ripponvale Road users close to the subject site users of part of SH6), it is agreed that PC14 sits relatively comfortably with the relevant landscape-related Objectives and Policies of the CODP.

CONCLUSION

- 46 The conclusions stated in the R&M Report are agreed with in that PC14 has been designed to respond to its landscape setting to bring about a sympathetic result and effects on the ONL will be avoided (indeed there will be a slight positive effect). There will be some effect on the openness and naturalness of the hill slopes that lie within the SAL but this will be of a low degree and will be considerably contained. From some particular viewpoints, visual amenity will be affected to a degree that ranges up to moderate-low. As discussed however, visual and character effects on the immediate context of the site and some unexamined viewpoints require more assessment and/or commentary.

SUBMISSIONS

- 47 Submissions by AG McFarlane (52), PJ Mead & AD Stark as Trustees for the McKay Family Trust (60), B Tovey (85) and M & BC Zareh (94) raise issues related to the landscape and visual effects of PC14. A number of the issues raised have already been discussed. Relevant issues raised can be categorised as follows:
- Effects on the elevated landforms surrounding Cromwell;
 - Visual effects of development on the SAL slopes as seen properties to the south of the site;
 - Tree planting and road frontage treatment;
- 48 The issues raised relate, to a large degree, to the issue of residential land use spreading uphill from the valley floor onto hillslopes that are within the SAL and are viewed from the flat land to the

south of the site. These issues have been discussed throughout this report. Viewpoints 1 to 4 of the R&M Report give an impression of some of the views available.

- 49 Activity Areas RL4 and 5 will provide for development within the SAL, as amended by proposed PC14, although RL3 also provides for development within in current SAL. As has been set out previously, a resident taking in a favourite view from their property is an observer that is particularly sensitive to effects on visual amenity. Additionally, when visible, the SAL slopes of the northeastern gully of the site are currently open and visually simple.
- 50 The minimum lot sizes that are proposed for RL4 and 5 are 1ha and 3ha respectively. Rural living areas with lots of this size generally develop as relatively green areas with tree planting to provide shelter and privacy. In views from the south such as those illustrated by the R&M Report's Viewpoints 2 and 3, a pattern of trees, parts of driveways and buildings and general increased visual complexity (although largely soft and green), will spread up the lower part of the northeastern gully while the elevated slopes or sides of the gully will remain open.
- 51 The most relevant provisions against which these effects should be considered are Objective 4.3.3 and Policy 4.4.2. Importantly, Policy 4.4.2 does not seek to avoid adverse effects. It seeks to ensure that effects on open space, landscape, natural character and amenity values are avoided, remedied or mitigated through a number of means including the location of development to maintain the open natural character of hills and ranges and to not compromise the landscape and amenity values of prominent hillsides and terraces.
- 52 Ultimately, in this regard it is considered that in the relevant views, the RL4 and 5 development will sit in the low part of the northeastern gully, thereby leaving the prominent hillsides unaffected. The open natural character of the hills, ranges, skylines, prominent places and natural features will very largely be maintained. Effects on the SAL land will not be entirely avoided but it is considered that the design of PC14 has considerably mitigated them. However, this is subject to the previous comment that it is sometimes difficult to ascertain exactly which activity areas are visible in certain views.
- 53 One submission raises the issue of suitable vegetative treatment of the Ripponvale Road frontage and also vegetation within the RuRA(5) area to appropriately soften built form in a visual sense. It is agreed that ample and appropriate tree planting throughout the development enabled by PC14 will be important to its success. It is considered that the Amenity Edge provisions and the matters

over which Council will retain control generally, will be useful as part of the resource consent process in bringing about good results in relation to the Ripponvale Road frontage and also in relation to tree planting throughout the zone in the future.

OVERAL CONCLUSIONS OF THE PEER REVIEW

- 54 The R&M Report is very comprehensive and thorough. The report follows an appropriate methodology and its findings are largely agreed with.
- 55 It is considered that proposed PC14 will have no adverse effects on the relevant ONL and will, in fact, have a slight positive effect. The proposed movement of the SAL boundary line is slightly unclear. In any event, it is agreed that there will be some low-degree adverse effects on the character of the SAL but in a way that is relatively confined.
- 56 PC14 will insert a relatively significant node of population into the Ripponvale Road vicinity. More information on how the landscape character of this particular vicinity will be affected should be given.
- 57 The R&M's Reports findings regarding effects on views and visual amenity may be misinterpreted. In relation to various viewpoints, the degree of effect on visual amenity is described by the R&M Report as moderate. A separate finding is then given in a later paragraph that these effects are not adverse. When considering a potential visual effect from a particular viewpoint, it is considered that it is more helpful to give a combined finding regarding whether the effect is adverse or not and what the degree of that effect is. When visual effects are reported on in this way, it is considered that there are adverse effects on visual amenity from a number of viewpoints, however, these effects are often of a low degree and range up to a moderate-low degree at most. These effects are generally derived from a loss of visual simplicity and naturalness of the slopes that are within the SAL.
- 58 Notwithstanding the above, more examination and assessment of visual effects as experienced from parts of Ripponvale Road that are close or immediately adjacent to the site should be given. This appears to be the area that will be affected most in a visual sense. Additionally, a part of SH6 should be examined further in relation to potential visual effects.

- 59 Some submissions raise issues regarding landscape and visual effects. These issues have largely been covered by the R&M Report (subject to the comments given above). Views from some private properties to the south of the subject site will inevitably be affected, generally by development enabled by RL4 and 5 spreading up the lower part of the northeastern gully. RL4 and 5 development will be large-lot rural living activity that will bring a treed, green and relatively un-built visual pattern. The design of PC14 has kept this to the lower parts of the gully in response to topography and has kept the upper slopes unaffected. It appears that potential effects have been considerably mitigated.






Ben Espie

vivian+espie

27th April 2020



LEGEND

-  Site Boundary
-  No Build
-  Indicative Open space and Stormwater Corridor
-  Indicative Road Network
-  Proposed ONL Boundary



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Memo

| | |
|-------|--|
| To: | David Whitney |
| From: | Antoni Facey |
| CC: | |
| Date: | 21/4/2020 |
| Re: | Review of transport reports for Plan Change 14 |

1. → Executive Summary:



The roads and intersections appear to have sufficient capacity to accommodate the traffic generated by the proposed subdivision with appropriate design and mitigation measures in place. The current stage of development is for a plan change so design details are not appropriate.

A footpath/cycle facility should be provided to link the development with Cromwell.

Ripponvale Road should be seal widened to 7.5 metres between the development access road and the eastern intersection of Ripponvale Road with SH-6.

The traffic and transport effects of granting the plan change application will be no more than minor with appropriate conditions.



2. → Location and land uses:

Ripponvale Road is a flat rural area bounded by SH6 to the south and the mountains to the north and east. The area is well suited to growing high value cherry crops and has been largely developed for this purpose. These crops have a high seasonal employment

demand for staff for various activities such as pruning trees, general ground maintenance and harvesting. Other land uses in the block include a large packhouse on the intersection of Ord Road with SH-6, an army regiment, the racecourse and an airfield.

The racecourse is recommended for upgrading to a higher standard as part of the governments review of racecourses in NZ. It is unknown if this will require improvements to the roading and intersections to allow these upgrades and improved facilities.

These uses will attract staff that are currently mostly housed in Cromwell. The upgraded racecourse may also generate more race days and the area become busier with patrons drawn from a wider catchment as well as more on-course equestrian facilities.

¶
¶
¶

3.→ Traffic generation:¶

Traffic generation from the residential properties originally used was 6 vpd/dwelling or 960 vpd from the "up to 160 allotments". This was revised to 8 vpd/dwelling in the RFI response or 1280 vpd. The peak hour traffic generation of 1 vph/dwelling in the peak hours was accepted so this had no effect in the intersection peak hour capacity analysis.

However, the traffic counts show that the interpeak hours on SH-6 were greater than the morning peak hour and additional traffic from the development could have a greater effect in the interpeak hours. However, the effect will still be less than the evening peak hour so the evening peak is considered the worst hour for analysis.

A number of scenarios were investigated for distribution of the traffic generated by the proposed development. These appeared reasonable.

