

Sections 104, 104B and 108, Resource Management Act 1991



Report recommending whether or not an application for resource consent should be:

- Granted or declined, and if granted, the conditions of the consent.

Name: Andrew Henderson

Position: Consultant Planner

Resource Consent Number: RC185627

APPLICANT:	Fulton Hogan Ltd																				
PROPOSAL:	To establish a new quarry (to be known as ‘Roydon Quarry’).																				
LOCATION:	Located on land between Curraghs, Dawsons, Maddisons and Jones Road, some 700m west of Templeton Township.																				
LEGAL DESCRIPTION:	The legal descriptions of the sites forming the application are as follows: <table><tr><th>Certificate of Title</th><th>Legal Description</th><th>Area (ha)</th></tr><tr><td>CB20F/554</td><td>Rural Section 6475 and Rural Section 6324</td><td>28.3279</td></tr><tr><td>CB291/71</td><td>Lot 1 Deposited Plan 4031</td><td>80.9953</td></tr><tr><td>CB39/215</td><td>Rural Section 6342</td><td>8.0937</td></tr><tr><td>815228</td><td>Section 7 Survey Office Plan 510345</td><td>16.4993</td></tr><tr><td>815227</td><td>Rural Section 5381 and Section 6 Survey office Plan 510345</td><td>36.4188</td></tr></table>			Certificate of Title	Legal Description	Area (ha)	CB20F/554	Rural Section 6475 and Rural Section 6324	28.3279	CB291/71	Lot 1 Deposited Plan 4031	80.9953	CB39/215	Rural Section 6342	8.0937	815228	Section 7 Survey Office Plan 510345	16.4993	815227	Rural Section 5381 and Section 6 Survey office Plan 510345	36.4188
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ZONING:	The property is zoned Inner Plains under the provisions of the Operative Selwyn District Plan (Rural) Volume.																				
STATUS:	This application has been assessed as a land use consent for a Discretionary activity under the District Plan. As such the relevant provisions of the District Plan (Rural) Volume and the Resource Management Act 1991 have been taken into account.																				
HEARING DATE:	Week Commencing Monday, 18 November 2019																				
RECOMMENDATION:	That consent be declined.																				

Preamble

1. This report reviews the application for resource consent and addresses the relevant information and issues raised. The recommendation made in this report is not binding on the

Commissioners and it should not be assumed that the Hearings Panel will reach the same conclusion having considered all the evidence brought before the hearing by the applicant and submitters.

Qualifications and Experience

2. My name is Andrew Henderson. I am currently employed as a Senior Associate – Planning with Beca Ltd. I have practiced as a planner for the past 24 years, having graduated with a Master of Regional and Resource Planning from the University of Otago in 1994. I am a Full Member of the New Zealand Planning Institute. I have been employed by Beca Ltd since 2012 and have previously held planning positions with the Wellington Regional Council (1994-1997), Dunedin City Council (1997-2001), Civic Corporation Ltd (2001-2005), and Boulder Planning (Otago) from 2005-2011.
3. I have over 20 years' experience in the field of planning and resource management and have worked in both local government and private practice during this time. I have been involved in a range of land use and statutory planning projects throughout New Zealand, predominantly in the South Island. I have previously presented evidence at Council and Environment Court Hearings, and I have acted on behalf of applicants, submitters and as a peer reviewer/processing officer for Councils. I have been involved in a number of land use consents for quarrying and gravel extraction, including in recent times the extraction of aggregate from a farm adjacent to the Waimea River in Nelson, and with various consents for the Marsden Valley Quarry (previous operated by Downer NZ) in Nelson.
4. I have read and agree to comply with the Code of Conduct for Expert Witnesses as contained in the Environment Court Practice Note. I confirm this evidence is within my area of expertise, except where I state I am relying on facts or information provided by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions I have expressed.
5. In November 2018, I was engaged by the Selwyn District Council (SDC) to provide planning advice relating to the resource consent application by Fulton Hogan Ltd to establish and operate a gravel quarry and processing operation at a site to be known as Roydon Quarry, located on Jones Road between Curraghs Road and Dawsons Road in Templeton.
6. In preparing this report, I have reviewed the Application and supporting documents submitted to the Selwyn District Council in November 2018; and the subsequent responses to requests for information pursuant to section 92 of the Act.

Introduction

7. Consent is sought to establish a gravel quarry on the 170-hectare subject site, involving the extraction of aggregate to a depth of approximately 10m below existing ground level, and subsequent rehabilitation of the site with cleanfill, overburden and topsoil material. I understand that the proposed rehabilitation does not extend to restoring the site to original ground level, with the intention being to leave the site at the excavated level with the exception of a layer of cleanfill and topsoil to support grass. In this regard I note that the original application¹ states that the rehabilitation primarily involves

...re-spreading and contouring of stored overburden materials, stabilisation of quarry faces and grassing of completed and restored extraction areas. It shall create a free draining and stable landform with batter slopes on completion of rehabilitation no steeper than 1 vertical (v):3 horizontal (h).

8. The proposed activity is described in detail in the information provided by the Applicant, including:
- The Application and supporting information lodged with the resource consent dated November 2018 ('the November AEE');
 - Response to Request for Further Information dated March 2019 (the March RFI); and
 - Response to Request for Further Information dated 16 August 2019 (the August RFI).
9. I adopt the Applicant's description of the proposal as set out in the above documents, noting that key changes to the proposal confirmed in the 16 August RFI include:
- An amended staging proposal, whereby the site will be worked in an anti-clockwise direction, from a block starting in the south-eastern corner²;
 - Confirming that heavy vehicle movements will be limited to an average daily limit of 800 per day (i.e. 400 in and 400 out) over a 60-calendar day period, with a maximum of 1200 movements (600 in and 600 out) in any one day³;
 - Inclusion of an option to provide for a shared heavy and light vehicle access to the site off Jones Road⁴.

¹ Section 4.12 Rehabilitation, End Use and Activities on Balance of Site, November 2018 Application, page 26

² Section A.1.1.3 Staging of Extraction, page 2, 16 August 2019 RFI

³ Section A.1.3 Truck Movements, page 4, 16 August 2019 RFI

⁴ Section A.1.4 Site Access, page 4, 16 August 2019 RFI

- Revisions to the lighting plan⁵;
- Confirmation that no more than 26ha of the site will be actively worked at any one time, excluding areas set aside for sealed access roads and buildings. The 26ha area does include areas which are sealed or compacted for dust suppression purposes. It is also noted that no more than 5ha will be excavated at any one time⁶;
- updated hours of operation, as follows⁷:

Hours	Duration	Range of Activities
6.00 am to 7.00 am	Monday to Saturday	Load out of trucks, site pre-start up including operational warm up of conveyors and machinery. Clean fill deposition.
7.00 am to 6.00 pm	Monday to Saturday	Full range of quarry activities
6.00pm to 8.00 pm	Monday to Saturday on 150 days per annum (between Monday and Saturday)	Full range of quarry activities with the exception of processing using mobile plant and backfilling.
8.00pm to 6.00 am	Monday to Saturday on 150 nights per annum	Load out of trucks (no more than 30 movements per hour) and truck movements, and ancillary activities such as operation of weighbridge and site offices and clean fill deposition.
Sunday and public holidays	For up to 15 days per year	Truck movements load out of aggregate and cleanfill deposition.
At all times, dust suppression, operation of weighbridge, office activities, site security and light maintenance as required.		

- Confirmation that the proposed bunding and landscaping can be ‘decoupled’, i.e the bund and planting can be completed independently of each other⁸.

10. I note that while the above changes have been made to the proposal, some of the supporting reports will require amending in the event consent is granted to ensure that the most recent changes to the proposal are captured. For example, the Quarry Rehabilitation Plan that forms part of the proposal will require amendment to show the amended staging approach.
11. While I rely on the Applicant’s overall descriptions of the proposal, for the purposes of my assessment, I understand the proposed quarry to generally involve topsoil stripping, bund formation, aggregate extraction to a depth of approximately ten metres below ground level and rehabilitation of the site with cleanfill, overburden and topsoil material. From extraction areas, aggregate material will be transferred by field conveyers and dump trucks to on-site processing

⁵ Section A.1.5 Revised lighting plan and assessment, page 4, 16 August 2019 RFI

⁶ Section A.1.1.2 Open Quarry Areas, page 1, 16 August 2019 RFI

⁷ Section A.1.12 Hours of Operation, 16 August 2019 RFI

⁸ Section C.3, Landscape Issues, page 12, 16 August 2019 RFI

plant, which will involve crushing, screening and washing of aggregates. The use of mobile processing plant is also proposed. The Applicant has confirmed that all of the material required to complete the bunds will be sourced from within the site.

12. Other activities that are proposed to occur on site include stockpiling of aggregates, workshops, staff amenity blocks and offices, along with the management of adverse effects such as bunding and screen planting, as well as dust mitigation. Dedicated access for heavy and light vehicles (whether combined or separate) will be created off Jones Road, and improvements to Dawsons and Jones Roads are proposed, including two options for a roundabout near the intersection of Jones and Dawsons Roads.
13. Given the large area proposed to be worked as part of the proposal, the works are to be staged over an estimated 40-year period, in five stages. Starting with an excavation in the centre of the site to accommodate the plant and buildings necessary to support the operation, quarrying will now commence in a block at the south eastern part of the site and move progressively in an anti-clockwise direction around the site, as illustrated in Figure 1 in section A.1.1.3 (Staging of Extraction) included within the 16 August 2019 RFI.

Background

14. This application to the Selwyn District Council is being considered jointly with applications to the Canterbury Regional Council. This report addresses the land use elements of the proposal, and the regional matters are addressed in the section 42A report prepared by Ms Hannah Goslin. The regional consents are required for matters relating to the take and discharge of water, discharges to land and for discharges to air (including dust).

Description of the Existing Environment

15. The site is a total of 170 hectares in area, made up from land in the following Certificates of Title:

Certificate of Title	Legal Description	Area (ha)
CB20F/554	Rural Section 6475 and Rural Section 6324	28.3279
CB291/71	Lot 1 Deposited Plan 4031	80.9953
CB39/215	Rural Section 6342	8.0937
815228	Section 7 Survey Office Plan 510345	16.4993
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16. The site and surrounding area are described in section 3.0 of the November 2018 application. I understand there is no disagreement between any of the parties as to the description of the site, zoning or the surrounding area, and I note that Mr Robertson, the Council's consultant landscape architect, has summarise the site as

'...typical' pastoral land characterised by pasture grass, a patchwork of rectangular paddocks, small number of buildings, low levels of scattered vegetation and open views across the site to the landscape beyond. The site does not have any distinguishing physical characteristics but has some shared and recognised values as the former location of a well-regarded horse stud – Roydon Lodge Stud.

17. The nature of the surrounding roading network is described in the evidence of Mr Andy Carr for the Council, and I rely on that description.
18. I am familiar with the site and surrounding area, and regularly travel past the area by car. I visited the site and surrounding area specifically for this project on the afternoon of the 17th of December 2018, and the surrounding area again on 31 August 2019 prior to finalising this evidence.

Operative Selwyn District Plan

19. The Selwyn District Plan ('the District Plan') was made operative on 03 May 2016. Under the District Plan the application site is zoned Inner Plains. The site is also subject to the 50-A weighted decibels (dBA) and 55 dBA Christchurch International Airport Noise Contours.

Land Use

20. Land use consent is sought overall for a discretionary activity. The consents that are required are set out in detail in the application, and rather than repeat the list of consents that are required, I refer the Commissioners to the list contained in the land use consent application form that is included with the original application⁹. I agree with the Applicant's assessment of the relevant rules and agree that overall the application should be assessed as a discretionary activity.
21. I note, however, that there is an inconsistency in the Vehicle Accessway and Crossings Rules in Chapter 4 of the Plan. Consent is sought for a breach of Rule 4.5.1.6., which requires a Restricted Discretionary Activity consent pursuant to Rule 4.5.2. However, Rule 4.5.5 also states that any activity that does not comply with Rule 4.5.1.6 is a non-complying

⁹ Part A of November 2018 Application, Application for Resource Consent to Selwyn District Council.

activity. Neither Rule 4.5.2 nor Rule 4.5.5 have any qualifiers that would indicate when they should be applied, so there appears to be a conflicting activity status.

22. I have considered this inconsistency and taken advice from the Council and Council's legal advisors. I consider that it is reasonable that a breach of an access standard becomes a Restricted Discretionary activity, with discretion restricted to the effect of the breach. In my experience this is a common plan drafting approach adopted by Councils, enabling the effects of the particular breach to be considered. I consider it would be unreasonable for a breach of this standard to result in the entire proposal being a non-complying activity. I therefore consider that Restricted Discretionary status for this particular breach is appropriate.
23. Overall, adopting a bundling approach, I agree with the Applicant's assessment that the proposal overall requires a discretionary land use consent under the Selwyn District Plan.

National Environmental Standards

National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

24. The NES manages activities which involve the disturbance of land which may be contaminated. This is determined by whether activities have or are likely to have occurred on the site, which are listed in the Hazardous Activities and Industries List (HAIL).
25. Consent is sought by the Applicant for a Controlled activity pursuant to the NES. Matters relating to land contamination have been addressed by Mr Rowan Freeman, one of Environment Canterbury's experts, and the Selwyn District Council has determined that it will rely on Mr Freeman's advice in relation to the NES. Additional comments have also been provided by Environment Canterbury's Contaminated Land Team, which I have referred to in the following paragraphs.
26. The Contaminated Land Team has advised that:
 - *The Environment Canterbury audit of the Detailed Site Investigation noted that the site had not been fully investigated, as samples had not been collected from the waste dumping area, former market garden area, or from all of the historic structures at the Jones Road site. In order for a change of use to be a controlled activity, a DSI must state that the soil contamination does not exceed the applicable standard. In this case, as not all of the HAIL areas of the site have been investigated it would be hard to meet the requirements of a controlled activity.*
 - *Unless further sampling is undertaken in the HAIL areas I believe that the change in use would be a discretionary activity.*

27. Section 4.6.2.2 of the November 2018 application concludes that because Fulton Hogan are proposing to remove any contaminated soil prior to extraction, adverse effects on human health are less than minor, and any associated risks can be effectively managed and are acceptable. The Contaminated Land Team has stated that the Recommendations section (Section 10) of the PSI/DSI provided with the application states that the Applicant proposes to remediate the areas of soil contamination and validate it for rural-residential land use. The Contaminated Land Team has agreed that this approach would result in a low risk to human health from the proposed quarrying activities, and I accept this advice.
28. Appropriate management of any excavated contaminated soil will be required to ensure that it is not used as cleanfill in the quarry. I agree with this advice and note that the draft conditions of consent include a number of conditions that address the management of contaminated soil on the site.

Notification

29. Public Notification was requested by the Applicant.
30. The Selwyn District Council and Environment Canterbury resolved, pursuant to section 37 of the Act, to double the submission period for the application. The application was publicly notified on 6 April 2019 and the submission period closed on 6 June 2019. Notice was also directly served on a number of parties.

Submissions

31. A total of 451 submissions were received within the statutory submission period, and 3 were received after the closing date. These late submissions were accepted by the Councils in accordance with section 37 of the Act.
32. Of the overall 454 submissions received, 354 oppose the proposal, 92 support it, and 8 neither supported nor opposed the proposal.
33. Full copies of the submissions have been made available to the Commissioners. Given the volume I have not included a summary of these in this report. However, I have reviewed them all, and consider that very broadly, the matters raised in the submissions that relate to the land use consent included:
- Traffic effects, particularly in relation to traffic volumes, traffic noise and potential routes;

- Noise, including from night time operations, and effects on surrounding residential and non-residential land uses;
- Noise and vibration from truck movements;
- Amenity effects;
- Safety issues, including on surrounding roads and the existing rail crossing and for aircraft approaching or departing Christchurch International Airport (particularly in relation to bird strike); and
- Consent conditions and appropriate controls to manage effects.

Procedural Matters

Samadhi Buddhist Trust

34. Many submissions were received from members of the Samadhi Buddhist Vihara, a Sri Lankan Buddhist temple operated by the Trust at 358 Maddisons Road. These submissions all raised concerns at the potential effects of the proposed quarry on the various activities undertaken at the temple. As part of the preparation of this report, I sought advice from the Council and Council's legal advisors regarding the land use status of the Temple, as an understanding of what consents (if any) were held would be necessary in determining the appropriate baseline to apply when assessing effects.
35. Advice I received from the Council was that, at the time the Fulton Hogan resource consent application was lodged, no resource consents were held by the Samadhi Buddhist Trust of NZ for the temple and the range of activities it undertakes.
36. The consent status of the Temple is relevant in determining how actual and potential effects on its activities are assessed. In order to determine whether the temple was operating under any resource consents, or otherwise as a permitted activity, I made enquiries of the Council and its enforcement team. The discussion below represents the outcome of those investigations.
37. The primary activity undertaken on the site falls within the definition of a Spiritual Activity, defined in the Selwyn District Plan as:

land and/or buildings used for the public and/or private assembly of people primarily for worship, meditation, spiritual deliberation and ancillary community facilities of a non-commercial nature.
38. I understand that a range of activities occurs on the site throughout any given week, and that the scale of the activities undertaken on the site exceeds the permitted thresholds for a spiritual

activity in the Selwyn District Plan. Legal advice provided by the Council's legal advisor therefore is that as the temple is operating in the absence of any consents, any adverse effects on it are to be disregarded.