One issue that was not considered was the potential for traffic generated by the development to have a destination on the western side of the highway ie those living in the development who may work in the orchards or packhouse on Ripponvale Road or Ord Road. This effect is likely to be small but could reduce the existing traffic travelling from Cromwell to the orchards for work or at least prevent some new traffic movements from being introduced as the orchards grow as well as limiting the number of movements from the proposed development to Cromwell. These trips would be short and on local roads so may be more likely to be undertaken by cycle or on foot.

¶

4.→ Capacity¶

The traffic volume on Ripponvale Road in the vicinity of the proposed development is reported as between 200 and 300 vpd and is seasonal depending on the work required.

at the cherry orchards at any time. The development will add between 960 and 1280 vehicles per day to Ripponvale Road. This would be a total of up to 1,500 vehicles per day if they all travelled on the same link.

Ripponvale Road has a seal width of 5.8 metres.

Appendix A3.11 of the NZTA Economic Evaluation Manual provides a method for assessing the capacity of a rural road. Based on this method, the capacity of the existing roadway is approximately 1800 vehicles per hour. Given that the peak hour traffic flow is typically 10% of the daily flow, the development when fully constructed and added to the existing traffic would have a peak hour flow of about 150 vehicles per hour. This is well within the capacity of the existing roadway.

The capacity of SH-6 will be higher than the capacity of Ripponvale Road due to the wider traffic lanes and shoulder. With current traffic flows and future growth as well as traffic from the proposed development added, the total traffic in the peak hours will be around half of the capacity of the road.

¶

The Ord Road intersection is unlikely to be used by traffic generated from the development to any great extent with both Ripponvale Road intersections being the most logical routes for traffic from the development.

Analysis of the two Ripponvale Road/SH-6 intersections shows that there is considerable capacity still within the intersections in the future with a high traffic growth rate and the proposed development traffic added. Therefore, it is not reasonable to recommend any intersection upgrades for capacity reasons. However, this development does remove some of the spare capacity that other developments may have been relying upon. Ideally, the development should pay a contribution to future upgrades to recognize their benefit from utilizing spare capacity that will not be available to others.

¶

¶

5. → Ripponvale Road design ¶

¶

Ripponvale Road is a generally straight, flat road with a reserve width of 20 metres and seal width of 5.8 metres. Being a rural road, there are no urban features like kerb and channel, streetlighting, footpaths, etc.

The proposed development will change the nature of the road environment from rural to rural residential. The internal roading will have specific semi-urban features and design appropriate to its relatively intensive development and will be considered at subdivision stage in accordance with the District Plan requirements.

The great majority of traffic and non-vehicular demand from the development will use the approximately 1100m section of Ripponvale Road between the development access road and the eastern intersection with SH6. Hence, it is appropriate to consider what Ripponvale Road in this section should look like.

The eastern section of Ripponvale Road is expected to become a collector road with a traffic volume of somewhere between 1000 and 1500 vpd as a result of the proposed development. It will be the main feeder route from the highway to the development and this function is consistent with a collector road.

It is unknown at this stage if the racecourse will have its main access from either Ord Road or Ripponvale Road since it has frontage to both roads.

Regardless of the racecourse, the development of Ripponvale Road will require an upgrade to the road to accommodate the additional traffic and increased level in the roading hierarchy.

NZS 4404:2010 "Land Development and Subdivision Infrastructure" gives appropriate standards for a collector road in a rural area, Figure E8 of Table 3.2. Some of these are considered appropriate for application in Ripponvale Road as a result of this development.

The standard recommends that the movement lane should be 5.5-5.7m wide with 1.0m wide sealed shoulders. This is considered an appropriate minimum standard for traffic accessing the development. **A condition should be imposed that the section of Ripponvale Road between the development access road and SH6 be seal widened to at least 7.5 metres wide.**

The standard recommends that cyclists should ride on the sealed shoulder of these roads.

The standard recommends that a footpath should be constructed on each side of Ripponvale Road. However, in this case, I consider that only a single footpath should be constructed of 1.5 metres width on the northern side of the road only as a result of this development. **A condition of consent should be imposed that a footpath be constructed on the northern side of Ripponvale Road between the development access road and SH6.**

A second footpath along Ripponvale Road may be necessary at some stage in the future if development occurs such as the upgrade of the racecourse.

To provide an adequate pedestrian and cycle link between the development and the Cromwell township, a crossing of SH 6 will be required. About 400 metres to the north of Ripponvale Road is the Ripponburn Lifestyle Village. This village is likely to create a demand for cyclists and pedestrians to cross SH 6 to Cromwell. It is noted that there is an existing pedestrian/cycle track from SH 6 opposite the village to Waenga Drive and this distributes cyclists and pedestrians throughout Cromwell. This would appear to be

a safe and convenient location for pedestrians and cyclists to cross SH 6. A pedestrian footpath should be constructed between Ripponvale Road and the Ripponburn Lifestyle Village with a formal crossing point for cyclists and pedestrians established adjacent to the Village.

It is recognized that the state highway footpath and crossing point will provide convenient access to other users so should not be the sole responsibility of the developer. It will provide improved pedestrian and cycle access to the Ripponburn Lifestyle Village and will provide a defined alternative for staff of the Ripponvale cherry orchards to access the area safely either by cycle or on foot. There will be greater potential for mode shift from cars with a safe and convenient alternative provided.

It should also be noted that the government is currently consulting to allow cyclists to use footpaths.

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6.→ Road safety¶

The application has provided a comprehensive assessment of the reported crashes. This suggests there is no underlying safety concerns with the section of SH 6 or Ripponvale Road that will be most affected by the traffic generated by the proposed development.

State Highway 6 in this section is flat with generally straight alignments and excellent visibility and limited access points. There is no reason to expect the additional traffic generated by the development will create any significant safety concerns.

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7.→ Alternatives to vehicles¶

There is currently no public transport within Cromwell and only a limited taxi service. There are no known plans to create public transport service. This may change in the future and consideration of potential public transport requirements should be included in the development proposals.

As noted above, there is a significant number of staff required on the cherry orchards and the packhouse at times and there may potentially be a demand for staff at the racecourse if the upgrade is successful. Some of this demand may be accommodated by people who live within the proposed development. Other staff who live in Cromwell

may find the new cycle and footpath facilities on Ripponvale Road and SH-6 will be of use to them and change their travel mode. ¶

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8. → McFelin Road ¶

McFelin Road has a short section constructed from Burn Cottage Road. The road is extended by an unformed paper road to the applicants property. This has been identified by submitters as providing opportunities for linkage between Ripponvale Road and McFelin Road. I agree with the paper road providing potential access opportunities in the future and linkage from the internal roading network to the McFelin Road paper road on the applicants boundary should be created. A practical link should be provided that has a reserve width of 15 metres suitable for a trafficable road if required in the future to protect future network options. In the meantime, it would provide potential recreational usage from the new development as a walking and cycling track for residents of the development as well as others if the McFelin Road paper road was upgraded to allow this. ¶

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CODC Plan Change 14 Peer Review of Transportation Assessment

| Rev. No. | Date | Description | Prepared By | Checked By | Reviewed By | Approved By |
|----------|---------------|----------------------------------|------------------|---------------|-------------|------------------|
| A | 9 August 2019 | Peer review for CODC Information | Andrew Metherell | Andrew Leckie | | Andrew Metherell |
| | | | | | | |

1 Introduction

CODC has received a private Plan Change Application (Plan Change 14) by New Zealand Cherry Corp (Leyser) L.P. to rezone rural land at 144 Ripponvale Road to Rural Residential.

A Transportation Assessment report has been prepared by Carriageway Consulting. An initial review by Stantec identified a table of matters requiring further information and this was forwarded to the Plan Change proponent, and this is included as Appendix A to this report. Carriageway Consulting has prepared a supplementary report addressing those matters.

This report provides a peer review of the Transportation Assessment and supplementary RFI information.

2 Site Overview and Current Transportation Networks

2.1 Site Location

Carriageway Consulting have described the local transport environment, including road hierarchy. Their Figure 2 of the Transportation Assessment shows that the site is close to, but not adjoining with the existing Cromwell Urban area. It is located on the western side of SH6, which provides a physical severance from the existing Cromwell Urban area.

2.2 Ripponvale Road

Figure 1 of the RFI response shows that Ripponvale Road is the road connecting SH6 to the Plan Change site, and it has two connections to SH6. The "east" connection is the direct route for access towards Cromwell and the north, and the "west" connection provides for access towards Kawarau Gorge and Queestown further afield.

The road is currently formed for low traffic rural volume usage, and adjacent activity appears to primarily be horticultural related. As noted by Carriageway Consulting, the road is formed to a slightly lesser standard than would be expected of a new road according to CODC subdivision standards. The road has no edge delineation, which is typical of a low volume road (NZTA RTSS).

2.3 Ripponvale Road (west) / SH6 Intersection

We consider that the SH6 / Ripponvale Road (west) intersection has some additional complexity associated with the proximity to a bend in SH6 to the west, which is not discussed in the assessments provided. The sightline from Ripponvale Road looking to the west is approximately 200-220m (measured from aerial photograph), which is less than the 248m Safe Intersection Sight Distance requirement for a 100km/h design speed. This could lead to drivers approaching from the west on SH6 having less time for assessing and responding to those manoeuvring from Ripponvale Road. Given the high speed open road environment that exists, and high number of unfamiliar tourist drivers, this slight deficiency in available sight distance creates some additional road safety risk at the intersection. However, the road safety records reported in the assessment indicate there have not been any crashes associated with vehicles turning out of Ripponvale Road (west), which is currently a low volume movement.

2.4 Walking and Cycling Infrastructure

The assessments indicate that the number of road users walking and cycling is very low. It is agreed that for existing usage, there appears to be insufficient demand for specific walking and cycling infrastructure on Ripponvale Road, and the type of rural activity would typically not be provided with such infrastructure.

The nearby retirement village has a link on the Cromwell side of SH6, although no infrastructure is available for assisting crossing of SH6.

Of note is that the CODC infrastructure Strategy identifies an issue that there is no safe crossing point across State Highway 8B between Cromwell and the lakefront and residential properties, with construction of an underpass identified as a preferred solution.

3 Traffic Patterns

The assessments provide analysis of SH6 traffic counts west of Pearson Road, traffic surveys undertaken at SH6 / Ripponvale Road (east), and estimates of traffic volumes on Ripponvale Road from Council databases.

The traffic counts can be summarised as demonstrating very low traffic volumes on Ripponvale Road, and moderate traffic volumes on SH6 of 4,900vpd with high recent traffic growth (over the last 5 years).

4 Future Changes in Landuse

The assessments do not consider the Cromwell Masterplan or other unapproved Plan Changes as Carriageway Consulting understand they do not form part of the receiving environment to be considered. We simply note that if those should be considered further, they are likely to influence the assessments in the following ways:

- Transport infrastructure improvements are likely to be planned and undertaken in a way that supports MasterPlan development which does not appear to contemplate further rural residential development of the scale proposed on the western side of SH6;
- Other Plan Changes such as PC13 could lead to a step change in traffic volumes on SH6 passing Ripponvale Road, altering traffic growth from historical trends and requiring additional analysis of intersection performance.

5 Proposal

5.1 Site Layout

The transport assessments have assessed the ability of the proposed access road to meet basic traffic engineering standards. We note that one of the standard Safe Intersection Sight Distance requirements has not been assessed, and can not be met based on vehicles travelling at the speed limit. A vehicle approaching from the east should be able to see a vehicle waiting to turn right¹. 175m is available, which only achieves the SISD requirement for a speed slightly less than 80km/h. The Transportation Assessment assesses against a 100km/h speed limit, indicating revision of the access location would need to be considered to maximise approach sight lines in accordance with standard traffic engineering guidance.

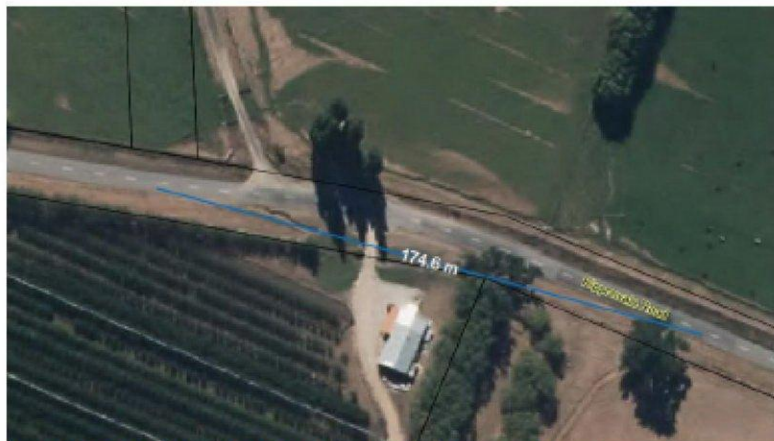


Figure 1: SISD for Approach to Right Turning Traffic on Ripponvale Road

The reporting does not set out any rationale for the choice of access location on Ripponvale Road. Having reviewed other documents in the Plan Change request, we have not identified any further justification for the access location onto Ripponvale Road. However, it appears to have been chosen to line up with an existing unformed legal road. At that location there is limited interaction with adjacent or opposite accesses.

¹ Austroads Part 4A Figure 3.3

We consider that the use of a single access has the potential to create resilience concerns for a development of the scale proposed. For example, if the main access road is shut off for an emergency or repair, there are no other opportunities to access the wider road network. Typical road standards such as those adopted by CODC suggest a cul-de-sac should provide for up to 25 dwellings. In this case the single access road will effectively create a long cul-de-sac road off Ripponvale Road serving 160 households. Council may have the opportunity through subdivision processes to require additional secondary connectivity to Ripponvale Road. We recommend subdivision assessment matters are revised to ensure network connectivity is able to be assessed further, or the Structure Plan modified to show how a secondary access can be achieved.

The Structure Plan also does not provide for connectivity to surrounding land, which is as expected if the surrounding land is not zoned for development. However, if there is the potential for adjacent land to have similar development occur in the future, the structure plan and/or assessment matters should allow for consideration of the need for additional connectivity.

For the site, we consider adoption of subdivision roading rules for guidance on road widths is appropriate, and further definition of road types can be considered through later subdivision processes.

6 Traffic Generation

The Transport Assessment set out a traffic generation rate of 6vpd/household, and in response to an RFI further analysis was carried out based on 8vpd/hh (which is the rate recommended in the CODC Engineering Standards Policy). We note that 6vpd/household has been utilised in other districts for low density development remote from major centres, and while there is the potential for such a rate at this location, the 8vpd/household provides a more robust assessment in the absence of local data. In any case, the assessment adopts 1vph/household for the peak periods, which is considered conservative.

7 Traffic Distribution

The traffic distribution of the site is important in determining potential transport network effects. The Transportation Assessment assessed 25% of traffic travelling to/from Cromwell, and 60% traveling to Queenstown. The distribution appears to assume the site will act as a commuter suburb for Queenstown.

Patterns from the 2013 Census data and NZTA Household Travel Survey suggests a much higher proportion of traffic is likely to be to and from the local area. However in the absence of up to date forecasts on travel patterns in Cromwell, the RFI response tests an alternative distribution more closely aligned with commuting patterns observed in the 2013 Census.

The test completed in the RFI response is based on 75% of traffic being to/from Cromwell, which is slightly more than the Census indicates for commuters, and would thus be "at one end of the range" as stated in the assessment. Whilst this retains a lot of uncertainty in the routes that traffic from the development would travel on, in the absence of Cromwell specific travel surveys it does allow for assessment of potential traffic effects.

8 Route Choice

8.1 Route Choice for Travel to/from Queenstown

In the RFI response, assessment of local route choice has been made. Drivers travelling to and from the Queenstown direction have a choice between using Ripponvale Road (east) to access SH6, or Ripponvale Road (west). We consider drivers will consider both travel distance and travel time in the local area in making a choice on the route.

As stated in the RFI request, the distance from the site access to the SH6 / Ripponvale Road (west) intersection is 3.2km using Ripponvale Road (west), versus 4.8km via Ripponvale Road (east) and SH6, a 1.6km saving in travel distance. Assuming a low 70km/h average speed on Ripponvale Road (noting it has a 100km/h speed limit) and high 100km/h on the highway, we calculate it would still be approximately 40s faster to go along Ripponvale Road (west). As it is both significantly shorter and faster to use Ripponvale Road (west) we expect it would be well utilised by residents travelling to and from Queenstown, which is a different assessment than Carriageway Consulting. NZTA have suggested (at the recent Plan Change 13 hearing) that lower speed limits

may be considered for SH6 in the future. That would further increase the likelihood of Ripponvale Road (west) being used.