39. The assessment of potential effects on the Trust's activities will therefore be limited to effects on the activities to a scale and size that would be a permitted activity under the District Plan. I understand that to date that while the Council has advised the Trust that a resource consent is required, no application has yet been made.

Changes to Staging Approach

40. In the amendments to the application made as part of the 16 August 2019 section 92 response, the Applicant stated that the proposed staging for the quarry had changed. The next paragraphs discuss the staging as originally proposed.
41. The original application provided a reasonably well detailed operation and extraction plan. The wording in the application at sections 4.2.1 to 4.2.3 is reasonably detailed. I note that the staging was identified as 'indicative' in the original plan.
42. Section 4.3 of the original application describes the extraction activities as being in stages, detailing that quarrying would start in the centre of the site in an area described as the initial extraction area. Thereafter extraction would continue in stages with stage 1 being at the southernmost extent of the site and stage 5 being at the northernmost extent of the site. Essentially extraction within the site other than the initial extraction area commences at the Jones Road end and then progressively moves north towards Maddisons Road.
43. The applicant noted that no more than 40 ha at any one time with various inclusions and exclusions would constitute an active open area.
44. In terms of effects arising from the original staging, therefore, those who occupy land at the southern end of the site could expect that any effects arising from the site based quarrying activity arising following completion of the initial extraction area would arise earlier for them than for properties located to the north east and west of the application site. Conversely, those who occupy land at the northern end of the site might consider it would be some time before on-site quarrying activities affected them. The traffic bund construction and landscaping would still occur at the initial stage and there would be no change to the effects experienced by any party as a result of these.
45. The section 92 response received on 16 August 2019 confirmed that quarrying activity will commence with the creation of the initial extraction area in the middle of the site.

46. The difference in the proposed staging is that once the initial area is completed, the quarry extraction activity will then move from the midpoint to the South but located on the eastern side of the site.
47. Once stage 1 is extracted, quarrying of the site will move progressively around the site in an anti-clockwise direction.
48. The section 92 response identifies that a maximum of 26 ha at any one time will be utilised for quarrying purposes, excluding sealed access roads into the site and any site buildings. This is less than the 40 hectares originally stated. Furthermore, the applicant states that only 5 ha of the site will be actively open for extraction at any one time. The 5 ha includes the open face and working area behind this area. Areas to be stripped will be undertaken in 2 to 2.5 ha blocks.
49. Stage 1 is approximately 20% of the quarry area outside of the processing area and is estimated by the Applicant to take some eight years to complete. After stage 1 is completed, a 100 m wide pathway for the main conveyor and stage 2 will be excavated and the field conveyor will be relocated accordingly.
50. After stage 2 will come stage 3, with quarrying and excavation continuing progressively in an anti-clockwise direction around the site, with rehabilitation of worked areas being undertaken as the work moves around the site while maintaining the open ground limits earlier referred to.
51. I understand that queries have been raised by submitters as to whether the proposed changes fundamentally change the nature of the application such that it should be renotified as a fresh application or submitters otherwise be able to make additional submissions on the changes.
52. I have reviewed the original application and the amendments made the proposal, and have come to the view that the changes do not go beyond the scale or intensity of effects or the character of the effects of the proposal, for the following reasons:
- The overall intensity and scale of the activity on the site has not increased.
 - The changes to the areas to be open at any one time have reduced, which in turn reduces some of the effects of the activity, thereby reducing the scale and intensity of effects as experienced by neighbours.
 - The original staging was identified as 'indicative', indicating that it was at least possible that the staging could be amended as the application unfolded.
 - Parties living in the vicinity of the site, and the wider area, were aware of the quarry and made submissions on the overall project, irrespective of the staging.

53. Overall, it is my view that the changes made to the proposal have reduced the scale of some aspects of the application. The changes have not introduced effects that were not anticipated by the application as lodged. Although the staging alters the time when effects will be experienced by different property owners, the nature of the submissions leads me to believe that no parties would have submitted for or against the application based purely on the staging.
54. I therefore consider that the Commissioners may consider the application as amended, and there is no need for a fresh application or renotification, as overall the changes are within the scope of the original application.

Matters to be Considered

55. Section 104(1) of the Resource Management Act 1991 sets out the matters which must be considered by the Commissioners in considering this application for resource consent, and states that:
- (1) *When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to—*
 - (a) *any actual and potential effects on the environment of allowing the activity; and*
 - (ab) *any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity; and*
 - (b) *any relevant provisions of—*
 - (i) *a national environmental standard;*
 - (ii) *other regulations;*
 - (iii) *a national policy statement;*
 - (iv) *a New Zealand coastal policy statement;*
 - (v) *a regional policy statement or proposed regional policy statement;*
 - (vi) *a plan or proposed plan; and*
 - (c) *any other matter the consent authority considers relevant and reasonably necessary to determine the application.*
56. Section 104(2) states that when forming an opinion for the purposes of subsection (1) (a), a consent authority may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect ('the permitted baseline').
57. All matters listed in s104(1) are subject to Part 2 of the Act which contains its purposes and principles.
58. In addition, Section 104B of the Act relates to the determination of applications for discretionary or non-complying activities. It states that after consideration of an application, a consent

authority may grant or refuse the application and if granted, may impose conditions under section 108.

Assessment of Effects on the Environment

Introduction

59. Section 104(1)(a) of the Act requires that the Council have regard to any actual and potential effects on the environment of allowing the activity. 'Effect' is defined in section 3 of the Act as including-
- a) *Any positive or adverse effect; and*
 - b) *Any temporary or permanent effect; and*
 - c) *Any past, present, or future effect; and*
 - d) *Any cumulative effect which arises over time or in combination with other effects— regardless of the scale, intensity, duration or frequency of the effect, and also includes –*
 - e) *Any potential effect of high probability; and*
 - f) *Any potential effect of low probability which has a high potential impact.*
60. Section 104(2) of the RMA directs that the decision maker may disregard an adverse effect on the environment of an activity if a rule in the District Plan permits an activity with that effect, a concept known as the permitted baseline. The application of the permitted baseline is discretionary, and case law has established that the permitted baseline test relates to the effects of non-fanciful hypothetical activities which could be carried out as of right under the District Plan, as well as any existing lawfully established activity on the site. The existing environment also includes any activity for which resource consent has been granted.
61. Quarrying is a discretionary activity in the Inner Plains Zone. There is no permitted quarrying activity or other activity of a similar scale that is permitted in the zone that could provide an appropriate baseline against which to consider the effects of the proposal.
62. I have considered the matters raised in the application and further information requests. I also note that in assessing the actual and potential effects of the proposal, I have been guided by the following expert assessments:
- Mr Rowan Freeman, Principal Science Advisor - Contaminated Land, Environment Canterbury and Ecan Contaminated land Team;
 - A review of the Applicant's Landscape and Visual assessment, prepared by Mr Wade Robertson, Consultant Landscape Architect;
 - A review of the Applicant's traffic modelling and assessment, prepared by Mr Andy Carr, Consultant transportation engineer;

- A review of the Applicant's noise modelling and assessment, prepared by Mr Jeremy Trevathan, Consultant Acoustic Engineer; and
- A review of the Applicant's economic assessment prepared by Mr Rodney Yeoman of Market Economics.

63. Apart from the Market Economics Assessment, the expert reports for the Selwyn District Council have considered the matters raised and clarified in the most recent material received from the Applicant, being 16 August 2019, and therefore assess the application as amended. I have reviewed these assessments and adopt them for the purposes of my own assessment.
64. The various experts for the SDC have come to the view that subject to conditions of consent, the actual and potential adverse effects of the application as it stands amended by the August 2019 changes can be appropriately managed by conditions of consent, except for a transportation related element that is addressed later in this report.
65. The expert reports have identified the areas where there is agreement with the Applicant's assessment and experts, including any agreements reached through caucusing that has been undertaken to date. As stated above I rely upon these reports, and therefore in my own assessment I do not traverse in detail the matters where agreement has been reached, apart from noting the agreement or identifying potential conditions of consent that the experts have agreed on in relation to particular effects. My assessment identifies the outstanding areas where there is a disagreement or difference of opinion in relation to particular matters, and considers these, with reference to the appropriate expert report where necessary.
66. Having regard to the above matters, I consider the actual and potential land use effects of the proposal can be assessed under the topic groups:
- Visual and landscape values
 - Transportation Effects
 - Noise Effects
 - Effects on Amenity Values
 - Effects on Cultural Values;
 - Hazardous Substances;
 - Effects on airport / bird strike;
 - Cumulative Effects; and
 - Positive Effects.

67. In addressing these effects, I note that Ms Goslin has addressed matters such as the effects of dust, which are also addressed to a degree in the Selwyn District Plan. As dust effects relate to both district and regional matters, I defer to the expert assessments undertaken by the Environment Canterbury experts in relation to dust and refer as appropriate to Ms Goslin's assessment.

Visual and landscape Values

68. The Applicant has identified that the proposed quarry will cover approximately 170 hectares, with excavation up to 9.9m deep, over a period of some 40 years. The topography of the site and surrounding area is flat, and while the site and surrounding area have a rural character, the area is changing with the construction of Stage 2 of the Christchurch Southern Motorway (CSM2) and the development of various commercial and residential activities in the wider area.
69. The proposal is supported by a detailed Landscape and Visual Impact Assessment (LVIA), prepared by DCM Urban which concludes overall that any potential adverse effects on landscape and visual amenity values will be less than minor¹⁰, for reasons including:
- Residential dwellings and viewpoints on the roading network will experience a low degree of change, due largely to the flat topography and the applicant's proposed mitigation measures;
 - Views from elevated positions (such as the new CSM2 flyover) will be of short duration;
 - Earth bunding and vegetative screening (the mitigation measures) will be established along the site boundaries prior to the commencement of quarrying.
70. The landscape and visual effects, and the proposed mitigation measures, have been assessed by Mr Wade Robertson, the Council's consultant landscape architect.
71. Mr Robertson has concluded that

*The **short term effects** of the proposal have been assessed as low to moderate for rural amenity and high for rural character, predominantly as a result of construction and establishment works*

*The **long term effects** of the proposal have been assessed as very low for rural amenity and moderate for rural character, predominantly as the result of significant landform modification and fundamental change to the appearance and use of the site over the 40-year quarry operation.*

¹⁰ November 2018 AEE, para 6.6 (p38)

The proposed bund and perimeter planting are considered to be effective in screening the medium to long term activity on the site from surrounding roads, although in the short term the establishment of the bunds will generate adverse effects until the perimeter planting reaches maturity over a 10-year period. While the planting of approximately 14,000 native plants is a positive effect of the proposal it is not considered to represent a significant contribution to the enhancement of indigenous habitat in the wider rural landscape. Perimeter planting aside the proposal does not include any additional enhancement/ betterment of site and as a result there will be no positive landscape effects.

*Although there are some challenges in navigating the project LVA it is generally consistent with accepted industry practice. On balance and taking into account the continuum applied in the LVA and discussed ... above the **landscape and visual effects of the proposal are considered to be low** albeit at the upper end and trending towards moderate.*

72. I have reviewed Mr Robertson's assessment and conclusions and rely on his view. Critically, he has identified that the greatest magnitude of change on rural character and amenity will occur at the establishment stage of the proposed quarry, with the creation of the initial extraction area, establishment of the perimeter bund and access to and within the site. Once the bund is established, future quarrying activity at the site will largely be screened from view. I understand Mr Robertson's assessment to be overall that while there will be effects on rural character and amenity during the initial stages of the proposal, over time these effects will lessen as the bunds become established and the planting increases in maturity.
73. Mr Robertson makes a distinction between the change in rural character and the visual effects of the proposal. Presently, the site exhibits rural characteristics, and this character will change over time as the quarry is worked, resulting in the site remaining as a large depression that will be rehabilitated and available for use by a range of activities.
74. The fact that the character of the site will change is not disputed. However, the change in landscape character cannot be viewed in isolation from the visual effects. Mr Robertson's assessment is that the visual effects will diminish over time as the planting matures.
75. I also note that the proposed quarry is not completely dependent upon the bund and proposed landscaping for the mitigation of the visual effects. Views into the site are already obscured in places due to existing boundary plantings. The Applicant has also confirmed that the proposed plantings are not reliant upon the bund and can be planted independently, and I also note that both the bund and perimeter plantings are required to be implemented prior to the commencement of quarrying activity at the site. I agree this is appropriate, as the measures the Applicant is relying upon for mitigation will therefore be established prior to the commencement of the activity. Given that only 26ha of the site will be open at any one time,

with active quarrying limited to 5ha, much of the perimeter plantings will have reached a height to afford effective screening before the excavation moves around the site, assuming particularly that each stage could take up to 8 years. I therefore agree with Mr Robertson that the visual effects will be more concentrated at the initial stages where the bund is established, and the initial extraction area formed.

76. I do not consider that the visibility of the initial works to create the bund, and the bund itself, are in themselves a significant adverse effect. While the bund will have a bare appearance until it is grassed, initial screening will be provided to some degree by the plantings and requiring it to be grassed and watered until the vegetation is established is therefore appropriate. Over time, the bund will be increasingly obscured by the trees to be planted around the site, indicating that the bund is in itself less critical for mitigating the adverse visual effects than the proposed tree planting.
77. The success of the planting, therefore, and its ongoing maintenance is critical in providing the long-term visual mitigation it is intended to provide. In this regard, Mr Robertson has considered the Applicant's Landscape Management Plan, and notes that in general terms the Plan includes all of the necessary components to ensure the success of the proposed mitigation measures. He has provided some recommended additions to the Plan to ensure its robustness and enhance the probability of success for the proposed mitigation measures. I agree that these are appropriate and have included these changes in the amended conditions appended to this report.
78. Mr Robertson has also considered the Applicant's proposed site rehabilitation. While he has raised the question of the desirability of the fully remediated site being an attractive residential or lifestyle proposition, he has stated overall that the Applicant's progressive approach to quarrying and rehabilitation (i.e. worked areas are rehabilitated as the quarry progresses) is preferable to large areas of quarried land being left untreated over the life of the quarry. I agree with this view.
79. Overall, I rely upon Mr Robertson's conclusions with respect to the actual and potential adverse effects of the proposal on rural character and visual amenity values.

Transportation and Roading Effects

80. The key elements associated with the access and traffic issues associated with the proposal as notified and amended in the 16 August 2019 RFI, are:
- Creation of a new heavy vehicle access onto Jones Road approximately 350 – 550 m west of the existing Dawsons/Jones Road intersection. The access is to be formed

to a side road intersection standard given the volume of traffic it is predicted to accommodate;

- Creation of a Light Vehicle Access off Jones Road using the existing access into the site to provide for staff and small vehicle access;
- Inclusion of an option to have a shared light and heavy vehicle access off Jones Road;
- Roading Improvements - In order to facilitate the flow of traffic to and from the site in association with the new NZTA constructed roundabout at the intersection of main South Road and Dawsons Road, the applicant has proposed to construct a new roundabout close to the intersection of Jones Road and Dawsons Road. Consent is sought for two potential intersection arrangements. Option 1 involves the creation of a roundabout in the existing Dawsons Road, with extensions into both the applicant's site and the adjacent land owned by the Christchurch City Council. Option 2 involves the creation of a roundabout within the Applicant's site, with no incursion into the Christchurch City Council land (although it will affect portions of the road under CCC control). Should consent be granted, under either scenario the applicant will require design approval in accordance with the relevant Council standards prior to construction, and will be required to fund the construction works. These matters can be addressed through conditions of consent.
- Heavy vehicle movements will be limited to an average daily limit of 800 per day (i.e. 400 in and 400 out) over a 60-calendar day period, with a maximum of 1200 movements (600 in and 600 out) in any one day, and up to 150 per day for the light vehicle access.

Intersection options – SDC Asset Management Perspective

81. Mr Andrew Mazey, the SDC's Asset Manager Transportation, provided comments to me¹¹ on the two intersection options from the perspective of the Council as asset managers. He has advised that the Council is aware of the potential issues relating to the district boundary between SDC and CCC in the location of the Jones and Dawsons Rd intersection. Mr Mazey explained that SDC has a longstanding agreement with the CCC on the maintenance of boundary roads. This agreement, however does not relate to ownership and use aspects. These remain the management responsibility of each Council up to the road centre line, including managing adjoining land use and access as required by their respective District Plans.