For sensitivity testing, rather than accepting the use of Ripponvale Road (west), the RFI includes an intersection assessment addressing traffic using the shorter route of Ripponvale Road (west). We note that it provides limited discussion of the impacts on Ripponvale Road (west) if that scenario eventuates.

8.2 Route Choice for Travel to/from Cromwell

The RFI response explains the rationale for travel route choice to/from Cromwell. We agree that travel to the town centre would most likely be via SH8B. We consider there is then a "watershed" in the vicinity of Barry Avenue / Gair Avenue where travel distance and time is reasonably equal for travel via either SH8B or McNulty Road. As there are large employment areas south of Barry Avenue / Gair Avenue (being the industrial and commercial area), we consider it would be reasonable to expect a high proportion of peak period commuter travel to and from that area to be via McNulty Road. Other trips near the watershed may split across routes to a greater degree than suggested.

Assessment of SH6 / McNulty Road for Plan Change 13 indicated that intersection will come under pressure in the future, yet no assessment has been undertaken of increased use of that intersection.

8.3 Recommended Route Choice for Assessment

Based on consideration of travel time and distance, and potential origin/destinations in our opinion the assessed route choice should more clearly identify a spread of traffic as follows:

- Travel to Queenstown – there is likely to be a preference for use of Ripponvale Road (west);
- Travel to Cromwell – there is likely to be a split in use of SH8B and McNulty Road to access Cromwell.

We have produced diagrams below indicating potential additional daily traffic volumes on various routes based on the assessed distributions, and our comments on route choice. In the context of existing traffic volumes, the greatest change will be on Ripponvale Road, which currently carries traffic volumes approximately 250vpd and will increase by 600-1200vpd on Ripponvale Road (east), and 100-700vpd on Ripponvale Road (west).

State highway traffic volumes could increase by up to 800vpd on parts of SH6. This would be an approximately 15% increase on existing SH6 traffic volumes. In the Queenstown bias scenario, this occurs over a long stretch of SH6, whereas in the Cromwell bias scenario, the change is on shorter local sections of the road network.

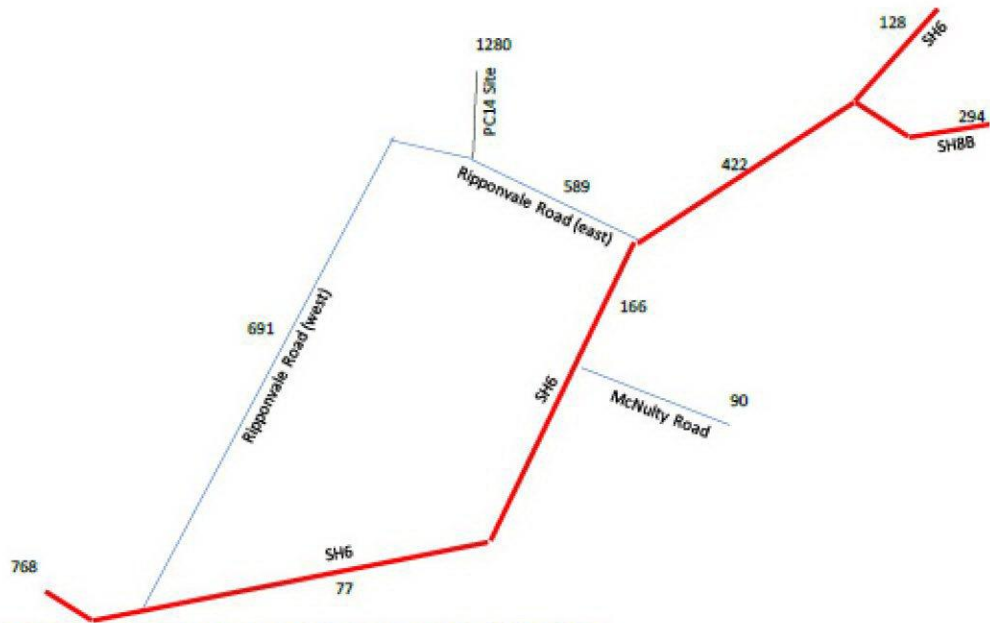


Figure 2: Daily Traffic Volume, Adoption of Queensdown Bias Traffic Distribution

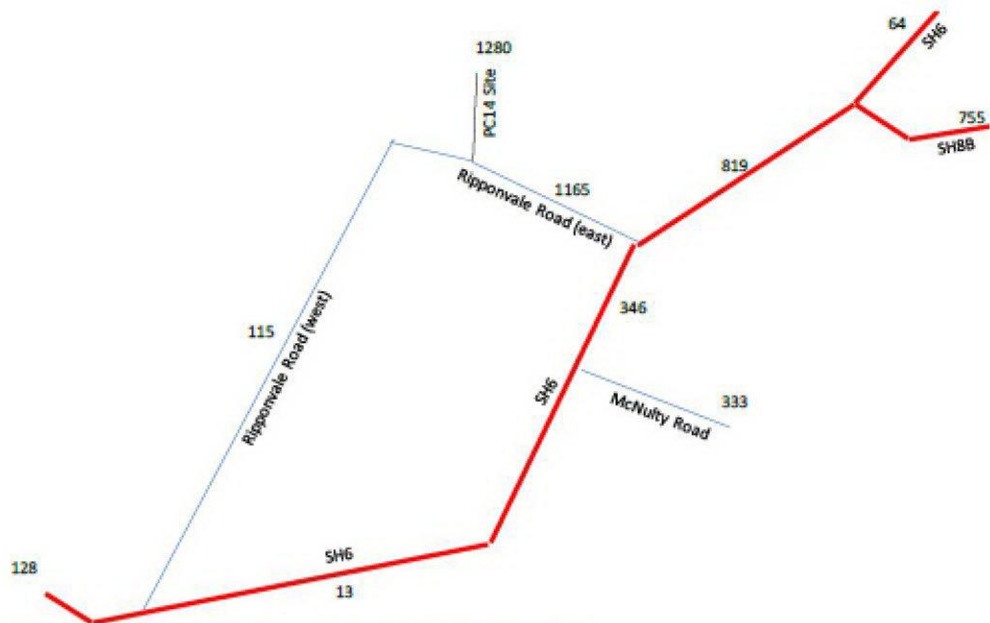


Figure 3: Daily Traffic Volume, Adoption of Cromwell Bias Traffic Distribution

9 Intersection Capacity

The assessments have utilised a standard intersection analysis software for testing performance of intersections with and without the Plan Change.

From the results presented, the following comments are made:

- SH6 / Ripponvale Road / Pearson Road intersection will operate with reduced level of service (LOS D rather than LOS C) in the morning peak period under the scenario of Queenstown bias distribution, and the route choice via Ripponvale Road (west). As noted earlier, the sight distance at the intersection from Ripponvale Road approach is less than would normally be expected. This combination of sight distance deficiency and increasing delays could contribute to increased safety concerns, and increased pressure for improvements to be carried out.
- SH6 / SH88 intersection LOS reduces to LOS E under the Cromwell bias scenario, adopting route choice to Cromwell via SH88. This is a poor level of service for a major rural state highway intersection and whilst the change would increase the pressure for improvements to be carried out (delays increase for the right turn out of SH88 from 28 seconds to 39 seconds), the additional traffic volume could be equivalent to only 1-2 years worth of normal highway traffic growth (at existing rates).

As these intersections of particular interest are NZTA controlled, the Plan Change could have some adverse safety influence on the NZTA controlled network, which is a key transport corridor. The willingness of NZTA to accept the level of service expected and potential for bringing forward improvements would be for them to consider as road controlling authority. We also consider further assessment of SH6 / McNulty Road would be appropriate, as one of the entry points to Cromwell that will potentially have increased pressure resulting from the Plan Change 14 development.