¹¹ Email correspondence dated 21 August 2019

82. While the proposed Roydon Quarry falls entirely within the Selwyn District, the surrounding road network it relies upon includes the use of shared district boundary roads. Mr Mazey identified that SDC's main concern to date has been the safety of the existing Jones/Dawsons Rd intersection, followed by the use of Jones Rd between Templeton and Rolleston as a relatively well used local road through route (including trucks) parallel to SH1 that traverses a number of rural cross road intersections. His view is that wider network links should be via SH1/CSM2 so Jones Rd is used for only localised access needs between Templeton and the new CSM2 interchange at Weedons Ross Road.
83. Based on the above, Mr Mazey indicated that the Council (as asset manager) is agreeable to either of the Options provided by the Applicant as both will eliminate an unsafe intersection, disincentivise the wider network through function of Jones Rd (to encourage SH to be used instead), and will cater for the traffic generation from the proposed activity and related connection to the SH.
84. Mr Mazey considered, from an asset management perspective, that Option 1 is preferred as it the approaches are fully aligned to the new roundabout. However , he noted that this would require the realignment of Jones Rd to create a new eastern approach. This would require the approval of the CCC for changes to the parts of the road for which it is the Road Controlling Authority. It is unclear how favourably the CCC would view this given the concerns expressed in their submission. Additionally, in order to effect Option 1, the Applicant would be required to construct the new Jones Rd eastern approach, and obtain the land necessary to do so, to an appropriate standard before that portion of road could vest with the CCC.
85. Should Option 1 not be supported by the CCC as a Road Controlling Authority, then in SDCs opinion Option 2 would still suffice as it still meets the broader concerns it has with the current situation as explained above. While Option 2 largely eliminates the need for CCC approval, it still has an impact relating to the shared portion of Dawsons Rd, which does need CCC approval for its realignment.
86. The Applicant has not indicated which access scenario is preferred, with the most recent RFI response (16 August) identifying that both options remained live. I note, however, that no applications have been made to the Christchurch City Council for roading improvements for either scenario. I also understand that the Hearing Commissioners do not have the jurisdiction to make a decision over land that is not within the Selwyn District.
87. Mr Carr has identified that either option would provide for the access and traffic needs of the proposed quarry. I defer to his expertise and note that either option will require work on land owned or controlled by a third party, and as such, prior to any roading improvements works being undertaken, the appropriate approvals and consents from CCC will be required.

Assessment

88. The actual and potential traffic effects of the proposal have been assessed for the Selwyn District Council by Mr Andy Carr of Carriageway Consulting.
89. Mr Carr's assessment has identified that overall, the Applicant's traffic modelling has underestimated the volume of traffic that flow from the site onto the surrounding network. Overall, as I understand his view, the additional traffic can be accommodated within the existing roads, and that there will not be any significant adverse traffic safety effects arising from the proposal, with one significant exception.
90. Mr Carr has identified that there is the potential for vehicle queues to extend from the railway level crossing , along Dawsons Road and as far as the State highway. He has noted that queues of stationary vehicles in this location will not be expected by drivers travelling towards Christchurch, and he therefore considers that there is the potential for adverse road safety effects to arise.
91. I refer to the definition of 'effect' in Section 3 of the Act, as has Mr Carr, which includes an effect of low probability with a high potential impact. Mr Carr's view from a road safety perspective is that the potential road safety effects in this location are such that the application should not be approved unless revised modelling shows that the queuing issue is resolved.
92. I note in this regard that Mr Carr considers that if the queuing issue is resolved, the transportation assessment shows that the traffic generated by the proposal can be accommodated safely on the roading networks without adverse efficiency issues arising.
93. I defer to Mr Carr's expertise and overall conclude that with the exception of the queuing issue, the transportation effects of the proposal will not be significant.
94. Mr Carr has also addressed the Applicant's draft conditions of consent and has made a number of suggestions relating to matters such as construction, timing and monitoring of vehicle movements. I agree with his suggestions and have incorporated his comments into the draft set of conditions appended to this evidence for the Commissioners' consideration should it be considered appropriate to grant consent.

Noise Effects

95. The proposed quarry and activities at both establishment and operational stages will generate noise from various sources, including:
- Removal of overburden material
 - Bund construction

- Aggregate extraction
- Processing and crushing, from both fixed and mobile plant
- Crushing
- Stockpiling
- Importing material and spreading backfill
- Site rehabilitation
- Truck and trailer movements; and
- General traffic movements (staff, contractors and other).

96. Noise generated from all of these activities have the potential to adversely affect the amenity of activities in the immediate and wider area, depending upon factors such as the location of the receivers, time of day and mitigation measures. Marshall Day Acoustics have prepared a noise assessment on behalf of the Applicant, and this has been reviewed by Dr. Jeremy Trevathan of Acoustic Environmental Services for the Council.
97. I have reviewed Dr. Trevathan's evidence. He has concluded overall that subject to the controls included within the draft conditions of consent provided by the Applicant and the additional conditions recommended in his assessment, the noise effects of the proposal, including conditions, are appropriate given the existing environment and the expectations the district plan has for this locality. I rely on this view for my own evidence.
98. Dr. Trevathan has systematically assessed the potential noise effects associated with the proposal, commencing with consideration of the existing noise controls provided in the application, before considering the existing noise environment, and whether the proposed operational and construction noise limits are appropriate, before traversing potential effects on specific sensitive receivers.
99. Dr. Trevathan has considered the existing noise levels in the vicinity of the site ('the ambient noise environment'). In my experience, residents in rural locations can have an expectation of a greater degree of amenity than is actually experienced by virtue of the various activities that are undertaken within the rural area. An understanding of the existing background noise within the context of the rural location within which the site is located is therefore important.
100. Having considered the noise assessment prepared by Marshall Day for the applicant, and his own observations of the vicinity, Dr Trevathan has concluded in his paragraph 30 that
- ...properties in the vicinity of MSR, Jones Road or Maddisons Road typically experience ambient noise sustained at higher levels than those in an isolated rural area. At locations set back from these roads (for example 153 Curraghs Road and the NZMCA site) the ambient noise environment has a more rural character; albeit with near constant background noise from*

MSR and/or Maddisons Road. Within the Templeton residential area, background noise levels are elevated due to traffic on MSR.

101. Dr. Trevathan also records his agreement with the Applicant's findings in relation to the existing noise environment, and notes that while the completion of construction works for CSM2 may decrease the ambient noise levels, the character of the overall ambient noise in the area will be unlikely to change.
102. Dr. Trevathan explains the existing background levels, considers the noise limits that are expected within the zone and the limits imposed by the applicant, and then considers the effects of the proposed activities within that context. In this regard, I note that the applicant has proposed noise limits that are generally more restrictive than those imposed by the Selwyn District Plan, and I rely overall on Dr. Trevathan's view that the noise that will arise from the various component parts of the activity will, subject to appropriate conditions, be minor.
103. I note that the application is a discretionary activity overall, requiring consideration of whether the site overall is suitable for the proposed activity. While it may be possible for an activity to comply with noise rules, very low ambient noise levels in an area could mean that a particular site may not be suitable for a particular activity. However, that is not the case with this proposal. As identified by Dr Trevathan, the ambient noise levels in the area are elevated due to the presence of existing roads and activities and are unlikely to be significantly altered by the proposal. Adding the proposed activity to the site, subject to the conditions addressed in this report, will not increase the ambient noise levels to a significant degree, and I therefore do not consider the site to be inappropriate for the proposed activity from a noise management perspective.
104. Dr. Trevathan has considered the noise effects arising from the proposal in terms of operational noise, construction noise, noise and vibration, and day time and night time noise.
105. The applicant has proposed a day time noise limit that is more stringent than the Selwyn District Plan, apart from the 0700 – 0730 period, as identified by Dr. Trevathan. I also note that the noise limit is to apply at the boundary of the Applicant's site, with the exception of the area immediately around the heavy vehicle access. I consider this has advantages for monitoring, as well as providing additional certainty to surrounding properties that any noise effects will be contained within the application site boundary. Dr. Trevathan considers that the ambient noise during the 0700 – 0730 period is already elevated due to traffic noise, aircraft noise and the Main Trunk Railway Line, and that any adverse effects during this period will therefore be minimal.

106. With respect to construction noise, I agree that the Applicant's proposed condition requiring adherence to the Construction Noise standard is appropriate. In my experience, such a condition is often included in land use consents where construction work is being undertaken, and I agree that it is good practice, and I consider that it is well understood by both the industry and Council monitoring and enforcement personnel. Ongoing quarrying activities will be subject to the noise limits proposed by the Applicant. Given the breadth of activities that could be included within 'Site Rehabilitation', however, I agree with Dr. Trevathan that this should be excluded from being considered construction noise, apart from bund deconstruction and topsoil spreading. Noise arising from site rehabilitation will therefore be subject to the noise restrictions that apply to the general site activities.
107. Noise and vibration associated with vehicles entering and existing then site, and travelling on the surrounding roads, is an issued raised in a number of submissions. Dr. Trevathan has considered this matter in some depth, considering it both in terms of effects on the wider environment, as well as in relation to specific sites or areas. Overall, he considers that adverse effects will not be significant, although this is based upon the understanding that the Applicant's traffic modelling predicts that most traffic will flow onto State highway 1 rather than using adjacent roads such as Curraghs Road. Given the longevity of the proposed quarry, should consent be granted, I consider that this would be a matter to be covered by a review condition, allowing the Council to consider changes to conditions in the event that the traffic routes changed over the course of the consent.
108. I have reviewed Dr. Trevathan's assessment of noise and vibration effects on the various sensitive receivers located around the site, and I accept his advice that subject to appropriate conditions, and due to factors such as setbacks and distance from the site, overall the adverse effects can be appropriately managed, and will not be significant.
109. Dr. Trevathan has also considered the potential effects of noise at night, as the Applicant has sought consent for activities during night time hours (now defined as 8:00 pm to 6:00 am) for up to 150 occasions annually. Night time noise was a concern in many submissions, with residents concerned about effects on sleep and general amenity arising from activity on site at night, as well as from vehicles entering and exiting the site. Dr. Trevathan's evidence has considered the potential effects of such activity within the context of the ambient environment. He has noted that while the wider environment will be unlikely to be affected by noise from night time activity, some of the closest dwellings (including those on Jones Road and Dawsons Road) could experience increases in their ambient noise of up 4 to 5DB L_{Aeq} at night. He has also concluded that the overall number of perceptible events, with reference to vibration, will increase for the closest dwellings at night.

110. Overall, I note that Dr Trevathan's view is that the noise effects of the proposal will be minimal, assuming compliance with the proposed conditions. However, I have reservations about the appropriateness of the night time activities on the amenity of the closest residential dwellings. Although the increases in night time noise at the locations identified by Dr. Trevathan fall within the noise limits, the night time ambient noise level will increase. As identified above, the proposal is for a fully discretionary activity, and while quarrying activity is generally anticipated by the Plan in the Inner Plains Zone, as a discretionary activity the consent authority must be satisfied that the activity is appropriate on the subject a site.
111. I consider that the increase in the night time noise levels, even though they fit within the night time limits proposed by the Applicant, will contribute to a decrease in the overall amenity experienced by the closest residential properties at night. In reaching this view I note that that the definition of amenity values in the Act relates to '*the qualities and characteristics of an area that contribute to people's appreciation of its pleasantness , aesthetic coherence..*', and that amenity values are affected not only by noise but other factors. I am concerned that the increased background noise at night (for 150 nights per year), and the associated vehicle movements and perceptible increase in vibration, has the potential to adversely affect the amenity values of the immediate neighbours and their appreciation of the current level of amenity. I therefore consider that should consent be granted, it should be on the basis that all of the proposed night time activity is not permitted.

Effects on Amenity Values

112. Amenity values are defined in section 2 of the Act as
means those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.
113. The character of the site and surrounding area is predominantly rural, with a low density of residential development and some commercial activities, including the Motor Caravan Association site and various rural and industrial activities. To the south is stage 2 of the Christchurch Southern Motorway, which contributes a level of vehicle noise into the existing environment. There are no large scale industrial or rural activities in the vicinity. All of these factors contribute to the current amenity of the area.
114. The various effects associated with the proposed quarry have the potential to change the current amenity attributed to the area by those who live and work in it and otherwise experience it. I understand that a change in amenity values is not necessarily an adverse effect in itself, rather, it is the scale and the intensity of the change against the existing amenity levels that require consideration.

115. The potential effects of the proposed quarrying activity that could adversely affect amenity include noise, traffic movements and associated noise, visual and landscape values, and dust. These matters have all been addressed by the respective experts for the Council, and all have identified that while there will be changes to amenity experienced in the vicinity of the site and wider area, the effects can be appropriately managed by conditions of consent. I note in this regard that Ms Goslin has identified concerns in relation to the management of dust on the site, relating largely to concerns relating to the adequacy of the supply of water to suppress dust. Provided the Applicant is able to satisfy the Regional Council's concerns regarding the adequacy of water supply, concerns regarding dust suppression will be appropriately addressed.
116. The proposed remediation work involves placing a small volume of fill and then a layer of topsoil over the worked areas to provide a flat surface and maintain the ground level at least 1m above the ground water level. The remediation work will not create any different or greater noise than the excavation activity and will not in itself give rise to any adverse amenity effects.
117. The exception to this, as I have identified above, is my reservation about the appropriateness of providing for activities on the site at night time, particularly given Dr. Trevathan's assessment that there will be an increase in ambient night time noise and vibration experienced by properties in close proximity to the site. In order to maintain the night time amenity for surrounding neighbours, I therefore consider it appropriate that night time activity be precluded.

Effects on Cultural Values

118. The Application identifies that there are no known waahi tapu or other sites located on the proposed site, and that the Applicant had engaged in dialogue with Mahaanui Kurataiao Ltd (MKT), which led to the view that no cultural impact assessment was required. The Applicant also identified that engagement with MKT as well as Te Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga is ongoing.
119. The submission of Te Taumutu Rūnanga confirms that both they and Te Ngāi Tūāhuriri Rūnanga are recognised as manawhenua in relation to this proposal.
120. In respect of the land use consent, the submission of Te Taumutu Rūnanga has raised the issue of the accidental discovery of koiwi tangata and Taonga Tuku Iho (cultural artefacts) arising from the proposed activity. Two additional issues, being the discharge of heavy metals and their potential to enter waterways, and the depth of excavations, were also raised that relate to the regional consents which will be addressed in the report of Ms Goslin.
121. Should the land use consent be granted, the submitter has requested that accidental discovery conditions be imposed to identify the appropriate steps to take in the event that human remains

or cultural artefacts are discovered. I agree that this is appropriate and note that draft conditions to this effect are included within the draft conditions appended to this report.

122. Having reviewed the Applicant's assessment of the potential cultural effects of the proposal, and the matters raised in the submission by manawhenua, I agree that the proposal will not adversely affect cultural values.

Hazardous Substances

123. The application identifies that the only hazardous substances planned to be stored on the site will be fuel and lubricants required for quarry plant and machinery. A total maximum volume of 15,000 litres (L) of diesel is proposed to be stored on site. This will be stored in a double skinned tank. Any other hazardous substances that will be stored will be limited to lubricants, such as engine oils, and these will be stored within the workshop in small quantities totalling approximately 250 kilograms (kg). The application also notes that from time-to-time portable tankers may be used on site, and that any refuelling with such tankers will take place well above the bottom of the pit floor.
124. The storage of hazardous substances is governed by the HSNO Act, and the application confirms that all storage of hazardous substances will be in accordance with the requirements of the relevant legislation. This includes any storage being undertaken on impervious surfaces with secondary containment, which I understand is standard practice. Oils and lubricants will also be securely stored within the workshop on the site.
125. The fixed diesel tank will be likely be installed within two years of commencement of quarry operations. Until it is installed on the site, any required refuelling will be undertaken using mobile tankers. The Applicant has stated that the dispenser on the fixed diesel tank will be covered to shelter it from rain and will contain a self-bunded area (similar to a drip-tray), and that refuelling is to occur adjacent to this tank on a covered concrete refuelling pad, which could double as an area for vehicle servicing. The hard stand area could also be used by mobile tankers prior to a fixed tanker being installed. An interceptor system will be installed to support the area.
126. The application also identifies that a Spill Management Plan will be developed for the site and will include such relevant matters as the management and inspection of the fuel tank (including fuel reconciliation, spill management and containment, and visual inspection of the tank).
127. I consider that the mitigation measures the applicant has proposed in relation to the storage of hazardous substances are consistent with standard industry practice, and provided they are

adhered to, I agree with the applicant's assessment that any adverse effects can be appropriately managed.

Bird Strike/Effects on CIAL Flight Paths

128. Concerns were raised that the proposal could give rise to potential adverse effects on aircraft arising from bird strike, as well as effects on aircraft arising from lighting and dust. These matters were addressed in the August 2018 section 92 response from the Applicant. The applicant identified that in formulating the response to these issues, discussions were held with both Air New Zealand and Christchurch International Airport Ltd (CIAL), and that the concerns primarily related to lighting and glare, bird strike risk, effects of dust on pilot visibility, and rehabilitation of the site.
129. There is an element of cross over in these potential effects into matters that fall within the jurisdiction of Environment Canterbury, and the relevant parts will be addressed by Ms Goslin. To address the issues, the Applicant has confirmed that there will be no wash water ponds required as part of the operation of the quarry, eliminating the potential for bodies of water to attract birds.
130. The Applicant has also volunteered a number of conditions to address the concerns raised, which provide for input and liaison with CIAL throughout the life of the consent. While Air New Zealand or CIAL may comment further on these at the hearing, I consider that the proposed conditions, insofar as they relate to the Selwyn District Council functions, are appropriate and address the concerns raised.

Positive Effects

131. The Application is supported by an economic assessment prepared by Brown Copeland & Co Ltd. This assessment is appended to the original application as Appendix J. The assessment concludes overall that:
- *Fulton Hogan's proposed new Roydon Quarry will give rise to the following economic benefits:*
 - a. *Lower aggregate transport costs;*
 - b. *Lower aggregate construction costs;*
 - c. *Lower aggregate supply process; and*
 - d. *Retention of employment and incomes in the local economy.*
 - *The new Roydon Quarry will not result in economic externality costs.*

- *The new quarry is consistent with community economic wellbeing and the efficient use and development of resources.*

132. The Brown and Copeland & Co report was peer reviewed for the Selwyn District Council by Mr Rodney Yeoman of Market Economics Ltd. The Market Economics assessment is attached to this report as Appendix 2. Overall, the Market Economics assessment concludes that while they do not agree with some of the applicant's methodology, the matters on which there is disagreement do not affect the overall findings. Mr Yeoman concludes overall that the net position from an economic perspective is likely to be positive.

133. I note that both economic experts generally agree that there will be economic benefits overall from the proposed quarry, and I rely on these views.

Summary – Assessment of Environmental Effects

134. Overall, with the exception of the safety issues arising in relation to the queuing adjacent to the State highway as identified by Mr Carr, and the night time activities sought by the applicant, I consider that the actual and potential effects of the proposal will not be significant and can be appropriately managed by conditions of consent. In reaching this view, I have relied upon the various assessment reports prepared for the Selwyn District Council.

135. As raised by Mr Carr and referred to in the assessment contained within this report, there is an outstanding matter in relation to trucks queuing from the railway level crossing, along Dawsons Road and as far as the State highway, giving rise to significant traffic safety concerns. As identified by Mr Carr, this is unacceptable from a traffic safety perspective, and if unresolved is considered to give rise to a significant adverse effect. Likewise, I consider that night time activity has the potential to adversely affect the amenity of surrounding residential activities, and consider it is appropriate therefore to exclude night time activity.

Statutory Assessment

Canterbury Regional Policy Statement

136. The Canterbury Regional Policy Statement ('CRPS') sets out the resource management issues for the Canterbury region and the objectives, policies and methods to achieve integrated management of natural and physical resources. The CRPS became operative on 15 January 2013.

137. The Applicant has undertaken a comprehensive assessment of the relevant provisions of the CRPS. Overall, I agree with the Applicant's assessment, noting that the SDC's experts have come to the view that the actual and potential effects of the proposed quarry, with the exception of the traffic safety matter highlighted by Mr Carr, are minor and can otherwise be managed

by conditions of consent. In this regard I consider that the proposal directly conflicts with Policies 5.3.7 and 5.3.8, which are concerned with the safe and efficient functioning of the District's transportation network, among other matters. Similarly, the transport related provisions in Chapter 6 of the CRPS, relating the recovery and rebuilding of Greater Christchurch are not satisfied given the safety concerns raised. I also note that the proposal will potentially adversely affect residential amenity unless night time activity is avoided.

Greater Christchurch Regeneration Act 2016 and the Land Use Recovery Plan

138. The Greater Christchurch Regeneration Act (GCR Act) came into force on 19 April 2016 and replaces the Canterbury Earthquake Recovery Act 2011, which was repealed on the same date.
139. The application site is within Greater Christchurch, as defined by the Act (within Selwyn, Springs and Selwyn Central Wards). As such, the GCR Act needs to be considered in relation to this application.
140. The Land Use Recovery Plan (LURP) applies to the Greater Christchurch area. It was approved by the Minister for Canterbury Earthquake Recovery and gazetted on 6 December 2013. Although prepared under the Canterbury Earthquake Recovery Act 2011, the LURP is a Recovery Plan under s4 of the GCR Act and so needs to be considered in relation to this application.
141. The LURP considers the impacts of the earthquakes on residential and business land use and provides a pathway for the transition from rebuild to longer term planning. The LURP sets a policy and planning framework necessary to:
 - Rebuild existing communities
 - Develop new communities
 - Meet the land use needs of businesses
 - Rebuild and develop the infrastructure needed to support these activities
 - Take account of natural hazards and environmental constraints that may affect rebuilding and recovery.
142. The LURP identifies what needs to be done in the short and medium term to co-ordinate land use decision-making, identifies who is responsible and sets timelines for carrying out actions. It directs amendments to be made to Environment Canterbury's Regional Policy Statement, the Christchurch City Plan, the Selwyn District Plan and the Waimakariri District Plan.
143. When considering an application for a resource consent for a restricted discretionary, discretionary or non-complying activity, any person exercising powers or performing functions

must not make a decision or recommendation that is inconsistent with the LURP (s60 of the GCR Act).

144. The required amendments to the Regional Policy Statement and the District Plan have been made, and so any application that is not inconsistent with these documents is also not inconsistent with the GCR Act and the LURP.

145. As outlined in this report, I consider that the application is overall consistent with the objectives and policies of both the District Plan and the Regional Policy Statement. As such, the application is consistent with the Greater Christchurch Regeneration Act 2016 and the Land Use Recovery Plan.

Selwyn District Plan Objectives and Policies

146. The objectives and policies of the Selwyn District Plan that I consider relevant are set out in the following table. In reviewing these provisions, I have also considered the applicant's assessment of these matters, and I have stated where I agree with the applicant's assessment.

Objectives and Policies	Comment
B1 Natural Resources	
B1.1 Land and Soil Objectives	The Applicant considers that the proposal is consistent with Objectives B1.1.1 and B1.1.2 as the risk of any discharges which may result in contamination will be managed during the proposed extraction and rehabilitation processes and by appropriately disposing of any contaminated soils at appropriate facilities. I agree with the Applicant's assessment, and overall rely upon the assessments provided by Environment Canterbury's Contaminated land team that confirm there will be no adverse effects on human health, subject to appropriate conditions.
Objective B1.1.1 <i>Adverse effects of activities on the District's land and soil resources are avoided, remedied or mitigated.</i>	
Objective B1.1.2 <i>People and their property are not affected by contaminated soil or unstable land and any adverse effects on the environment are avoided, remedied or mitigated.</i>	
B1.1 Land and Soil Policies – Contaminated Land	In reaching this view I note that the application includes mitigation measures relating to the storage and use of hazardous substances on the site, achieving policy B1.1.1 to ensure that the risk of contaminating land is reduced. The proposal in this respect includes industry and best practice methods including staff training in avoiding spills, development of a Spill Management Plan and access to spill kits,
Policy B1.1.1 <i>Ensure any activity involving hazardous substance or waste disposal is carried out in a way which reduces the risk of contaminating land or soil.</i>	
Policy B1.1.2	

<p><i>Avoid adverse effects on people through exposure to contaminated land and mitigate or remedy any adverse effects on the environment.</i></p>	<p>and storage on impervious surfaces with secondary containment. I agree that all of these measures are appropriate.</p>
<p>Policy B1.1.3</p> <p><i>Encourage the management of contaminated sites so that effects on peoples' health or on the environment are avoided.</i></p>	<p>Policy B1.1.2 seeks to avoid adverse effects on people through exposure to contaminated land and mitigate or remedy any adverse effects on the environment, a policy that is consistent with the outcomes sought in the National Environmental</p>
<p>Land and Soil Policies – Soil Damage</p>	<p>Standard for Assessing and Managing</p>
<p>Policy B1.1.7</p> <p><i>Avoid removing large quantities of topsoil from sites unless:</i></p> <ul style="list-style-type: none"> <i>The site will be covered in hardstanding; or</i> <i>The topsoil will be replaced and the site replanted, when the activity ceases.</i> 	<p>Contaminants in Soil to Protect Human Health. I rely on Mr Freeman's view and agree that provided the appropriate site management practices are employed, there will be no adverse effects on human health associated with the disturbance and removal of contaminated soil from the site.</p> <p>I also agree that the application of secure and effective management and mitigation measures around hazardous substances will avoid creating any contamination on the site.</p> <p>Management measures are proposed for site rehabilitation and management of cleanfill, both of which are included the management plans that are to be provided in accordance with the proposed conditions of consent. The proposed remediation includes placing cleanfill over the base of the site and covering it with a layer of topsoil to facilitate the growth of grass and other vegetation, and overall, I agree that the proposed management and mitigation measures are consistent with these provisions.</p>
<p>B1.3 Water Objectives</p>	<p>I agree with the Applicant's assessment that the range of mitigation measures incorporated into the proposal will ensure any potential effects on ground and surface water resources are avoided, remedied or mitigated, and that the proposal is consistent with these provisions.</p>
<p>Objective B1.3.1</p> <p><i>Contamination of ground water or surface water is avoided and/or mitigated, and water quality improved in degraded waterbodies through changes in land management practices and controls on land uses likely to cause waterbody contamination.</i></p>	
<p>Objective B1.3.3</p>	

<i>Protect and enhance the amenity values along waterbodies.</i>	
B1.3 Water Policies – Ground and Surface Water	
<p>Policy B1.3.4</p> <p><i>Manage land to protect water resources and avoid, remedy, or mitigate adverse effects on surface water quality and quantity, and aquatic habitat from activities and development, including:</i></p> <ul style="list-style-type: none">• <i>Activities locating close to waterbodies; or</i>• <i>Activities which may result in surface run-off of contaminants, or leaching of contaminants into groundwater.</i>	
B2 Physical Resources LURP	
B2.1 Transport Networks – Objectives	<p>Mr Carr’s evidence has reviewed the Applicant’s ITA and subsequent modelling, and considers overall, apart from one matter, that the proposed quarry transportation aspects of the proposal will not compromise the safe and efficient operation of the district’s roads. I therefore consider the proposal is not wholly consistent with objectives B2.1.1 and B2.1.2.</p> <p>I note that the transport experts agree that the upgrades proposed to the district roads will improve the current situation at the Dawsons/Jones Road intersection, with vehicle movements able to be accommodated by the surrounding network and agree therefore that the proposal is consistent with policy B2.1.3, which seeks to manage the traffic effects of activities in considering the hierarchy of roads, with the notable exception of the concerns raised in relation to the queuing of vehicles in a manner that would potentially affect the safe and efficient operation of State highway 1.</p> <p>Mr Carr has raised a significant safety concern arising from the modelling that shows the potential for extended queuing in the vicinity of the State Highway, and he considers this to be a significant</p>
<p>Objective B2.1.1</p> <p><i>An integrated approach to land use and transport planning to ensure the safe and efficient operation of the District’s roads, pathways, railway lines and airfields is not compromised by adverse effects from activities on surrounding land or by residential growth.</i></p>	
<p>Objective B2.1.2</p> <p><i>An integrated approach to land use and transport planning to manage and minimise adverse effects of transport networks on adjoining land uses, and to avoid “reverse sensitivity” effects on the operation of transport networks.</i></p>	
B2.1 Transport Network Policies – Roads and Pathways	
<p>Policy B2.1.3</p> <p><i>Recognise and protect the primary function of roads classified as State Highways or Arterial Roads in Appendix 9, to ensure the safe and efficient flow of through traffic en route to its destination.</i></p>	
<p>Policy B2.1.4(a)</p>	

<p><i>Ensure all sites, allotments or properties have legal access to a legal road which is formed to the standard necessary to meet the needs of the activity considering:</i></p> <ul style="list-style-type: none"> <i>the number and type of vehicle movements generated by the activity;</i> <i>the road classification and function; and any pedestrian, cycle, public transport or other access required by the activity.</i> 	
<p>Policy B2.1.4(b)</p> <ul style="list-style-type: none"> <i>Avoid or mitigate adverse effects on the safe flow of traffic along State Highways and Arterial Roads from new property access or new/expanded activities which generate a high level of traffic movements.</i> 	
<p>Policy B2.1.5 <i>Promote the strategic planning of transport networks to achieve a high level of connectivity and provision for sustainable transport including public transport, cycling and walking.</i></p>	
<p>Policy B2.1.6</p> <p><i>Avoid adverse effects of on-road parking and loading generated by surrounding land uses on rural roads.</i></p>	
<p>Policy B2.1.8</p> <p><i>Ensure roadside signs are designed and positioned so they can be read quickly and clearly by motorists without causing prolonged distraction from the road or sudden vehicle manoeuvres.</i></p>	
<p>Policy B2.1.10</p> <p><i>Ensure vehicle crossings, intersections, pathways, roadside signs and noticeboards are designed and positioned to ensure good visibility for all road users, and to allow safe passage, access and egress.</i></p>	
<p>Policy B2.1.11</p> <p><i>Ensure roads are designed, constructed, maintained and upgraded to an appropriate standard to carry the volume and types of traffic safely and efficiently.</i></p>	
<p>Policy B.2.1.12</p>	<p>effect. In this respect I do not consider the application as it stands to satisfy Policy B2.1.4(b), as effects on the safe flow of traffic along the identified state highways and arterial roads will not be avoided.</p> <p>I agree with the applicant's assessment that the proposed planting and signs are consistent with Policy B2.1.13.</p> <p>The application considers the wider impacts of the proposal to provide a site access design which will result in the majority of vehicles leaving the site quickly accessing Main South Road, as opposed to travelling along local roads. Subject to the inclusion of a monitoring condition to require the applicant to monitor truck movements for any deviation to the anticipated routes, I accept this view.</p> <p>Overall, considering Mr Carr's advice, I consider that there is a significant safety risk associated with the vehicle movements in relation to the State highway. While Mr Carr has identified that the proposed vehicle movements can be accommodated within the surrounding roads, unless the issue relating to the modelling of truck movements and queuing and the associated potential effects on State Highway 1, the proposal cannot be considered to satisfy the transportation related provisions of the Plan.</p>

<p><i>Avoid new property access directly on to the State Highway or Arterial Roads unless there is no alternative legal access available, or effects on the safe and efficient flow of traffic along the road will be minor.</i></p>	
<p>Policy B2.1.13</p> <p><i>Avoid planting trees or hedges in positions or allow them to grow to heights where they will shade roads for prolonged periods during winter.</i></p>	
<p>Policy B2.1.26 (Effects on the environment and reverse sensitivity effects - Roads and Railway Lines)</p> <p><i>Encourage heavy vehicles to use routes which bypass townships, where practical and appropriate, and avoid new residential development along heavy vehicle bypasses.</i></p>	
<p>B2.4 Waste Disposal – Objectives</p>	
<p>Objective B2.4.2</p> <p><i>Adverse effects on the environment from the collection, treatment, storage or disposal of waste are reduced.</i></p>	
<p>B2.4 Waste Disposal Policies</p>	
<p>Policy B2.4.5</p> <p><i>Ensure any site or facility used to collect, temporarily store or redistribute waste, is designed, sited and managed to:</i></p> <ul style="list-style-type: none"> <i>a) Avoid the risk of leaching of contaminants into ground or surface water;</i> <i>b) Avoid adverse effects of litter, vermin or odour on surrounding properties;</i> <i>c) Mitigate any adverse effects from transporting waste on the road network and the safety of other road users;</i> <i>d) Protect the values of any outstanding natural features and landscapes; any sites with special ecological, heritage, or cultural</i> 	<p>Waste generated on the site will be appropriately collected and disposed of. Water and sediment from the truck wash down area will be collected from the hard surfaced wash down area into a holding tank with a water and oil separator to remove contaminants prior to discharging the water to the ground. Collected sediment will be removed to an approved landfill. There is no reticulated waste water in the area so office and amenity buildings will be required to discharge into holding tanks for removal from the site or otherwise rely on on-site disposal methods (which presently are not sought as part of the application. Overall, I consider that the proposal is consistent with these provisions insofar as they are relevant to the proposal.</p>

<p><i>values; or the natural character of waterbodies; and</i></p> <p><i>e) Avoid the risk of creating a natural hazard through locating such facilities on land prone to inundation, instability or erosion.</i></p> <p><i>Provide for appropriate temporary, short-term storage for hazardous substances in the waste stream</i></p>	
<p>Policy B2.4.6</p> <p><i>Avoid any large scale facilities for disposing of solid waste in the District, unless any adverse effects, including any cumulative effects, on the environment will be minor.</i></p>	
<p>Policy B2.4.7</p> <p><i>Recognise that Tāngata whenua have a particular interest in the treatment and disposal of waste; and ensure appropriate consultation is undertaken with them on this matter.</i></p>	
<p>Policy B2.4.8</p> <p><i>Ensure appropriate after-care of land used to dispose of waste.</i></p>	
B3 Health Safety Values	
B3.2 Hazardous substances – Objectives	<p>I agree with the Applicant's assessment that the Objectives and Policies relating to hazardous substances are satisfied. In reaching this view I note that the storage of all hazardous substances at the site will be in accordance with the requirements of relevant legislation and will include appropriate measures for the safe use and storage of hazardous substances such that soil and groundwater resources will be effectively protected to avoid contamination resulting from hazardous substances.</p>
<p>Objective B3.2.1</p> <p><i>To ensure that adequate measures are taken to avoid, remedy or mitigate any adverse effects to human health, to the amenity of townships, the rural environment and to the natural environment arising from the manufacture, storage, transport on water bodies and disposal of hazardous substances.</i></p>	
<p>Objective B3.2.2</p> <p><i>To ensure that adequate measures are taken during the manufacture, storage and disposal of hazardous substances to avoid, remedy or mitigate any adverse effects to the health of livestock and other farm animals, to domestic animals, to flora and fauna, and to the life-</i></p>	

sustaining capacity and amenity values of waterbodies, land and soil resources.	
B3.2 Hazardous substances – Policies	
<p>Policy B3.2.1(a) Manufacture and Storage</p> <p><i>Allow appropriate quantities and classes of hazardous substances to be stored in the rural area to provide for land use activities that are consistent with the District Plan objectives and policies for those areas; and</i></p>	
<p>Policy B3.2.1(b) Manufacture and Storage</p> <p><i>Ensure hazardous substances are used and stored under conditions which reduce the risk of any leaks or spills contaminating land or water.</i></p>	
B3.4 Quality of the Environment - Objectives	<p>I agree with the Applicant's overall view that the proposal is consistent with objective B3.4.1 and policy B3.4.1 which seek to enable a variety of activities in the rural area, while maintaining rural character and managing effects of activities on nearby sensitive receivers. The noise assessment prepared by Dr. Jeremy Trevathan identifies that the noise generated by the proposed quarry and related activities will comply with the noise limits of the Plan, notwithstanding that the Applicant has adopted a more stringent set of noise rules.</p> <p>The economic assessments have agreed that extraction of aggregate from the site has economic benefits.</p> <p>Measures proposed through the amended application and the Applicant's draft conditions of consent to manage adverse effects generally include development of earth bunding and retention of existing shelterbelts around the site, establishment of new vegetative screening along the site boundaries prior to the quarrying commencing, and progressive site rehabilitation (including the deposition of cleanfill and spreading of topsoil) upon completion of quarried areas.</p>
<p>Objective B3.4.1</p> <p><i>The District's rural area is a pleasant place to live and work in.</i></p>	
<p>Objective B3.4.2</p> <p><i>A variety of activities are provided for in the rural area, while maintaining rural character and avoiding reverse sensitivity effects.</i></p>	
B3.4 Quality of the Environment - Policies	
<p>Policy B3.4.1 Rural Character</p> <p><i>Recognise the Rural zone as an area where a variety of activities occur and maintain environmental standards that allows for primary production and other business activities to operate.</i></p>	
<p>Policy B3.4.3 Rural Character</p> <p><i>Avoid, remedy or mitigate significant adverse effects of activities on the amenity values of the rural area.</i></p>	
<p>Policy B3.4.6 Rural Character</p>	