In our opinion assessment of the intersections on SH6 should also include consideration of a scenario with the Plan Change 13, as there is the possibility decisions on Plan Change 13 will overlap the process for Plan Change 14, and require reconsideration of transport network performance. This would also allow a better understanding of the potential longer term performance of the road network. Plan Change 13 could result in a step change in traffic volumes at intersections that will be utilised by Plan Change 14 traffic, rather than a continuation of historical traffic growth trends.

10 Non Car Modes of Travel

The development of 160 households is of sufficient scale that demand will increase for safe cycle facilities for access to Cromwell along Ripponvale Road, and across SH6. The site is within cycling distance of Cromwell, although is further than typical walking distance. Ripponvale Road has a rural road speed limit, and no lighting. It also has no sealed shoulders such that cyclists will need to share the traffic lane if the existing level of infrastructure is retained. Rural cycling crashes typically occur on roads with no shoulders², and severity of crashes on high speed roads will be higher than those associated with development accessed via urban roads.

With the Plan Change, volumes on Ripponvale Road (east) could increase to approximately 850-1,450vppd. NZS4404:2010 provides a table of road types and indicates a rural road servicing residential housing up to 150 dwellings could have cyclists sharing the movement lane with a 70km/ operating speed, but also requires sealed shoulders. This indicates some form of improvement and speed management is likely to be desirable for Ripponvale Road to facilitate use of cycling as a safe mode of travel. Alternatively, a separated facility would increase the likelihood that a range of cyclists would consider cycling as a safe mode of travel into Cromwell.

We also consider there will be increased demand for improved connections to trails on the eastern side of SH6, which should be supported by appropriate crossing points on SH6 given the high speed and traffic volume on that road. As noted in the CODC Infrastructure Strategy, SH88 has been identified as requiring improved crossing infrastructure, and it is considered a comparable increased need for crossing infrastructure of SH6 in the vicinity of Ripponvale Road will be necessary.

These network extensions would not be as necessary without the Plan Change development. The RFI response suggests this would be a matter for further consideration through subdivision processes. We consider either

² <https://www.nzta.govt.nz/walking-cycling-and-public-transport/cycling/cycling-standards-and-guidance/cycling-network-guidance/cycle-network-and-route-planning-guide/principles/safety-issues-for-people-who-cycle/>

provision should be included in the Plan Change indicating a cycle facility to and across SH6, or further assessment consideration should be included in the Plan Change provisions to allow assessment at the time of subdivision.

The site location is unlikely to be supportive of public transport as a mode of transport, as it is remote from other urban development and is not of sufficient scale to generate demand for a public transport service in its own right. We note that as there is no current indication that Cromwell would have a public transport service, the impact of this is less important than for centres that are serviced by public transport.

11 Ripponvale Road Improvements

The assessments indicate that Ripponvale Road is currently formed to a lesser standard than would be expected for future volumes that it could accommodate after development of the Plan Change area. Existing road widths are already slightly less than desirable, although at the very low volumes there would be no priority placed on widening without the Plan Change.

The Plan Change will generate volumes that will increase the need to improve the road to a standard that is consistent with typical standards to ensure it is safe for the volumes it is expected to accommodate. The RFI response suggests this would be a consideration at the time of subdivision. As the site is remote from other urban development, we consider there may be difficulties through standard subdivision processes addressing improvements on Ripponvale Road beyond the site frontage if there is no specific mention of that in the Plan Change. We consider an assessment matter should be included for Council to have discretion over the extent to which Ripponvale Road, through to SH6, would satisfy expected engineering standards. Possible outcomes could be contributions to additional road delineation, and shoulder widening.

12 Summary

Our peer review has identified that the proposed Plan Change site is located remote to existing urban development. By facilitating 160 households remote to existing urban areas there are some matters of connectivity and transport infrastructure provision that will require further consideration either through inclusion in the Plan Change rules, or subdivision matters of discretion:

- The resilience of the internal road network is reduced by only having one connection to the existing road network. This creates a long cul-de-sac type development. We consider the need for a secondary access point to Ripponvale Road should be considered further.
- The lack of connectivity to neighbouring blocks of land limits efficiency of future infrastructure provision. Although there are no current plans for development on adjacent blocks, if the Plan Change 14 development proceeds there may be increased likelihood of similar development occurring on adjacent lots that would warrant consideration of future connectivity with the Plan Change site.
- The access location of Ripponvale Road will require further optimisation as it currently does not achieve a requirement for safe intersection sight distance due to proximity to a bend, potentially increasing safety concern.
- Ripponvale Road (both east and west of the site) is currently not formed to a standard that would normally be expected for the volume of traffic that it will need to accommodate after the Plan Change area is developed. Some discretion through the subdivision process or Plan Change provisions to further consider improvements required is recommended.
- The scale and location of development is likely to generate cycling demand along Ripponvale Road that otherwise would not exist, but there are some safety concerns associated with the reliance on Ripponvale Road in its current form for safe cycling, particularly due to the differential speed of vehicles and cyclists. SH6 also provides severance as there is no safe crossing facility. Consideration of the need for infrastructure to support cycling would be desirable through the Plan Change provisions, potentially deferred to the subdivision process.

Based on assessed levels of traffic growth, the level of development traffic generation can be accommodated on the transport network, albeit with some reductions in level of service at state highway side road intersections:

- Ripponvale Road (west) intersection with SH6 will operate with lower levels of service (LOS D), and it also has some existing sightline deficiencies. The additional side road traffic will increase the need for improvements to address the increasing safety risk.
- There are likely to be cumulative effects of development on the efficient operation of other intersections on SH6, including SH6 / McNulty's Road and SH6 / SH8B. While the additional volume is not a step change,



the increases could be in the order of 15% which will likely bring forward the need to consider improvements (by a couple of years).

We note that no assessment has been carried out of scenarios with the implementation of the Cromwell masterplan, or Plan Change 13, both of which could further influence wider area traffic effects and the ability of the road network to accommodate the projected traffic increases.

Appendix 5

From: Quinton Penniall [<mailto:Quinton.Penniall@codc.govt.nz>]
Sent: Monday, 20 April 2020 10:21 AM
To: David Whitney <dwhitney.alex@xtra.co.nz>
Cc: David Campbell <David.Campbell@codc.govt.nz>; Peter Greenwood <peter.greenwood@codc.govt.nz>
Subject: PC14 - Infrastructure report comments

Hi David,

Please see below commentary in relation to the Infrastructure Report on the proposed plan change.

Stormwater

Soakage tests showed on the basis normal methods of stormwater disposal for a rural sub-division will be satisfactory. Should the development proceed stormwater conditions will be developed under our current NZS4404 standard and associated addendum to NZS4404.

On the basis of high level modelling trunk water mains and wastewater connections to Cromwell town reticulation can be provided to service this development.

Wastewater

In principle Cromwell's reticulated wastewater network has sufficient capacity to accept the demand of the additional 160 lots created. Council's preference is for the system to be gravity with larger lots potentially disposing on-site. The modelling report is high level and per the Infrastructure Report final design decisions will be made at the sub-division stage should the plan change progress.

Water Supply

In principle the development can be serviced from the Cromwell town water supply. Further modelling is required to address which zone the development could be served from. Final design decisions of the water reticulation and level of service provided outside Cromwell's water supply boundaries will be made at the subsequent subdivision stage should the plan change progress.

Power and Telecommunications

There are no concerns with regards to provision of power and telecommunications. Conditions will be developed at sub-division stage as per Council's engineering standards should the development proceed.

Regards,

Quinton



17 October 2019

Central Otago District Council

Attention: David Campbell

Novo Group Limited
Level 1, 279 Montreal Street
PO Box 365, Christchurch 8140
0 - 03 365 5570
info@novogroup.co.nz

By email: david.campbell@codc.govt.nz

Dear David,

ALEXANDRA FROST FAN: 91 ROCK VIEW ROAD, ALEXANDRA NOISE ASSESSMENT

Introduction

1. The Central Otago District Council (CODC) has engaged Novo Group to assess the cumulative noise generated by multiple frost fans operating at 91 Rock View Road, Alexandra. This is located in the Rural Resource Area (Planning Map 42) on property owned by Leaning Rock Cherries Ltd. This letter sets out the aforementioned noise assessment.
2. The frost fans are operating at the following speeds:
 - 2 blade – 2350 rpm; and
 - 3 blade – 1920 rpm.
3. The location of the frost fans are illustrated in Figure 1.