Maintain low levels of building density in the Rural zone and the predominance of vegetation cover.	<p>Having regard to Mr Robertson's review of the Applicant's LVIA , overall, I agree that the visual effects of the quarry can be appropriately screened and mitigated, and that overall the quality of the environment will be maintained over the life of the quarry and beyond.</p> <p>There will be no lights shining from the site directly into nearby dwellings, and the Applicant has provided a lighting assessment that demonstrates that any lighting effects will be minimal. I also consider that excluding night time activity at the site will avoid incidents of lights from vehicles shining into dwellings when exiting the site, which is consistent with Policy B3.4.13.</p> <p>Having regard to policy B3.4.13, Dr Trevathan's noise assessment has confirmed that subject to modifications made to the application, and the additional conditions recommended in his assessment, any noise effects generated by the proposal will be acceptable (subject excluding night time activity). The proposed conditions will assist in avoiding and mitigating noise effects such that they are minor.</p> <p>The proposed DMP for the site in Appendix D includes dust management control measures which will be adhered to, to ensure effective mitigation of any nuisance effects on adjoining dwellings, as a result of dust from stockpiled material or earthworks undertaken at the quarry. These matters have been considered by Ms Goslin, and I note that she has expressed reservations about the adequacy of water available for dust suppression measures. Unless this matter is resolved, I consider the proposal does not satisfy this Policy.</p> <p>With the exception of the traffic safety issue identified in relation to trucks queuing and giving rise to safety issues for State Highway 1, having considered the various expert reports prepared for the SDC, I consider that the adverse effects of the proposal on the environment will be minor, subject to the proposed conditions relating to the establishment, operation and rehabilitation of the Roydon Quarry.</p>
Policy B3.4.11 Glare and Nightglow Avoid night lighting shining directly into houses, other than a house located on the same site as the activity, or from vehicles using roads in the District.	
Policy B3.4.13 Noise and Vibration Recognise temporary noise associated with short-term, seasonal activities as part of the rural environment, but ensure continuous or regular noise is at a level which does not disturb people indoors on adjoining properties.	
Policy B3.4.15 Noise and Vibration Avoid, remedy or mitigate adverse effects caused by excessive or prolonged vibration.	
Policy B3.4.16 Dust Mitigate nuisance effects on adjoining dwellings caused by dust from earthworks, or stockpiled material.	
Policy B3.4.17 Shading Ensure buildings and trees do not excessively shade adjoining properties.	
Policy B3.4.18 Shading Ensure buildings are setback a sufficient distance from property boundaries to: <ul style="list-style-type: none"> a) Enable boundary trees and hedges to be maintained; b) Maintain privacy and outlook for houses on small allotments; and • Encourage a sense of distance between buildings and between buildings and road boundaries where practical. 	
Policy B3.4.20 Reverse Sensitivity Effects Ensure new or upgraded road infrastructure and new or expanding activities, which may have adverse effects on surrounding properties, are located and managed to mitigate these potential effects.	

	<p>Provided the outstanding safety issue can be resolved, I consider the proposal to be consistent with Policy B3.4.20 by ensuring that appropriate mitigation measures will be in place to manage the effects on the environment.</p> <p>The proposed management measures, including a Dust Management Plan, a Quarry Rehabilitation Management Plan, a Spill Management Plan and a Cleanfill Management Plan are provided for in the proposed conditions. I agree that these plans, as well as the overall landscape management plan recommended by Mr Robertson, will allow effects on the surrounding environment to continue to be addressed over the life of the quarry. I note that the Plans are presently in Draft form and as identified in the various expert statements, will require some amendment and updating before being provided to the Council in their final form. These matters are identified in the attached draft conditions of consent.</p>
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Summary – District Plan Objectives and Policies

147. Overall, I consider the proposal to be consistent with the relevant provisions of the Selwyn District Plan, with the exception of the provisions relating to

- (i) traffic safety with respect to the queuing of trucks between the railway crossing and the State Highway;
- (ii) dust management; and
- (iii) effects on amenity values arising from night time noise.

Other Matters

148. In accordance with section 104(1)(c) of the RMA, the following other strategies and plans are also relevant to the application for approvals for the proposed Roydon Quarry. Those relevant are set out below.

Mahaanui Iwi Management Plan 2013

149. The Mahaanui Iwi Management Plan (IMP) is the principal mana whenua planning document prepared and mandated by the six Papatipu Rūnanga holding mana whenua over the area

within the Hurunui River to the north, the Hakatere/Ashburton River to the South, and inland to the Southern Alps. The subject site falls within this area.

150. The IMP provides a statement of Ngāi Tahu objectives, issues and policies for natural resource and environmental management in the takiwā (area). Policies of particular relevance to the land use proposal are contained in Part 5.4, Papatūānuku, which contains objectives and policies relating to land and soil resources. The Applicant considers that the proposal will not have adverse effects on soil quality, for reasons including:
- topsoil and subsoils removed prior to excavation will be stored to prevent degradation and erosion losses, prior to being used in site rehabilitation.
 - Maintenance of machinery and the implementation of a Spill Management Plan will assist in the protection of soil resources.
 - Hazardous substances stored on site will be managed so as to not adversely impact soil resources.
151. While the Applicant has referred to the relevant provisions in the IMP, they have not been set out in full, and I have therefore reproduced them in the table in Appendix 1 of this report. I have reviewed these provisions and the Applicant's assessment, as well as the matters raised in the submission from Te Taumutu Rūnanga. Overall, I agree with the Applicant's assessment that these provisions are satisfied.

Te Runanga o Ngāi Tahu Freshwater Policy Statement 1999

152. The Te Runanga O Ngāi Tahu Freshwater Policy Statement 1999 (FPS) has been prepared by Te Runanga o Ngāi Tahu, and as has been addressed by the Applicant, provides a foundation for resource management agencies and Papatipu Runanga planning for freshwater within the rohe of Ngāi Tahu. As these matters relate to the Regional Council's functions as manager of the region's freshwater resources, they have been addressed in Ms Goslin's report, and I defer to her assessment.

Te Waihora Joint Management Plan (Mahere Tukutahi o Te Waihora) 2005

153. As identified in the application, the Te Waihora Joint Management Plan was prepared in 2005 by Te Rūnanga o Ngāi Tahu with advice from the Te Waihora Management Board (local Papatipu Rūnanga representatives) and the Department of Conservation. The plan results from the Ngāi Tahu treaty settlement, and contains long-term objectives, policies and methods for effective integrated management of the Joint Management Plan Area and the natural and historic resources within the area. As these matters relate to the Regional Council's functions as manager of the region's freshwater resources, they have been addressed in Ms Goslin's report, and I defer to her assessment.

Summary of Iwi Management Plans

154. I agree with the Applicant's assessment that there are no known heritage structures, waahi tapu sites or other sites of significance on the proposed quarry site and the relevant provisions of the IMP are therefore not affected by the proposal. The mitigation measures proposed for the storage and use of hazardous substances, vehicle maintenance, and compliance with clean fill standards will assist in the protection of the water resource due to the avoidance of adverse effects, in accordance with the IMP provisions relating to the protection of water quality. Overall, the proposal is considered to be consistent with the relative objectives and policies of the Mahaanui Iwi Management Plan, the Te Runanga O Ngāi Tahu Freshwater Policy Statement 1999 and the Te Waihora Joint Management Plan (insofar as the latter two plans are relevant to the land use consent application).

Part 2 Resource Management Act 1991

155. The purpose of the Resource Management Act 1991 is to promote the sustainable management of natural and physical resources, while enabling people and communities to provide for their well-being, while sustaining resources and addressing any adverse effects.
156. In assessing an application for resource consent, a consent authority is required to determine whether the proposal is consistent with the purpose and principles of the Act (Part 2), having regard to the matters set out in section 104, the Fourth Schedule, and any other statutory consideration. Part 2, as set out under sections 5 to 8 of the RMA, outlines the purpose and principles of the Act.
157. The Applicant has considered the Court of Appeal's decision in the recent Davidson¹² case in Appendix K of the original application (page 12). This provides a good summary of the position as I understand it and reproduce it here for convenience:

...the Court held that the Supreme Court's decision in Environmental Defence Society Incorporated v King Salmon Company Limited [2014] NZSC 41 was a contextual rejection of the "overall judgment" approach (whereby reference was made to Part 2 after consideration of relevant planning instruments). The Supreme Court's decision did not prohibit consideration of Part 2 in the context of resource consent applications. The Court of Appeal in Davidson held that decision makers should usually consider Part 2 when making decisions on resource consents, and must do so where the relevant planning instruments have not been prepared in a way which reflects Part 2. However, consideration of a consent application under Part 2 may be unnecessary

¹² Davidson Family Trust v Marlborough District Council [2018] NZCA 316.

where the relevant planning instruments have clearly been prepared in a way which gives effect to Part 2.

158. The Applicant has considered Part 2 as well as the Objectives and Policies of the relevant planning instruments, and for completeness I have also considered the relevant parts of Part 2 below.
159. Part 2 of the RMA outlines the purpose and principles of the Act. Section 5 states the purpose of the Act as sustainable management.
160. Section 6 of the RMA identifies matters of national importance which shall 'be recognised and provided for', while section 7 identifies other matters which shall 'be had regard to' under the Act. I agree with the applicant that there are no section 6 matters of relevance to this proposal.
161. The following section 7 matters are considered to be relevant:
- (b) the efficient use and development of natural and physical resources;*
 - (c) the maintenance and enhancement of amenity values;*
 - (f) maintenance and enhancement of the quality of the environment*
 - (g) any finite characteristics of natural and physical resources*
162. Subject to the implementation of the proposed operational control and mitigation measures, I agree with the Applicant's assessment overall that the proposed activity is consistent with section 7 (b), (c), (f) and (g) as it will enable the efficient use and development of an important aggregate resource, while not adversely affecting amenity values or the quality of the overall environment, subject to there being no night time operations. However, I note that this is also subject to the outstanding concerns regarding the mitigation of dust effects, preclusion of activities at night and safety issues arising from trucks queuing in the vicinity of the State highway being appropriately resolved.
163. Section 8 of the RMA requires specific regard to be had to the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). Noting that a submission received from tangata whenua has not opposed the proposal, and that the Applicant is proposing ongoing liaison with the appropriate Rūnanga, I consider that there are no specific Treaty of Waitangi matters requiring consideration in accordance with section 8 of the RMA.
164. With the exception of the safety matter raised by Mr Carr, and the concerns raised regarding dust mitigation and night time activities, I consider the proposal is consistent with Part 2 of the RMA and accords with the relevant matters in sections 5 to 8 of the Act and would otherwise achieve the purpose and principles of the Resource Management Act 1991.

Summary of Statutory Assessment

165. This report has assessed the proposal to establish, operate and rehabilitate the proposed Roydon Quarry against the relevant statutory framework and related considerations.
166. My assessment in this report is that the adverse effects of the proposal on the environment will not be significant subject to the changes promoted in the Council's expert reports. However, this conclusion is tempered by the issues raised in relation to night time activity, dust mitigation measures (as raised by Ms Goslin) and the safety issues raised as a result of the traffic modelling showing vehicles queuing and creating conflict with State highway traffic, creating an unacceptable adverse effect.
167. The assessment concludes that the proposed quarrying activity and associated site operations achieve Part 2 of the RMA and are consistent with the objectives and policies of the relevant statutory instruments, with the exception of the provisions relating to the safe operation of the roading network, dust and night time activities.
168. Overall, my assessment of the proposal leads to the conclusion that provided the safety matter relating to queuing of trucks between the rail crossing and the State highway is appropriately resolved, and that night time activities do not occur, the potential adverse effects of the application can be appropriately avoided, remedied or mitigated. While I have appended a set of amended conditions to this report, I consider that consent should not be granted unless the applicant is able to satisfactorily demonstrate that the truck queuing issue and effects on the State highway can be avoided, or appropriate measures are put in place to address the matter.

Development Contributions

169. If the consent is granted, the relevant development contributions will be required in accordance with the Local Government Act 2002. These contributions will be obtained through the Development Contributions Policy under the Council's Long Term Community Plan (LTP) and charged in accordance with the table attached to the decision. Development contributions are not able to be challenged through this RMA hearings process but are mentioned here as the Council's policy is to include the Development Contributions Notice on resource consent decisions where consents are granted.
170. Advice received from the Selwyn District Council is that there would be no water or waste water contributions required to the Selwyn District Council. However, a Transportation Contribution would be required as follows:

Transportation Contributions

Activity Based HUE Equivalent	GFA(m ²)	Total HUE ¹³	Development Contribution per HUE (GST excl)	Total for Category	HUE credits available	Total Credit available	Total (GST excl)	Total (GST incl)
0.000	0	165.00	\$1,769.00	\$291,885.00	1	\$1,769.00	\$290,116.00	\$333,633,40

Draft Conditions

171. I have appended an amended set of draft conditions (the Officer Set) to this report. The changes include amendments recommended by the Council's experts, as well as including changes sought through this report. Should the Applicant provide further modelling that addresses the issue of trucks queuing between the rail crossing and the State Highway and / or the Commissioners be minded to grant consent, then the attached Officer Set of draft conditions form the basis of the management regime for the quarry throughout its establishment, operation and rehabilitation stages.
172. While I have considered the draft management plans provided by the Applicant, along with the SDC experts, I have considered them to be a work in progress and consider that conditions of consent will develop over the course of the hearing, and to that end I anticipate that should consent be granted, the conditions will be subject to further discussion and drafting to accommodate the outcome of the hearing.

Recommendation

That Resource consent be **declined** pursuant to sections 104 and 104B of the Resource Management Act 1991 unless the Application is amended in order to

- (i) include appropriate measures to avoid adverse effects arising from trucks queuing between the Main Trunk railway line crossing and the State Highway; and
- (ii) remove all activities proposed to occur between 8:00pm and 6:00 am (i.e. no night time activity).

Attachments

- Draft Conditions of Consent
- Economic Assessment prepared by Mr Rodney Yeoman, Market Economics
- Mahaanui Iwi Management Plan Objectives and Policies

Reported and recommended by	
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¹³ Based on 1650 ECM/D with one HUE being 10 ECM/D

A handwritten signature in blue ink, appearing to read 'a Henderson'.

Andrew Henderson, Consultant Planner

Date: 2 September 2019

Attachment 1: Draft Officer Set of Conditions

OFFICER SET OF CONDITIONS – LAND USE CONSENT RC185627

General Conditions

- 1) Except as required by subsequent conditions the development shall proceed in accordance with the information and plans submitted with the application submitted on 20 November 2018 and subsequent further information submitted on 12 March 2019 and 16 August 2019. The Approved Consent Documentation has been entered into Council records as XXXX. Where there is any conflict between the application and the conditions, the conditions of consent shall prevail.

Location of Quarry

- 2) The area to be excavated shall be in accordance with the area shown on the attached XXX plan dated XXX. This is the quarry area within the quarry site.

Lapse and Expiry

- 4)3) The consent holder is to notify the Team Leader Resource Consents, Selwyn District Council, at least 48-5 working days ~~hours~~ prior to commencement of activities authorised by this consent.
- 2)4) Pursuant to section 125 of the Act this consent shall lapse five years after the date of this consent unless either the consent is given effect to, or the council has granted an extension pursuant to section 125(1)(b) of the aAct. Once the consent has been given effect to, or work shall be completed within 40 years.

Management Plans and Works to be completed prior to commencement of quarry operations

Certification

- 5) The following shall apply in respect of any condition which requires the consent holder to provide the Council with a plan or similar document 'for certification'
- (a) the consent holder shall provide the plan to the Council in accordance with the timeframe specified in the applicable condition;
 - (b) the consent holder may commence the activities for which the plan relates in accordance with the submitted plan unless the Council advises the consent holder in writing within 20 working days of receipt of the plan that it refuses to certify it on the grounds that it fails to meet the requirements of the condition which requires such a plan to be provided in the Council provides reasons why that view is held;
 - (c) should the Council refused to certify the plan, the consent holder shall submit a revised plan to the Council for certification. Clause(b) shall apply for any resubmitted plan;
 - (d) once certified the plan may be varied by the consent holder. The certification process for any variation to the plan shall follow the process outlined in (a) to (c) above. The activities subject to the variation shall not commence until the variation has been certified by the Council.
- 6) This resource consent and a copy of the Council certified versions of all the plans required by this consent shall be kept on site at all times and the consent holder shall ensure all personnel

are made aware of each plans contents where the plan relates to activities that those personnel are responsible for.