Figure 1: Frost Fan Locations (Leaning Rock Cherries Ltd)



Noise Assessment

Methodology

4. An assessment of the existing soundscape was undertaken by means of noise measurements to establish the noise effects of the multiple frost fans at neighbouring properties.
5. The noise was measured and assessed in accordance with NZS6801:1991 (Measurement of Sound) and NZS6802:1991 (Assessment of Environmental Sound). Although these documents have been superseded by 1999 and 2008 amendments, the 1991 versions are still referred to in the Central Otago District Plan and considered relevant to protect the amenity in the Rural Resource Area.
6. A site visit was conducted on 1 October 2019, between the hours of 06:00 – 08:00 when the frost conditions allowed for the operation of most of the frost fans simultaneously. Five measurements (N1 – N5) were taken at various locations in order to assess the cumulative levels of the frost fans (refer to Figure 2). An additional measurement (N2-2) was taken at 212 Letts Gully Road to mitigate the effect from the barking dog that was initially experienced at location N2-1.



Figure 2: Noise Measurement Locations



7. The measurements were precisely taken at the following locations relative to the nearest operating frost fan:
 - N1 – 350m north west;
 - N2-1 – 144m west;
 - N2-2 – 178m west;
 - N3 – 317m south;
 - N4 – 590m north north east; and
 - N5 – 740m north (noting that the fans were off at the time of the measurement, however, a frost fan on the property of 592 Springvale Road, roughly 430m north east of the measurement location was operating during the measurement)
8. The measurements were taken using a Bruel and Kjaer Type 2238 sound level meter, which meets the specifications for Type 1 equipment in NZS 6801:1991. The sound level meter was calibrated *in situ* before and after the set of measurements with the offset within the acceptable range.
9. The measurements occurred for at least 10 minutes, except at location N4 where the frost fans switched off 5 minutes into the measurement – at which point the measurement was also stopped. The measurements were taken at least 3.5m from any reflecting surface and 1.2m - 1.5m above ground level (refer to Figure 3 to Figure 8). The weather conditions were 3°C, partly cloudy with a light breeze <1m/s.



Figure 3: Measurement Location N1



Figure 4: Measurement Location N2-1



Figure 5: Measurement Location N2-2



Figure 6: Measurement Location N3



Figure 7: Measurement Location N4



Figure 8: Measurement Location N5

10. A spectral analysis was also taken at location N3 to assess whether the noise from the frost fans had a tonal characteristic as per NZS 6802:2001 (refer to Figure 9 for results). Due to the limited time frame, only one spectral analysis could be taken. However, it can confidently be assumed that the frequency spectrum would measure the same owing to the same model of frost fans being utilised across the entire site.
11. The determination of a tone adjustment for this assessment was carried out using the simplified test method as per NZS 6802:2008 rather than NZS6802:1991, because the latter does not provide an objective test method. The former suggests that an adjustment for tonality shall apply if the Leq in a one-third octave band exceeds the arithmetic mean of the Leq in both adjacent bands by more than the values given in Table 1.

Table 1: One-third octave band level differences

| One-third octave band | Level difference |
|-----------------------|------------------|
| 25 – 125 Hz | 15 dB |
| 160 – 400 Hz | 8dB |
| 500 – 10 000 Hz | 5dB |

12. The duration of the measurements is sufficient to comprehend the soundscape of the area due to the frost fan noise being the dominant and stable sound source. Furthermore, the weather conditions allowing for even propagation.



13. The frost fans were the dominant noise source at all the measurement locations. There were no other rural/farming/agricultural activities taking place at the time of the site visit that gave rise to either obvious or undue noise.

Measurement Results

14. The results of the measurements are summarised in Table 2 below, with the spectral analyses indicated in Figure 9 below.

Table 2: Measurement Results – Tuesday 1 October 2019

| Sample ID | Location | LA10 (dB) | Time | Duration (min) | Notes |
|-----------|----------------------|-----------|-------|----------------|---|
| N1 | 238 Letts Gully Road | 54 | 06:35 | 10 | Frost fan noise was the dominant noise source at this location. |
| N2 - 1 | 212 Letts Gully Road | 66 | 06:52 | 10 | Frost fan as well as dog barking influenced measurement at this location. |
| N2 - 2 | 212 Letts Gully Road | 59 | 07:06 | 10 | Frost fan noise was the dominant noise source at this location. |
| N3 | 102 Letts Gully Road | 59 | 07:26 | 10 | Frost fan noise was the dominant noise source at this location. |
| N4 | 92 O'Neil Lane | 63 | 07:55 | 5 | Frost fan noise was the dominant noise source at this location. |
| N5 | 115 O'Neil Lane | 53 | 08:08 | 10 | Frost fans belonging to Leaning Rock Cherries Ltd were off at the time of the measurement, however, the measurement did pick up another frost fan operating on 592 Springvale Road. |

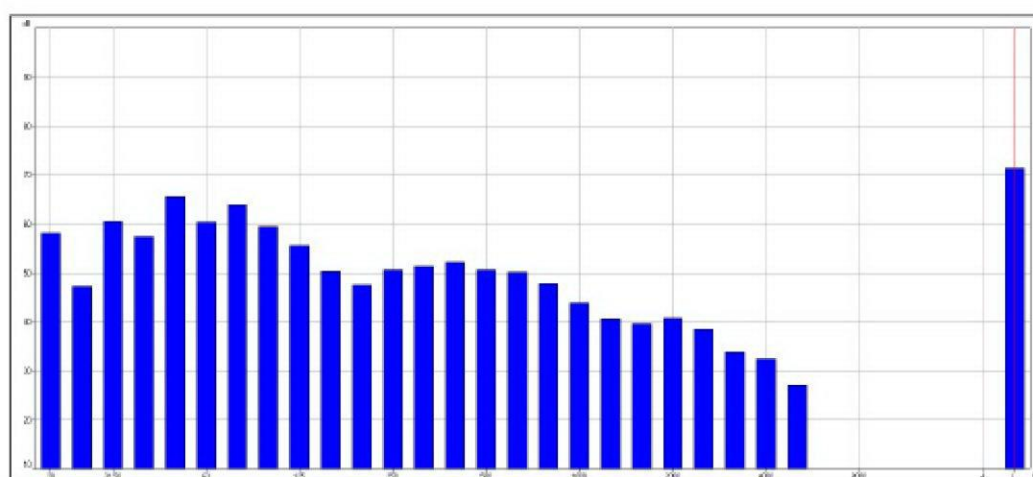


Figure 9: Spectral Analyses at Location N3



Assessment of Effects

15. It was determined from the spectral analyses (see Figure 9 above) that no one-third octave band exceeded the level differences as per Table 1 and therefore no tonal adjustments to the measured levels were required.
16. The measurement levels that incorporate the specific effects of the frost fans ranges from 54dB LA10 to 63dB LA10. The results indicate that the noise levels comply with District Plan Standard 4.7.6 E (c) at dwellings nearest to the measurement locations.
17. The measured levels to the north west, west and south (N1, N2-2 and N3) are lower than the measurement to the north (N4), even with the measurements (N1, N2-2 and N3) taken closer to the frost fans. This is mainly due to the topographical terrain, with the areas to the north west, west, south west and south sloping away from the frost fan locations. The area to the north generally has full line of sight towards the frost fans.
18. Due to time frame constraints undertaking the measurements it was not possible to cover all areas around the site. No measurements were taken in areas to the immediate east and north of the Leaning Rock Cherries Ltd property, (refer to figure below with indicated areas). Therefore, the full extent of the cumulative noise effect in these areas is not certain.
19. With reference to the noise level measured at N4 (63dB LA10), it is reasonable to assume that the likely noise level at the properties of 93 O'Neil Lane, 15 O'Neil Lane and 4 O'Neil Lane which is the nearer to the , will be higher and unlikely to comply with Standard 4.7.6 E (c). However, the areas identified to the east will be less effected due to only one frost fan within a distance of 210 meters from the nearest dwelling and likely to comply with Standard 4.7.6 E (c).