Supervision and Notification

- 7) The consent holder shall appoint a representative(s) prior to the exercise of this resource consent, who shall be the Council's principal contact person(s) in regard to matters relating to this consent.
- 8) All quarrying works shall be overseen by a suitably qualified and experienced quarrying practitioner.
- 9) Should any persons change during the term of this resource consent, the Consent holder shall immediately inform the Team Leader – Compliance Environmental Services, Selwyn District Council (compliance@selwyn.govt.nz) and shall also give written notice to the Team Leader of the new person's name and how they can be contacted as soon as practicable.

Landscape Management Plan

- 10) Establishment of landscape works (predominantly bunding and planting) shall not occur until Selwyn District Council has certified a final LMP in general accordance with the Landscape Management Plan, Project No. 2017_031|B prepared by DCM Urban. The purpose of the Landscape Management Plan (LMP) is to ensure the successful establishment and long-term success of the proposed on-site landscape works.
- 11) The consent holder shall ensure that all quarry activities are undertaken in a general accordance with the certified landscape management plan.
- 12) The commencement of Stage 1 of quarrying operations shall not begin until landscape works defined in the approved LMP are established on-site
- 3)13) Prior to quarrying operations commencing on the site, site bunding and landscaping shall be established in accordance with the Landscape Management Plan approved in Condition 4 and Visual Impact Assessment by DCM Urban, referenced as Appendix E of the Resource Consent Application report by Golder Associates dated November 2018 together with subsequent updates to this documentation from the 12 March 2019 and 16 August 2019 further information responses. This shall include:

Bunding

- a. Establishment of 3 m high earth bunds around the site perimeter, with the exception of site accessways, with a 1 m wide flat top shall be constructed around the site. The bunds shall have a profile with an outside slope of up to 1:3 (one vertical to three horizontal) and a 1 m wide top and shall have a minimum width of 15 m.
- b. Overlapping bunding, or a planted island barrier, shall be established to the heavy vehicle accessway entrance adjacent to Jones Road, so as to obscure views into the quarry from Jones Road (as per the example shown on Page 25 of the LVIA prepared by DCM Urban, Project No. 2017_31, dated 12 August 2019, or as otherwise may be approved by the Team Leader, Resource Consents).
- c. As soon as practicable following construction of the bunds, the bunds are to be sown with grass or hydro-seeded to achieve swift grass cover and watered regularly to ensure grass cover is established and maintained.

Commented [AH1]: Note that conditions should be reordered generally in the following sequence:

- General
- Certification
- Management Plans
- Works to be completed prior to the commencement of quarrying
- Operation Conditions
- Review, monitoring and rehabilitation conditions.
-

Commented [AH2]: Plans require amending to show all plantings and walkways within Council road reserves being removed.

Commented [AH3]: Changed to also cover maintenance so that dust does not become a problem in the future.

- d. To assist in achieving swift grass cover, construction of the bunds shall take place outside of summer months and in favourable weather, to avoid significant potential dust risk (e.g. during the months of February to November inclusive) and enable grassing of the bunds to occur in autumn or spring, in order to align with periods of good grass strike.
- e. The grassed bunds shall be mown regularly or grazed to give a tidy appearance.
- f. The grassed bunds shall be watered, when required to suppress potential dust, until a grass cover has been established.
- g. To ensure the survival of the existing shelter belts (identified on the figure Mitigation Measures – Edge Treatments on Page 17 of the LVIA) bunds should not be constructed within 1 m of the base of trees. Where no shelterbelt currently exists, bunding shall be setback at least 4 m from the site boundary. This design is shown in the Edge Treatments included on pages 19-22 of the LVIA prepared by DCM Urban, Project No. 2017_31, dated 12 August 2019.

Commented [AH4]: 'Tidy appearance' is subjective. Given the bund is behind the trees then keeping grass low may be less of a visual effects matter than a fire risk issue if the grass gets long and browns off.

Planting

- a. The existing shelterbelts (identified on the figure Mitigation Measures Edge Treatments on Page 17 of the LVIA prepared by DCM Urban, Project No. 2017_31, dated 12 August 2019) along the site's road boundary with Curraghs Road, the common boundary with 319 Maddisons Road, and the road boundary adjacent to the dwelling at 107 Dawson's Road shall be retained. Where there are gaps or where the vegetation is dying or in poor condition these gaps shall be filled with similar tree species to achieve closures of these gaps.
- b. An additional row of plantings shall be established behind these existing shelter belts as shown on the Edge Treatments 1 and 3 (pages 19 and 21) of the LVIA prepared by DCM Urban, Project No. 2017_31, dated 12 August 2019. This row of plantings may be established at the base of the bunds.
- c. Along the site boundaries where there is no planting, three rows of plantings shall be established in accordance with the Edge Treatments 2 and 4 (pages 20 and 22) of the LVIA prepared by DCM Urban, Project No. 2017_31, dated 12 August 2019.
- d. All planting required for this consent under this condition (Condition 4 a to f) shall be maintained. Any dead, diseased, or damaged planting is to be replaced with plants of a similar species and as soon as practicable, having regard to planting seasons.
- e. All planting will be established on the outer side of the bunds.
- f. Any plantings along the Jones Road boundary will be maintained at a height of 5 m or less to limit shading of the road carriageway.

Commented [AH5]: I consider this condition needs to be time bound.

Commented [AH6]: As above

Site Access

4)14) Vehicle access shall be provided on Jones Road, between Curraghs and Dawsons Road, for light and heavy vehicles. This may involve a separate access point exclusively for light vehicles. These access points shall be designed and constructed/ upgraded in accordance with the recommendations of the Stantec ITA (Appendix C of the AEE). The heavy vehicle access shall be located at least 250 metres from the dwelling at 1090 Main South Road.

15) Roothing upgrades shall be undertaken in accordance with the Stantec ITA (Appendix C of the AEE). This shall include provision of a roundabout on Dawsons Road and roading upgrades on Jones Road.

16) The roading improvement schemes specified in Conditions 14 and 15 above shall be constructed and fully operational prior to any movement of materials to or from the site.

17) Prior to the commencement of the works required in Conditions 14 and 15, the consent holder shall provide detailed designs to the Council's Transportation Asset Manager for review and approval.

5)18) The consent-holder shall arrange for a detailed design road safety audit to be carried out of the Jones Road / Dawsons Road roundabout. The audit shall be carried out by a suitably-qualified, independent traffic engineer. Matters raised in the audit shall be considered by the consent-holder, and the audit and outcomes will be provided to the Council.

Commented [AH7]: Needed to ensure that when the quarry starts operating, the infrastructure is in place

Commented [AH8]: Standard clause in most consents, as the infrastructure will be vested. I consider a timeframe should be specified to give SDC time to undertake the review.

Commented [AH9]: Safety audits are now best practice on new roading projects. Limited to design of roundabout only as site accesses are as per typical standards so shouldn't need an audit

Operational

General

6)19) The hours of operation are 7.00 am to 8:00 pm, Monday to Saturday. Outside of these hours restricted processing operations and load out of trucks may occur as detailed in Table 1 below.

Table 1: Hours of operations/activities.

Hours	Duration	Range of activities
6.00 am to 7.00 am	Monday to Saturday	Load out of trucks, site pre-start up including operational warm up of conveyors and machinery. Clean fill deposition.
7.00 am to 6.00 pm	Monday to Saturday	Full range of quarry activities.
6.00 pm to 8.00 pm	Monday to Saturday on 150 days per annum.	Full range of quarry activities with the exception of processing using mobile plant and backfilling.
8.00 pm to 6.00 am.	Monday to Saturday on 150 nights per annum	Load out of trucks and truck movements, and ancillary activities such as operation of weighbridge and site offices and clean fill deposition.
Sunday and public holidays	For up to 15 days per year	Truck movements – load out of aggregate and clean fill deposition.
At all times, dust suppression, operation of weighbridge office activities, site security and light maintenance as required.		

Commented [AH10]: Only defined and unambiguous terms should be used. I.e. are "load out of trucks", "load out of aggregate" and load out of trucks and truck movements" distinct things? What is "operational warm-up" and are "back-filling" and clean fill deposition" different things?

7)20) No aggregate processing or transportation from the site shall take place prior to the opening of the Christchurch Southern Motorway Stage 2 (CSM2).

8)21) Truck movements outside the hours of 7.00 am to 8.00 pm Monday to Saturday shall be restricted to no more than 30 vehicle movements per hour.

Excavation

PGR-038777-295-156-V1

9)22) No excavation shall occur below 1 m above the highest recorded groundwater level at the site, as at the date of this consent being granted.

10)23) The consent holder shall establish a surveyed datum point at local ground level in an area that will not be excavated. This point shall be used to certify the depth of excavation and cleanfill at any point within the consent holder's site.

11)24) Should the groundwater water level increase (at times of high-water table) so that the separation is less than 1 m between the measured groundwater levels and the base of the quarry floor, the consent holder shall apply virgin materials (aggregate sourced from within the site, opposed to imported cleanfill) in these areas, so as to re-establish a 1 m separation distance. [Such actions shall be reported to the Team Leader – Compliance Environmental Services, Selwyn District Council \(compliance@selwyn.govt.nz\) within one month of the work being undertaken.](#) This requirement shall not apply to any areas which have already been rehabilitated.

12)25) Access to the quarry excavation areas shall be secured by fencing and lockable gates.

13)26) After the establishment of the quarry pit, no processed aggregate stockpiles shall be above the height of natural ground level.

14)27) All processed aggregate products shall be stockpiled by grade within the quarry floor area. All stockpile volumes shall have a maximum total volume of 200,000 m³ at any one time and shall be located below the height of the level of the bunds, following the establishment of the central processing area.

15)28) Site areas shall be limited to a maximum area in accordance with the following specified open ground limitations, at any one time, as set out in the table below:

Table 2: Open area limits for active quarrying.

Purpose	Area (ha)
Central processing area, its fixed plant, stockpiles, portable plant etc.	7
Excavation in process	5
Fill and rehabilitation in process	5
Site roads – unsealed	5
Field conveyor, service lanes	4
Total active area	26
The above areas exclude the sealed access road(s) and any site buildings.	

46)29) Any roads within the central processing area shall be sealed as shall the access road(s) into the site.

Setbacks

17)30) Any fixed processing plant and associated stockpiling shall be set back at least 500 m from the site boundaries and any mobile processing plant and associated stockpiling shall be set back at least 250 m from the site boundaries.

31) No extraction shall occur within 100 m of any dwelling existing at [the date of consent being granted] being 151 Curraghs Road and 319 Maddisons Road, without the prior written consent of the owners and occupiers of these dwellings.

Keeping of Records

18)32) At the conclusion of each stage, the consent holder shall forward a progress report to the Team Leader xx. The report will note the volume of material extracted, the amount and type of fill placed, the area of excavation that remains open, and the number of daily truck movements associated with the operation during that stage. Each report will include a plan showing the area which has been worked during the applicable period.

Cleanfilling

19)33) Where additional fill is required to be brought into the site for rehabilitation purposes, the consent holder shall ensure that all material deposited in the excavated area is:

- a. Only material defined as 'Cleanfill' as set out in the advice note attached to this condition;
- b. The material is not deposited into groundwater; and is at least 1 m above the highest recorded groundwater level, subject to Condition 22);
- c. Material is deposited in accordance with a Cleanfill Management Plan which has been prepared in accordance with Section 8.1 and Appendix B of "A Guide to the Management of Cleanfills", Ministry for the Environment, January 2002;
- d. Checked by the site manager prior to deposition in the pit. If the material is not classified as Cleanfill, the consent holder shall immediately remove the material and arrange for the disposal of it at an appropriate location; and
- e. Recorded by an electronic weighing system. The record shall include a detailed record of all materials deposited into the Cleanfill site and shall be provided to the Selwyn District Council annually. This record shall include the following information:
 - i. The name of the company delivering the material;
 - ii. The date of deposition;
 - iii. The physical address of the land the material was sourced from;
 - iv. A description of the material;
 - v. The approximate quantity of material; and
 - vi. The weight or volume of the material deposited; and
 - vii. The approximate location of the load within the site following deposition.
- f. Copies of this documentation shall be provided to the Council on an annual basis request and otherwise shall be available on request.

Advice note: 'Cleanfill' is defined as:

Commented [AH11]: From a compliance perspective, maybe report to council if this is to occur, this would circumvent any possible complaint

Material that when buried will have no adverse effect on people or the environment. Cleanfill material includes virgin natural materials such as clay, soil and rock, and other inert materials such as concrete or brick that are free of:

- combustible, putrescible, degradable or leachable components
- hazardous substances
- products or materials derived from hazardous waste treatment, hazardous waste stabilisation or hazardous waste disposal practices
- materials that may present a risk to human or animal health such as medical and veterinary waste, asbestos or radioactive substances
- liquid waste.

20)34) Any contractor depositing material at the site shall have a written contract with the consent holder and shall be provided with a copy of this consent prior to entering the site. Site inductions will be held on a quarterly basis for contractors using the site, and records of these inductions shall be kept and [provided to the Council on an annual basis request and otherwise shall be available on request.](#)

Traffic

21)35) Heavy vehicle movements shall not exceed a maximum of 1,200 movements per day. For the avoidance of doubt, this would equate to 600 trucks [entering the site each day, and 600 trucks exiting each day.](#) [Records of heavy vehicle movements shall be kept in sufficient detail to enable monitoring of this to take place and shall be provided to the Council on an annual basis together with confirmation that this has not been exceeded.](#)

22)36) Heavy vehicle movements shall not exceed more than 800 movements per day, as an average, over any consecutive 60 calendar day period. [For the avoidance of doubt, this would equate to 400 trucks entering the site each day, and 600 trucks exiting each day.](#) [Records of heavy vehicle movements shall be kept in sufficient detail to enable monitoring of this to take place and shall be provided to the Council on an annual basis take place together with confirmation that this has not been exceeded.](#)

23)37) [A Transportation Management and Routing Plan shall be prepared by the consent-holder. This will include, as a minimum, that](#)
:

- a. Fulton Hogan controlled trucks will only travel into or through Templeton [or on Curraghs Road](#) if a delivery is in the immediate vicinity.
- b. Fulton Hogan will require any non FH-controlled truck drivers accessing the site to sign on to a code of practice committing to the same.
- c. A prominent sign will be established inside the quarry gate reminding drivers not to travel through Templeton [or on Curraghs Road](#) unless a delivery is in the immediate vicinity.
- d. [Arrangements for](#) site induction shall include a section on truck route options to and from the site and specifically address point (b) above.

38) [The consent holder shall ensure that all quarry activities are undertaken in a general accordance with the certified Transport Management and Routing plan.](#)

40) [The surveys and assessments specified in Condition 38 above shall be repeated at least one each year that the quarry is operational](#)

25)41) The heavy vehicle internal access road from the Jones Road boundary into the site shall be sealed [over a distance of at least 100m](#) to prevent debris being carried out onto the public road. Any light vehicle access road into the site from the Jones Road boundary will also be sealed for its full length.

26)42) To avoid material being deposited, dropped or tracked onto Jones Road from the application site, the following measures shall be put in place for the heavy vehicle access road:

- a. Any unsealed portion of the access road connecting to the sealed part of access road is to have clean chip placed on it to minimise dust and movement of larger material to the sealed portion of the access;
- b. At least the first 100 m of the sealed portion inside the site boundary of the heavy vehicle access road is to be [inspected daily and debris swept as required](#).
- c. The edges of the sealed access road shall be inspected and maintained, particularly where pot holes emerge. Before they are filled, pot holes shall be coned off to avoid further damage and likelihood of material transfer to the road;
- d. Trucks shall be inspected (which may be by camera) at the weighbridge with the purpose of identifying and minimising the risk of material being carried onto Jones Road.

27)43) The length of Jones Road from Dawsons Road to the site's vehicular entrance must be regularly inspected by the consent holder for sediment tracked by vehicles to and from the site. In the event that any sediment does get tracked onto the public roadway [from the site](#), all material must be removed immediately. A record of when road cleaning has taken place must be retained and must be made available to Council on request [and otherwise provided to the Council annually](#).

Noise

28)44) All activities on the site (other than construction), measured in accordance with the provisions of NZS 6801:2008 "Acoustics – Measurement of environmental sound", and assessed in accordance with NZS 6802:2008 "Acoustics – Environmental Noise", shall not exceed the following noise limits at any point within any other site, during the following times:

- a. Daytime 0700 to 1800 hrs 55 dB L_{Aeq}
- b. Evening 1800 to 2000 hrs 50 dB L_{Aeq}
- c. Night 2000 to 0700 hrs 45 dB L_{Aeq} and 70 dB L_{Amax}

29)45) In order to permit vehicle access onto the site, the noise limits above shall not apply to vehicle movements when measured within 250 m of the site's heavy vehicle entrance.

30)46) Construction activities including the establishment of the site, roadworks, topsoil stripping, bund construction [deconstruction and topsoil spreading, and formation of final batter slopes](#), shall be conducted in accordance with NZS 6803: 1999 "Acoustics - Construction Noise", and shall comply with the "typical duration" noise limits contained within Table 2 of that Standard.

47) Should audible vehicle reversing alarms be required, only broadband noise alarms are to be used on quarry- equipment [including trucks](#). Tonal reversing alarms are not permitted.

Fulton Hogan Ltd shall require any non-FH controlled drivers accessing the site to sign on to a code of practice committing to the same.

- 31)48) Prior to the commencement of the activity, the consent holder shall submit to the Team Leader – Compliance Environmental Services, Selwyn District Council (compliance@selwyn.govt.nz), a Noise Management Plan relating to the proposed operation. The Plan shall describe in detail the proposed managerial measures to be used to control noise generated by the operator. The Plan shall describe the role of staff in the management of noise, and nominate the specific staff member(s) responsible for overseeing the implementation and upkeep of the Plan. The Plan shall also specify procedures should any complaint in relation to noise be received.

Noise emissions from the site shall be measured and assessed in accordance with Condition 44 above, by a suitably qualified and experienced acoustic consultant at the following stages:

- Within the first 12 months following the commencement of gravel extraction activities,
- When excavation advances to within 400 metres of the dwellings at 319 Maddisons and 153 Curraghs Road
- If mobile crushing is undertaken within 400 metres of the dwellings at 319 Maddisons and 153 Curraghs Road
- When rehabilitation activities are undertaken within 400 metres of the dwellings at 319 Maddisons and 153 Curraghs Road

On each occasion, a report describing the measurement results shall be submitted to the Team Leader – Compliance, Environmental Services, Selwyn District Council (compliance@selwyn.govt.nz) within 20 working days of completion of the survey.

Field Code Changed

Lighting and Glare

- 32)49) Lighting from the site shall be directed downwards and shall have a maximum light spill not exceeding 3-lux spill on to any part of any other adjoining property, in accordance with Rule 9.18.1.2 contained in Part C of the Rural Volume of the Selwyn District Plan.
- 33)50) All lighting for the site will be designed and installed by an appropriate and recognised lighting specialist, in general accordance with the Lighting Plan prepared by Ideal Supplies Ltd. Lighting Design reference 3242, and dated 5 August 2019.

Airport Operations and Bird Strike

- 34)51) No activities shall take place in the floor of the quarry which involve feeding and or encouragement of birds. The quarry shall be managed to ensure that any surface ponding drains freely while rehabilitated areas shall be designed and finished to be free draining surfaces, as provided for in the Draft Quarry Rehabilitation Plan (Appendix G of the AEE).
- 35)52) An emergency contact person responsible for on-site operations, and their contact details, shall be provided to Christchurch International Airport Limited (CIAL) prior to this consent being exercised. This will enable prompt contact with the consent holder to be made by CIAL for any issues that may arise on-site that need urgent action to prevent conflict with airport operations, including but not limited to dust generation, glare from any operations and bird management. If

the emergency contact person should change during the exercise of this consent, the consent holder shall advise CIAL of the new contact details for the new emergency contract person.

36)53) Subject to prior contact with the on-site operations managers, CIAL's planning staff and/or Wildlife Management Officer may arrange visits to the site by Ornithological or Pest Management Consultants and their staff for the purposes of pest bird monitoring or management and to assess and make recommendations that relate to the mitigation of bird strike risk.

37)54) Solid waste shall be disposed of to an approved solid waste facility by an appropriately-licensed operator. Solid waste shall be held in wheelie bins or similar appropriate containers designed to avoid attracting birds or rodents, to shelter the contents from rainfall, and to secure the waste in the event of windy conditions.

38)55) CIAL shall be provided with an opportunity to participate in the development and review of management plans for the duration of the consent to ensure that the plans are being implemented and as changes are needed, these are being actioned and implemented appropriately.

Hazardous Substances

39)56) The consent holder will take all practicable step to mitigate fuel spills or contaminants. In the event of a spill of fuel or any other contaminant, the consent holder shall clean up the spill as soon as practicable and take measures to prevent a recurrence.

40)57) The consent holder shall inform the Team Leader - Compliance Environmental Services, Selwyn District Council (compliance@selwyn.govt.nz) within 24 hours of any spill event greater than 4 litres and shall provide the following information:

- The date, time, location and estimated volume of the spill;
- The cause of the spill;
- The type of contaminant(s) spilled;
- Clean up procedures undertaken;
- Details of the steps taken to control and remediate the effects of the spill on the receiving environment;
- As assessment of any potential effects of the spill and measures to be taken to prevent a recurrence.

41)58) The only hazardous substances to be stored on site shall be fuel and lubricants for quarry plant and machinery.

42)59) The total maximum volume of diesel to be stored on site shall not exceed 15,000 litres (L). Diesel storage shall have a Stationary Container Certificate and the storage of all hazardous substances on site shall be in accordance with the requirements of the Hazardous Substances and New Organisms Act 1996.

Demolition

43)60) Prior to any demolition of the dwellings on the site, asbestos surveys shall be undertaken, and any identified or suspected asbestos containing material (ACM) shall be removed. All asbestos work shall be undertaken by a suitably licenced person(s) in accordance with the Health and Safety at Work (Asbestos) Regulations 2016 and the WorkSafe New Zealand Approved Code

of Practice: Management and Removal of Asbestos 2016. The results of the asbestos survey shall be used to determine if asbestos investigation of soil is required around the periphery of the dwellings.

- 44)61) When any dwellings on the site have been vacated, prior to demolition, the investigation of lead-based paint in soils around the periphery of the dwellings shall be undertaken and reported to Team Leader - Compliance Environmental Services, Selwyn District Council.

Remediation of Contaminated Material

- 45)62) The handling and reuse of contaminated material as identified in the "Preliminary and Detailed Site Investigation", prepared by Golder Associates (NZ) Limited dated November 2018 and submitted with the application (Appendix H of the AEE) shall be undertaken in accordance with a Remediation Action Plan (RAP). The RAP shall be prepared and submitted to the Team Leader - Compliance Environmental Services, Selwyn District Council prior to the remediation works commencing.

- 46)63) The material identified in Condition 62) may be reused in the construction of earth bunds on the site and for rehabilitation of the base of the quarry excavation only if identified as being suitable for doing so in accordance with the RAP prepared under Condition 62).

- 47)64) The excavation of the material identified in Conditions 62 and 62) shall be supervised and validated by a Suitably Qualified and Experienced Practitioner as defined in the NES Contaminated Land Users' Guide (MfE 2012). On completion of the works, the consent holder shall submit a site validation report to the Team Leader – Compliance, Environmental Services, Selwyn District Council.

- 48)65) Prior to undertaking any works in areas of contaminated land, Fulton Hogan shall remove any contaminated soils from the site, in order to remove the risk for any ongoing contamination from such land. Following the removal of any waste material and soil containing heavy end hydrocarbons from the site, validation sampling of the underlying soils shall be completed, to determine the land can be suitably reinstated for rural residential or recreation end use, upon the completion of quarrying.

- 49)66) An unexpected discovery protocol shall be prepared to address the potential for uncovering of contaminated soil/materials during earthworks and extraction, and shall be applicable to the whole development.

- 50)67) In the event that soils are unexpectedly found that have visible staining, odours and/or other conditions that indicate soil contamination then work must cease and all workers shall vacate the immediate area, notify the site manager and ensure that the local authorities are informed (via Selwyn District Council and the Environment Canterbury pollution hotline on 0800 76 55 88). No excavation of such soil shall occur without advice from a Suitably Qualified and Experienced Practitioner (SQEP) on land contamination and the agreement of the local authorities.

Rehabilitation

- 51)68) At least one month prior to the commencement of any activities authorised by this resource consent, the consent holder shall submit a Quarry Rehabilitation Plan (QRP) via email to the Team Leader - Compliance Environmental Services, Selwyn District Council for technical review and certification (or their nominee).

52)69) The QRP shall be based on the draft QRP submitted to the Selwyn District Council in November 2018 and developed in accordance with Rule 17.8.3.14 of the Christchurch District Plan (as at 5 March 2019).

53)70) If the Selwyn District Council confirms receipt of the QRP but then fails to provide any further response to the consent holder within a period of two months then the QRP shall be deemed to be certified.

Commented [AH12]: Given the likely complexity, one month is a short time frame.

54)71) Rehabilitation of the site shall be undertaken in accordance with the certified QRP and implemented at the completion of each stage of extraction.

55)72) Rehabilitation work shall only be undertaken during the relevant consented hours.

56)73) The QRP shall be reviewed annually by an expert nominated by Council and all fees associated with a review shall be paid for by the Consent holder. A scheduled review of the QRP shall consider the following matters, in terms of suitability of existing content and any requirement for new information:

- a) Outlining rehabilitation activities undertaken during the reporting period.
- b) Areas of the site to be quarried (extraction) over the next 12 months.
- c) Plans for earthworks, including overburden stripping and disposal, over the next 12 months.
- d) Areas of vegetation removed and areas planted during the reporting period.

57)74) An unscheduled update (out of annual review timeframe) of the QRP shall be triggered, should any of the following circumstances occur:

- a) When there is a fundamental shift in operational activities (e.g. unscheduled move to a new area).
- b) Following significant environmental incidents (e.g. flooding on the site, causing damage to assets).

58)75) The final internal slopes of the quarry should be formed to provide an irregular form to the edge of the quarry but at gradients which allow for the placement of topsoil and grass growth. The slope gradient should vary between 1 in 3 and 1 in 6 with an irregular form to negate a linear, uniform appearance of the slopes and to create a more natural appearance.

59)76) Following completion of quarrying and cleanfilling in a sub-stage, a minimum 300 mm topsoil layer shall be applied over the finished surface level and sown with a suitable grass species or Team Leader - Compliance Environmental Services, Selwyn District Council planted with another suitable vegetation.

60)77) Re-grassing or otherwise vegetating final top soil layers within each rehabilitated sub-stage shall occur within 60 days, to minimise dust generation and erosion losses. If this work is required outside of spring or autumn, the area can be suitably mulched or covered with another form of material to suppress dust from the area until it is appropriate to re sow grass. Irrigation of grass-seeded areas shall be undertaken as required to ensure establishment.

61)78) All finished surfaces to be designed and constructed to be free draining.

Management Plans

62)79) A number of management plans are proposed for the quarry to ensure that the conditions of this consent are complied with. The management plans are intended to describe how conditions will be met and address how potential adverse effects are to be monitored and managed. The management plans may change and evolve over time in order to remain responsive to current operations and environmental conditions. The site shall operate in accordance with the following management plans:

- a. Rehabilitation Management Plan (Appendix G of the AEE).
- b. Dust Management Plan (Appendix D of the AEE).
- c. Cleanfill Management Plan (Appendix F of the AEE).

d. Spill Management Plan.

d.e. [Transportation Management and Routing Plan](#)

In the event of an inconsistency between the management plans and a condition of this consent, these conditions shall prevail.

63)80) The consent holder shall establish a Community Liaison Group (CLG) in accordance with the following requirements:

- a. The purpose of the CLG shall include, but not be limited to, the following:
 - i. To engage on an on-going and regular basis about matters associated with the operation of the quarry where those matters affect the community and are of mutual interest to the representative parties.
 - ii. to promote the free flow of information between the local community and the consent holder so as to, wherever possible, address any issues that may arise; and
 - iii. to discuss the results of monitoring and any matters that may arise as a result of the monitoring.
- b. The CLG shall initially comprise up to two representatives of the consent holder and the consent holder shall invite one representative of the Selwyn District Council, one representative of the Canterbury Regional Council, one representative of the Templeton Residents Association (TRA), one representative of the Weedon's Residents Association (WRA), the New Zealand Motor Caravan Association Incorporated and representatives of the relevant *Kaitiaki Runanga*.

Advice note: This condition only governs initial membership for the purposes of convening the first meeting of the CLG. On-going membership will be determined by the CLG.

- c. The consent holder shall ensure that members of the CLG are provided with the opportunity and facilities to meet:
 - i. At least 30 working days prior to the start of any construction activities on the site;
 - ii. Not less frequently than quarterly during the first year of the quarry being established, and biannually thereafter, unless all members of the CLG agree there is no need for a meeting;

Commented [AH13]: Establishment of the Group should be a requirement given the longevity of the consent.

Commented [AH14]: I consider the should condition also state that the Consent holder is responsible for costs of the CLG, and that in terms of Council representation, should be expanded to also include Compliance and Monitoring personnel.

- d. If the consent holder, in progressing any element of the quarry, wishes to call a meeting of the CLG to obtain community input, the meeting regime may be shifted to accommodate such a request.
- e. Proposed meetings shall be notified to members of the CLG and to any members of the local community whose contact details have been provided to the consent holder.
- f. Minutes of the CLG meetings shall be made publicly available.

Advice note: In the event that it is not possible to establish a CLG or convene meetings through lack of interest or participation from the local community, then such failure to do so shall not be deemed a breach of these conditions. Should the local community wish to re-establish meetings after a period of inactivity then the conditions above continue to apply.

Accidental Discovery Protocol

64)81) Immediately following the discovery of material suspected to be a taonga, kōiwi or Māori archaeological site, the following steps shall be taken:

- a. All work in the vicinity of the discovery will cease and the Council advised.
- b. Immediate steps will be taken to secure the site to ensure the archaeological material is not further disturbed.
 - i. Notify the Kaitiaki Rūnanga and the Area Archaeologist [Heritage New Zealand](#) (. In the case of kōiwi (human remains), the New Zealand Police must be notified. The Kaitiaki Rūnanga and [HNZPT](#) will jointly appoint / advise a qualified archaeologist who will confirm the nature of the accidentally discovered material. If the material is confirmed as being archaeological, the consent holder will ensure that an archaeological assessment is carried out by a qualified archaeologist, and if appropriate, an archaeological authority is obtained from [HNZPT](#) before work resumes (as per the [Heritage New Zealand Pouhere Taonga Act 2014](#)).
 - ii. The consent holder will also consult the Kaitiaki Rūnanga on any matters of tikanga (protocol) that are required in relation to the discovery and prior to the commencement of any investigation.
 - iii. If kōiwi (human remains) are uncovered, in addition to the steps above, the area must be treated with utmost discretion and respect, and the kōiwi dealt with according to both law and tikanga, as guided by the Kaitiaki Rūnanga.
 - iv. Works in the site area shall not recommence until authorised by the Kaitiaki Rūnanga, the [HNZPT](#) (and the NZ Police in the case of kōiwi) and any other authority with statutory responsibility, to ensure that all statutory and cultural requirements have been met. The Council shall be advised of the outcomes prior to the recommencement of work, and copies of all relevant approvals shall be provided to the Council for the consent file.
 - v. All parties will work towards work recommencing in the shortest possible time frame while ensuring that any archaeological sites discovered are protected until as much information as practicable is gained and a decision regarding their appropriate management is made, including obtaining an archaeological authority under the [Heritage New Zealand Pouhere Taonga Act 2014](#) if necessary.

Appropriate management may include recording or removal of archaeological material.

- vi. Although bound to uphold the requirements of the Protected Objects Act 1975, the contractor / works supervisor / owner recognises the relationship between Ngāi Tahu whānui, including its Kaitiaki Rūnanga, and any taonga (Māori artefacts) that may be discovered.

Reporting and Review

65)82) The consent holder shall maintain a complaints register

. The Complaints Register shall include details of when a complaint was received, the steps taken by the consent holder, and any steps taken to address the issue raised. The complaints register shall be provided to the Team Leader, Compliance, Selwyn District Council (compliance@selwyn.govt.nz) annually, and otherwise shall be available on request.

Field Code Changed

66)83) Records of all staff training shall be retained on site and provided to the Council immediately on request.

84) The Selwyn District Council may, during the month of xx each year, review any or all of the conditions of the consent pursuant to section 128 of the Resource Management Act 1991 for al or any of the following purposes:

- a. To deal with any adverse effect on the environment which may arise from the exercise of the consent that was not foreseen at the time of granting of the consent, and which is therefore more appropriate to deal with at a later stage; and / or
- b. To require the consent holder to adopt the best practical option to remove, remediate or reduce and adverse effects on the environment resulting from the activity; and/or to review the noise limits and traffic effects; and/or
- c. To review the methodology of the operation should noise, dust and nuisance effects become an issue; and/or
- d. To require consistency with any relevant Regional Plan, District Plan, National Environmental Standard, Water Conservation Order or Act of Parliament.

~~—once per year, on any of the last five working days of May or November, serve notice of its intention to review the conditions to address any adverse effect on the environment which may arise from the exercise of this consent.~~

Advice Notes to the Consent Holder

Lapse Period

- a) Pursuant to section 125 of the Resource Management Act 1991, if not given effect to, this resource consent shall lapse five years after the date of this decision unless a longer period is specified by the Council upon application under section 125 of the Act.

Monitoring

- b) In accordance with section 36 of the Resource Management Act 1991, the Council's specialised monitoring fee will be been charged.
- c) If the conditions of this consent require any reports or information to be submitted to the Council, additional monitoring fees for the review and certification of reports or information will be charged on a time and cost basis. This may include consultant fees if the Council does not employ staff with the expertise to review the reports or information.

- d) Where the conditions of this consent require any reports or information to be submitted to the Council, please forward to the Council's Compliance and Monitoring Team, compliance@selwyn.govt.nz
- e) Any resource consent that requires additional monitoring due to non-compliance with the conditions of the resource consent will be charged additional monitoring fees on a time and cost basis.