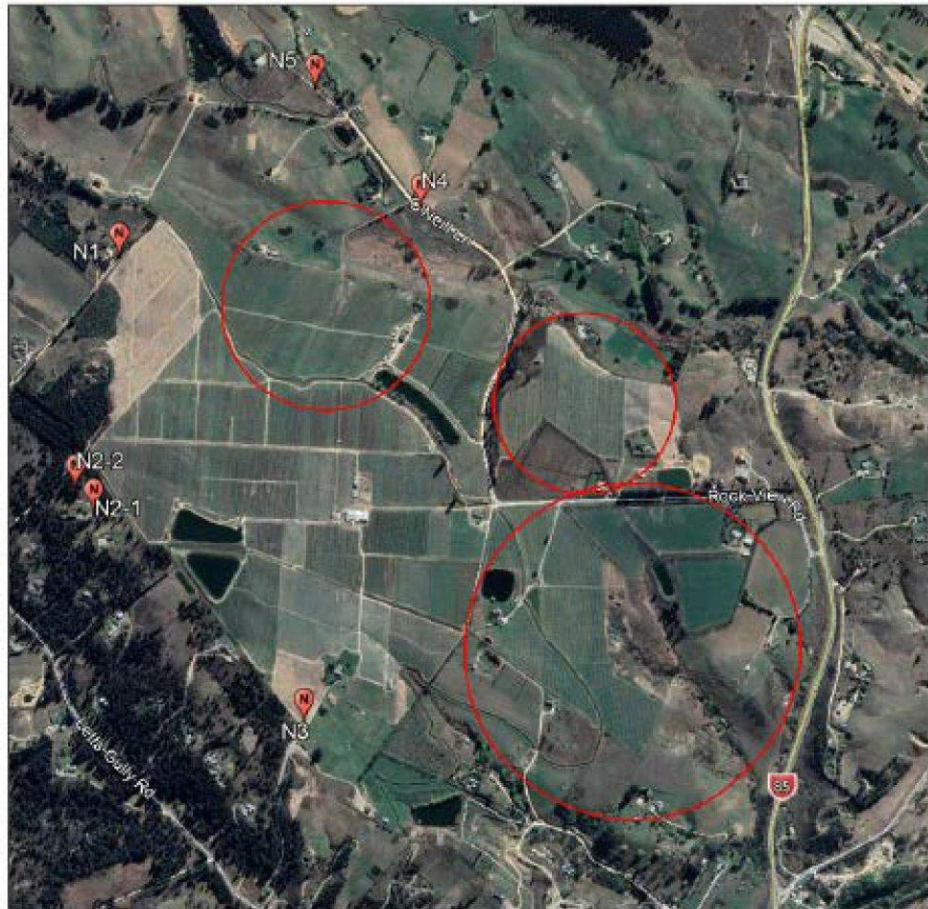


Figure 10: Areas with no measurement data

20. Section 16 of the Resource Management Act requires the best practicable option to be adopted to control noise at a reasonable level. Considering that frost fans operate during the frost danger period, which is during night time through to the early morning, the primary concern is on sleep disturbance.
21. Even though CODC Rule 4.7.6 E (d) refers to an indoor design sound level of 45 dBA Lmax within any habitable room as being acceptable, this would not protect against sleep disturbance in bedrooms. Accordingly, the World Health Organisation's (WHO) indoor guideline values for bedrooms (30dB LAeq for continuous noise) are used. Noting that dwellings have an average reduction of outdoor sound levels of 25dB with windows closed and assuming that windows will be closed during frosty outdoor conditions, the indoor level inside the dwellings to the north west, west, south west and south is calculated at a maximum of 31dB LAeq.



22. Given that a 1dB change is barely perceptible it is considered that the current noise effect from the frost fans on the dwellings to the north west, west, south west and south is reasonable. With the assumption that the frost fan noise levels will comply towards the east, it is also assumed that the current noise effect will be reasonable.
23. Without noise level data for the nearest dwellings to the north and north east (93 O'Neil Lane, 15 O'Neil Lane and 4 O'Neil Lane) it is assessed that the noise effect will be unreasonable due to a calculated indoor level of 40dB LAeq.

Conclusion

24. The Central Otago District Council (CODC) has engaged Novo Group in terms of an assessment of the cumulative noise generated by the multiple frost fans operating in the Rural Resource Area on property owned by Leaning Rock Cherries Ltd.
25. Ultimately it is established that the current noise effect from the Leaning Rock Cherries Ltd frost fans in terms of the RMA section 16 is unreasonable due to the calculated exceedance of the indoor level at 93 O'Neil Lane, 15 O'Neil Lane and 4 O'Neil Lane.
26. It is recommended that additional noise measurements be undertaken at the notional boundary of these properties as well as within the area to the east to accurately establish the noise effect from the frost fans.

Yours sincerely,

Novo Group Limited

Luke Sadler

Environmental Acoustic Engineering Consultant

D: 03 925 9315 | M: 027 226 0343 | O: 03 385 5570

E: luke@novogroup.co.nz | W: www.novogroup.co.nz

017001

7 November 2019

Central Otago District Council

Attention: David Campbell

Novo Group Limited
Level 1, 279 Montreal Street
PO Box 365, Christchurch 8140
0 - 03 365 5570
info@novogroup.co.nz

By email: david.campbell@codc.govt.nz

Dear David,

ALEXANDRA FROST FAN: 91 ROCK VIEW ROAD, ALEXANDRA NOISE ASSESSMENT ADDENDUM

Introduction

1. This letter serves to follow on from the previous noise assessment (dated 17 October 2019) with respect to considering the impulsiveness characteristic of the frost fan noise, which was raised as an issue by neighbours to the frost fans.
2. With reference to a technical discussion document on the management of noise from frost protection fans by Malcolm Hunt Associates (MHA) for the Marlborough District Council, "The sound from frost protection fans arises largely from aerodynamic sources associated with the blade passing through air. It is generally the blade tips which generate the most noise as these parts of the blade are traveling the fastest through the air and have the most potential to induce air disturbance (which is a perceived noise)" (Hunt, 2010). "the rapid-fluctuating sound characteristic from the frost fan sound, if present, can be considered an additionally annoying and classified as "impulsive sound" if the fluctuations are large enough and have a sufficiently short rise time" (Hunt, 2010).
3. As per Rule 12.7.4 of the Central Otago District Plan, adjustments for special audible characteristics, if present, as provided for in clause 4.3 and 4.4 of NZS6802:1991, shall apply and will have the effect of imposing a numerical noise limit 5 dB more stringent than those L10 numerical limits stated in the Plan. Alternatively, a 5dB penalty may be added to the measured levels. Seeing as the reasonableness of the noise is assessed rather than whether compliance is achieved, the latter option is more relevant.
4. As the noise levels were initially assessed on an objective quantifiable basis during the previous assessment, the impulsiveness characteristic of the noise (which was also not acutely present in all the surrounding areas), which is subjectively assessed, was not considered. 'Blade slap' which causes the impulsiveness, however, was perceptible at most monitoring locations during the site visit.
5. Furthermore, with reference to a Marshall Day Acoustics (MDA) revised report, presenting recommended noise rules for the Hurunui District which states that "all wind machines we have heard have special audible characteristics such as 'blade slap'(Camp, 2008), it is considered to impose a 5dB penalty to the noise levels as measured during the previous assessment.



6. Noting the above as well as noting the finding in the previous assessment stating that "the indoor level inside the dwellings to the north west, west, south west and south is calculated at a maximum of 31dB LAeq", it is reconsidered, by applying a 5dB penalty, that the maximum indoor level at the aforementioned neighbouring dwellings is 36dB LAeq.
7. It is therefore reconsidered that the current noise effect from the frost fans on the dwellings to the north west, west, south west and south is unreasonable.

Conclusion

8. After reconsidering the special audible characteristics of the frost fan noise and confirming that a penalty is imposable, it is established that the current noise effect from the Leaning Rock Cherries Ltd frost fans in terms of the RMA section 16 is unreasonable due to the calculated exceedance of the World Health Organisation's indoor level guideline for bedrooms at 93 O'Neil Lane, 15 O'Neil Lane and 4 O'Neil Lane, and also the neighbouring dwellings to the north west, west, south west and south. Noting that the indoor levels are based on predictive calculations rather than indoor measurements.
9. The recommendation remains, that additional noise measurements be undertaken at the notional boundary of 93 O'Neil Lane, your 15 O'Neil Lane and 4 O'Neil Lane as well as within the area to the east to accurately establish the noise effect from the frost fans.

References

10. Camp, S. (2008) *rp001 r04 2008469c frost fan noise rules 28nov08*. Hurunui District Proposed Frost Fan Noise Rules.
11. Hunt, M. (2010) *Review of Noise & Acoustic Matters Technical Discussion Document*. Feb. 2010. Managing Noise from Frost Protection Fans, Marlborough Sound Resource Management Plan.

Yours sincerely,

Novo Group Limited

Luke Sadler

Environmental Acoustic Engineering Consultant

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Appendix 7

-----Original Message-----

From: Jelley, Neville [<mailto:Neville.Jelley@stantec.com>]

Sent: Monday, 6 April 2020 2:57 PM

To: David Campbell <David.Campbell@codc.govt.nz>

Cc: Johnston & Whitney <dwhitney.alex@xtra.co.nz>; resourceconsents@codc.govt.nz; Engineering <Engineering@codc.govt.nz>

Subject: Plan Change 14 : Report Reviews

David

The Stantec specialist comments on the geotechnical & flood hazard reports are provided below as requested.

Nga mihi
Neville

From: Paterson, Lee <Lee.Paterson@stantec.com>

Sent: Monday, April 6, 2020 11:12 AM

To: Jelley, Neville <Neville.Jelley@stantec.com>

Subject: Plan Change 14 : Report Reviews

Hello Neville – here is my commentary for you to pass on to the client

As requested, we have undertaken a review of the following documents downloaded from this page:
<https://www.codc.govt.nz/publications/plans/district-plan/plan-changes/Pages/default.aspx>

- * Appendix F – Paterson Pitts Cherry Corp (Leyser) L.P. Request for change to the operative Central Otago district plan, Infrastructure Report, REF: C2528, May 2019
- * Appendix H - Geosolve Flood Hazard Assessment, 114 Ripponvale Road, Cromwell, May 2019 GeoSolve Ref: 180137.01
- * Appendix I - Geotechnical Investigation – Shannon Farm Private Plan Change, 144 Ripponvale Road, Cromwell, February 2019 GeoSolve Ref: 180137.01

Natural Hazards

The Geosolve “Geotechnical Investigation” report appears to be a comprehensive appraisal of available published information and prior knowledge.

No physical investigations were undertaken for this work, so it does not seem fair to have this titled as an investigation report. Notwithstanding this, we consider it an appropriate work to inform opinion on the plan change.

Regarding natural hazards on the site, we have the following commentary:

Geosolve has provided a comprehensive consideration of the potential effects of natural hazards on the proposed development, including opinion on Alluvial Fan hazards. Landslide hazards, liquefaction and seismic risks for the potential development.

Landslide risk

In terms of landslide risk, the report is clear that the significant majority of the lower schist slopes should remain classified as areas with “no potential for rural residential built form” (marked in purple in the second appended plan in the report) however some zones have been noted as potentially suitable for development. The specific areas fall under the proposed Rural Lifestyle 5, Minimum Lot Size: 3 ha and are the following locations marked in red (the yellow boundaries are my example measurements using google earth)

[\[cid:image002.jpg@01D60C04.30A01B90\]](#)

[\[cid:image003.jpg@01D60C04.30A01B90\]](#)

[\[cid:image004.jpg@01D60C04.30A01B90\]](#)

slopes of approximately 20 degrees or less in ancient yet inactive landslide debris can be considered for potential development.

An initial inspection of the terrain and existing scarps was used to identify slopes which could be suitable, followed by closer review using 3D imagery and Lidar to identify areas of concern. While slowly creeping schist debris landslides extend from the flats to the top of the Pisa Range, the slopes within the plan change area reduce to 20 degrees or

flatter in places. In these locations the absence of distinct scarps or other signs of recent movement indicate either inactivity or very low rates of creep.

Areas of the landslide that have the potential for development will require further monitoring and investigation would be required to confirm geotechnical requirements. It is expected that this information would form part of future applications for resource consent.

Alluvial Fans

Geosolve has reviewed the ORC mapping, and is extremely familiar with the Alluvial fan risks in central Otago, with the following commentary in their report

The alluvial fan surface below the small catchment of the northern gully is smooth, with no topographic evidence of debris flow deposits or recent activity. The minor gullies on the face of the Early Quaternary Gravels are moderate to steep, but with only limited evidence of past alluvial fan development, and no evidence of recent activity.

there does not appear to be any evidence of recent activity, and the risk of future debris flows or debris floods is considered to be generally low. No mitigation measures are required for active alluvial fan matters that won't be covered by surface water flooding.

Liquefaction

This is not anticipated to be a present risk, due to the low prevailing water table, and unlikely presence of susceptible soils.

Seismic

The seismic risk associated with the Pisa Fault is considered very low.

Seismic risk is anticipated to be governed by the Alpine fault. Due to deep soils, preliminary design should adopt Class D "deep" subsoil conditions in accordance with NZS1170.5:2004 in the lower southern areas of the property.

Conclusions on Natural Hazards

The Geosolve position is clearly concluded as follows:

Assessment of the site indicates geotechnical hazards and risks are present within the property boundary but most will not provide any limitation on rural residential development, with a low risk attributed to most, and remedial measures available to reduce and remove others. Accordingly, the proposed zone can be supported from a geotechnical perspective.

Episodic creep of schist debris landslides may affect the western gully slopes at the base of the Pisa Range. This area shows areas susceptible to landsliding and within this a marginal zone of land (Appendix A, Figure 2) that could be subject to further investigations. There is a significant prospect that successful investigation and possible remedial measures, involving control of groundwater systems would enable rural residential development, in this area.

Alluvial fan activity has been identified in field investigations poses no risk to development as with no remedial measures required other than those for flooding mitigation as discussed in the flooding assessment

Flood Assessment

Geosolve has undertaken a quantification and assessment of potential overland low and flood effects on this area. We have not undertaken a numerical review of these calculations, but have reviewed the general inductive method used, and agree that it is appropriate.

The assessment from Geosolve is that*

In general, it will be possible to locate future building sites well away from and above active watercourses. Accordingly, most future lots will only require a minimum level of flood protection to deal with localised shallow runoff, such as establishing minimum floor levels above surrounding ground as outlined in Section 3.2. The CODC minimum floor level is 300 mm above natural ground, but in some cases, this will need to be greater.

All building sites should be located away from flood flow paths.

The three existing small water storage dams present an additional flood hazard to land immediately downstream, although the incremental increase in hazard may only be small. If retained as stormwater retention ponds, these could be modified to have a positive effect by reducing the impacts of flooding downstream. Further engineering assessment is recommended at a later date to confirm their suitability for reuse in this way, and to inform any requirements for managing flood risk downstream.

Geosolve has adopted a relatively conservative position on the flood modeling it has undertaken, by

* considering the first-hand accounts of the effects of the 1999 flood event were "anomalously low"

* assuming less active management of flood flows into water races and dams

Commentary / Advice

We consider that the potential risks associated with natural hazards have been suitably assessed within the Geosolve reports.

This report anticipates that 2 areas of the foothills can reasonably be built upon due to their relatively low 2 degree slope angles, but that "development will require further monitoring and investigation would be required to confirm geotechnical requirements"

Whilst the proposed works are a plan change, and not a subdivision consent, it would be ideal if there could be a separate zoning or firm commentary that development of these specific locations would be subject to a site-specific geotechnical assessment confirming that the site is suitably stable, and that proposed works would not create or exacerbate natural hazards on this or adjacent property.

The risk from flooding to residential properties can generally be managed by minimal engineering.

The exact extent of such works cannot be ascertained until the proposed form of any subdivisions is undertaken. Such subdivisions will be required to address the potential effects at that time.

In short, we believe that the Geosolve reports are appropriate to inform the proposed Plan change.

I appreciate that there may be some further commentary required for this – if you have any more questions, please feel free to contact me

Regards / Ngā mihi

Lee Paterson
BSc (Civil Engineering w Geology)
Senior Geotechnical Engineer
Advance-Certified Drone Pilot (102)

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