Field Code Changed

Vehicle Crossings

- f) Any new or upgraded vehicle crossing requires a vehicle crossing application from Council's Assets Department prior to installation. For any questions regarding this process please contact transportation@selwyn.govt.nz. You can use the following link for a vehicle crossing information pack and to apply online: <http://www.selwyn.govt.nz/services/roading/application-to-form-a-vehicle-crossing-entranceway>

Field Code Changed

Building Act

- g) This consent is not an authority to build or to change the use of a building under the Building Act. Building consent will be required before construction begins or the use of the building changes.

Regional Consents

- h) This activity may require resource consent from Environment Canterbury. It is the consent holder's responsibility to ensure that all necessary resource consents are obtained prior to the commencement of the activity.

Impact on Council Assets

- i) Any damage to fixtures or features within the Council road reserve that is caused as a result of construction or demolition on the site shall be repaired or reinstated and the expense of the consent holder.

Property Access

- j) [Access by the Council's Officers or its agents to the property is reserved pursuant to Section 332 of the Resource management Act 1991.](#)

Attachment 2: Economic Assessment



Memo

To: Andrew Henderson, Jesse Burgess
From: Rodney Yeoman, Associate Director
Date: 28 June 2019
Re: Selwyn District Council – Roydon Quarry – s42 Review (Economics)

Introduction

The purpose of this memo is to review the evidence/research base that relates to economic matters associated with the proposed Roydon Quarry (“RQ”) for the Proposed Selwyn District Plan (“PSDP”).

Background

Fulton Hogan Limited (FH) proposes to establish a gravel quarry at a site within a block of land bound by Curraghs Road, Dawsons Road, Maddisons Road, and Jones Road, which is within Selwyn District (see map in appendix). The site is located on the eastern edge of Selwyn, approximately 700m to the west of the township of Templeton and adjacent to State highway 1, Main South Line and within the airport air noise contour (55dba).

The proposed quarry will involve extraction of aggregate material to a depth of approximately 10 metres below ground level and rehabilitation of the site with cleanfill, overburden and topsoil material. From extraction areas, aggregate material will be transferred by field conveyors and dump trucks to on-site processing plant, which will involve crushing, screening and washing of aggregates. Other activities that will occur on site include stockpiling of aggregates, wash water ponds, workshops, staff amenity blocks and offices, along with management of adverse effects such as bunding and screen planting, as well as dust mitigation.

FH estimates that around 15 million cubic metres (equates to around 30 million tonnes) of aggregate is available to be produced from the quarry, with production averaging around 700,000-1,000,000 tonnes per annum over an estimated 30 to 40 year life for the quarry. FH is seeking consents from both the Canterbury Regional Council and the Selwyn District Council (SDC) for the establishment and operation of the quarry.

SDC has commissioned Market Economics (M.E) to review the economic evidence that has been provided in support of RQ. M.E has provided economic assessments of many quarries in New Zealand, so has specific specialist knowledge of the industry and the associated RMA process that relate to quarries.



Scope

The key purpose of this memo is to provide a peer review of the economic evidence presented by FH. This memo is provided to support SDC council officers in the drafting of s42 report. The memo considers the costs and benefits that accrue to Selwyn District which are associated with the proposed development of RQ, as compared to the status quo. The following steps have been undertaken in this assessment,

- Review of FH commissioned economic assessment¹,
- Selwyn District assessment, and
- Conclusions.

M.E was not commissioned to undertake an independent economic assessment of the RQ.

FH Economic Assessment of RQ

The economic assessment was conducted by Copeland & Co, who provide a report that covers seven sections, a policy discussion (Economics and the RMA), aggregates supply/demand (Market Assessment), role of aggregates in the wider economy (Role of Aggregates), role of aggregates in the local economy (Aggregates in Greater Christchurch), economic benefits of the proposal (Economic Benefits of RQ), economic costs of proposal (Economic Costs of RQ) and conclusion on the merits of the proposal (Merits of RQ).

The following discussion outlines the key points in each section, provides a short discussion on points. Finally, we provide a judgement as to whether we believe that the assessment provided by Copeland & Co is robust.

ECONOMICS AND THE RMA

The discussion in this section mostly focuses on the concepts of “well-being” (which includes a range of values²) for “communities” in the purpose of the RMA³ and “efficiency” which is noted several times in other matters of the RMA⁴. The assessment considers that the correct ‘viewpoint’ of an economic assessment within the RMA should be regional and territorial⁵, i.e. these are the communities that should be included⁶. The report considers that the focus of the assessment is on “externalities”, which are defined as “side effects” that accrue to “third parties”.

¹ Copeland & Co (2018) Assessment of Economic Effects of Proposed Roydon Quarry Development.

² RMA s5(2) “social, economic, and cultural well-being”

³ Copeland & Co (2018), paragraph [7] to [10]

⁴ Copeland & Co (2018), paragraph [11] to [12]

⁵ In this case Selwyn District Council and Christchurch City Council.

⁶ Copeland & Co (2018), paragraph [13] to [16]



The discussion in the report is uncontroversial, we agree that the RMA's purpose is well aligned with core theories of Welfare Economics and that efficiency in the RMA has been interpreted using concepts of economic efficiency. Also, that the assessment should focus on communities in both the region and territorial areas, as is required in the RMA. We agree that the core issue in this case will be externalities, the scale of any "side effects" are an important consideration which must be assessed to ensure that efficient outcomes are achieved.

The report then makes a controversial distinction between "economic effects" and "non-economic effects".⁷ In summary, they define economic effects narrowly as market transactions. The Copeland & Co report only addresses these 'economic effects' and ignores any 'non-economic effects' as defined by them.

While the report accepts that these effects can be considered as part of an assessment of economic wellbeing and efficiency effects (as is standard in Welfare Economics), they consider that is better not to attempt it as it may result in double-counting.

We disagree, importantly the Environment Court considers that an economist should and can assess externalities in the RMA context. The findings by Judge Jackson on PC13 in the Mackenzie District considered economic valuation of externalities "would be useful if made".⁸ In this case Mr Copeland made the same claim that externalities "*should be left to appropriately qualified experts and not considered within an economic assessment framework*", the court disagree.

MARKET ASSESSMENT

The discussion in this section of the report mostly focuses on a market assessment by another expert in 2015 (Mr English) before the Christchurch City replacement District Plan hearings. Mr English's assessment showed that demand for aggregate may exceed supply in the coming few decades. He estimated a demand of approximately 7 million tonnes per annum and a supply of 140 million tonnes, which indicates that supply of aggregates could run out by 2035.⁹

The FH economic assessment notes that there are two new quarries in the area, at Conservators Road. The report notes that neither of these quarries have washing facilities.¹⁰


It is beyond the scope of this memo to provide an independent market assessment. However, we consider that while the market assessment presented by FH may be outdated, it is sufficient to conclude that there will be a shortage of supply in the long term, assuming no new quarries are developed. We conclude that it would have been useful if the FH economic assessment had updated

⁷ Copeland & Co (2018), paragraph [17] to [19].

⁸ Federated farmers of New Zealand Inc (Mackenzie Branch) v Mackenzie District Council [2017] NZEnvC 53. [471]

⁹ Copeland & Co (2018), paragraph [20] to [23].

¹⁰ Copeland & Co (2018), paragraph [24].



the demand forecasts and provided an estimate of the implications of the additional supply at the two new quarries. But it is likely that an updated assessment would produce a similarly conclusion.

ROLE OF AGGREGATES

This section of the FH economic assessment provides a generic discussion of the uses of aggregate in the national economy.¹¹ We find no issues with this section.

AGGREGATES IN GREATER CHRISTCHURCH

This section provides a discussion of the relative costs of aggregate in Christchurch compared to Auckland and Wellington¹². The report contends that lower distances between quarries and users is estimated to reduce costs of aggregate in GCP. The cost in the GCP area is estimated to be \$25 per tonne, compared to \$50 per tonne in Auckland. Based on a demand of 6.7 million tonnes per annum, the total cost savings was estimated to be \$168 million per annum.

There are a few issues with the numbers used in this assessment but it may not make a difference to the conclusions. In Auckland (based on our working with a range of quarries) the value of aggregate product is around \$16.23/tonne. Transport costs make up the rest. On average transport costs sit between \$0.34/km/tonne and \$0.40/km/tonne – also, on average the rock travels 30km from the Hunua Ranges (where the major quarries are located) to market. This puts the market price at around \$26.73/tonne - \$28.50/tonne. Either this undermines the argument that Christchurch is more competitive, or highlights that the actual cost of aggregate extraction is higher in Canterbury than Auckland (assuming the average distance the rock travels is significantly less as the Copeland report indicates), or that the numbers used in this review are incorrect.

It does call into question the reports claim that Christchurch relies on this comparative advantage to keep costs down for “...local residents, businesses and in particular the Christchurch City Council and Selwyn District Council and their ratepayers.” Also it is not clear that a comparative advantage or lack of one generates additional costs that causes a fixed budget government department to delay the provision of new infrastructure. The provision of new infrastructure will be costed based on needs and the costs at the location it will be installed. Local costs are integral to those calculations, but the comparison between Christchurch and Auckland or Wellington are simply not relevant.

ECONOMIC BENEFITS OF RQ

The assessment then discusses and, in some cases, estimates the benefits of the RQ proposal, which includes reduced transport costs, economic efficiency, reduced aggregate prices and employment. We agree that no other benefits should have been considered.

¹¹ Copeland & Co (2018), paragraph [26] to [31].

¹² Copeland & Co (2018), paragraph [32] to [35].



Transport cost (savings)

First, the economic assessment considers that RQ will result transport cost savings. However, the report makes no attempt to estimate the savings associated with RQ. The report merely provides a discussion of Mr English's 2015 assessment of the market, which is provided as an example of the potential costs savings.¹³ The economic assessment also notes externalities associated with the reduced trucking, which includes CO², road accidents and congestion.¹⁴

We consider that it would be useful to present the saving in terms of annual, which would be less than \$5 million per annum.¹⁵ In addition, as noted above, we think there may be an issue with either the transport cost estimates or the production costs of aggregate relied on in the report.

Also as noted in the FH Market Assessment, there is still supply of aggregate in the Greater Christchurch area for the coming decades. This means that in the short-medium term there may be very little transport cost savings as there are other alternatives in close proximity. We consider that most of the savings will only occur in the long term (after 2035).

We agree with the assessment that externalities of transport are important. It is standard in transport economic assessments to measure these values and NZTA maintains the Economic Evaluation Manual that provides official methods for assessing these externalities (CO², Cost of accidents, Value of Life etc.).¹⁶ It would not be that difficult to apply these methods to establish the potential benefits of RQ transport savings. While this is an obvious gap in the FH Economic Assessment, we consider that it is not material to the findings – i.e. including this assessment would quantify additional benefits from the RQ proposal.

We conclude that while the transport savings estimates in the FH Economic Assessment are probably overstated, we agree that there would be positive benefits when compared to the alternatives which are reported as being more distant from market.

Other Economic Efficiency

Second, the FH Economic Assessment considers that RQ operation in of itself, will be efficient. This section provides a discussion of the efficiency of RQ, which includes wide range/quality of the resource, close to major transport infrastructure, economies of scale, ability to use mining plant for multiple uses and staging will limit the time land is not used for farming. It is acknowledged that these benefits flow to FH.¹⁷ There is no attempt in the FH Economic Assessment to estimate or quantify the

¹³ Copeland & Co (2018), paragraph [36] to [37].

¹⁴ Copeland & Co (2018), paragraph [38].

¹⁵ Based on Mr Smiths price of aggregate of \$25, a high cost saving of 20% and high output of 1 million tonnes at RQ.

¹⁶ New Zealand Transport Agency (2018) Economic Evaluation Manual.

¹⁷ Copeland & Co (2018), paragraph [39] to [41].



operational benefits. In addition, we hold that there may still be issues with the cost of production values relied upon in the report.

There is no evidence for or against the claims of efficiency. We consider that this lack of evidence is not crucial to the FH Economic Assessment, other than reducing the foundation of the claims of efficiency.

Reduced Aggregate Prices

Third, the FH Economic Assessment considers that there will be limited scope for the price of aggregate to change, as existing supply and competition will mean that market prices will not change regardless of whether RQ is developed or not. However, with time the prices are expected to rise towards the highest cost source and that RQ development would delay price rises in the future.¹⁸ Again, there is no attempt in the FH Economic Assessment to estimate or quantify the timing or value of the price benefits.

We agree that the price benefits of the RQ proposal will be minimal in the coming two decades, current supply of aggregates will be sufficient to ensure that prices are more or less the same with or without the RQ. In the long term (30 years or more) there may be some benefits from RQ proposal impacting the price of aggregates.

Employment and Income

Finally, the FH Economic Assessment notes that RQ would create employment (10-12), income (\$0.5-\$0.7 million per annum) and expenditure (\$9.5 million per annum) in the local Selwyn economy.¹⁹ It is acknowledge that these values are not conditional on RQ proposal, as they would occur somewhere else in the Greater Christchurch anyway.

We agree, while these values are a benefit from the Selwyn District perspective, they are not 'new' at the regional level. We note the wages and expenditure compared to the annual production suggests a cost of \$15 per tonne, other costs such as transport (\$4.5 per tonne²⁰), depreciation on plant, overheads, and profit margin (\$3 per tonne²¹) may take the cost per tonne up to a point close to the current price of aggregate (\$25). This result seems to call into question the claims that RQ will be more efficient than other existing quarries.

¹⁸ Copeland & Co (2018), paragraph [42] to [44].

¹⁹ Copeland & Co (2018), paragraph [45].

²⁰ Assuming \$0.30/km/tonne.

²¹ StatsNZ (2018) Business Performance Benchmark. The Gravel and Sand Quarrying industry had a profit margin of 12% in 2018.



ECONOMIC COSTS OF RQ

FH Economic Assessment discusses the costs of the RQ proposal, which includes alternative land use, public infrastructure costs and local road congestion.

We consider that the obvious externalities of noise and dust should have been at least discussed in the list of costs. These are likely to be key issue associated with the consent hearing.

Alternative land use

The RQ proposal covers 170 hectares of land which is currently used for pastoral farming, with four existing dwellings.²² The land will be quarried in multiple stages, of 40 hectares each, with land restored to pastoral farming after each stage. The report suggests that the lost farming production from the site is not a cost because it is internalised to FH, who has accounted for this loss in their decision to purchase and develop RQ.

While we do not agree with rational outlined in the FH Economic Assessment, we agree that this cost is likely to be insignificant. First, the area of land taken out of rural production is relatively small as such would only produce limited value – i.e. approx. \$0.1 million per annum.²³ Second, it is likely that if RQ quarry is not consented then an alternative site will be used instead. There will be lost rural production on this alternative site. So the lost rural production would be the marginal difference between the RQ and the alternative site, which is likely to be minimal. Therefore, we consider that this cost will be very small, such that we come to the same conclusion as the FH Economic Assessment.

Public Infrastructure Costs

The FH Economic Assessment considers there are no infrastructure costs associated with the RQ proposal.²⁴ We have no information on this cost, therefore we are unable to confirm whether this assumption is correct or not.

Local Road congestion

The FH Economic Assessment considers there are no congestion costs associated with the RQ proposal.²⁵ This conclusion is based on the traffic assessment by Stantec, which found that the extra traffic from the quarry can be accommodated via additional investments in the some of the local roads.

²² Copeland & Co (2018), paragraph [46] to [47].

²³ Even if we assume the land is used for dairy farming, which has an operating profit of \$3,186 per ha (DairyNZ – Benchmarks).

²⁴ Copeland & Co (2018), paragraph [48].

²⁵ Copeland & Co (2018), paragraph [49].



We agree that the location of the quarry (adjacent to State Highway 1 and low volume local roads) and the upgrades by FH, means that there is likely to be limited congestion costs.

MERITS OF RQ

The FH Economic Assessment provides a number of findings, which restate the results from the previous section.²⁶ In summary, RQ is consistent with community economic wellbeing and efficient use of resources. Also the RQ will not result in economic externality costs.

While we agree with most of the conclusions, however we consider that the lack of quantitative evidence on the benefits or costs undermines the findings. This is compounded by assumptions about transport and/or production costs that do not equate with our understanding of the market.

Also that there are no findings on the net position for the Selwyn Community.

We consider that FH economist had sufficient information to produce an estimate of the value of the benefits and costs. For example, the official government transport Economic Evaluation Manual (EEM) could have been easily used to assess the value of the externality benefits associated with CO² reductions. Similarly, the EEM includes official methods for calculating the value of the externality costs of noise.

Also, we do not agree with the conclusions of FH economist with regard to externality costs. Oddly, the FH economist is willing to accept that there are positive externality benefits (CO², road accidents etc. at para [38]) and some negative externality costs (congestion at para [49]). However, the report rejects other negative externality costs as being “non-economic”. This contradictory outcome is based on the erroneous belief that (some) non-market costs should not be considered by economists. This is a narrow view of economics, which has been clearly rejected by the Environment Court. We also consider that official government economic evaluation methods show that these externalities are commonly considered by economists when assessing transport (NZTA – EEM) and other policy (Treasury – policy assessment Guidelines). We see no rational for not apply the same approach to local government policy.

Selwyn District Assessment

The scope of this memo was to peer-review FH Economic Assessment. While it was beyond the scope of this memo to undertake an independent economic assessment, we provide the following discussion of the potential economic value of the benefits and costs of the RQ proposal to the Selwyn District community.

²⁶ Copeland & Co (2018), paragraph [50] to [57].

The following table draws on FH Economic Assessment and some new assumptions to provide an indicative quantification of the benefits and costs. Table 1.1. shows that the RQ may produce a positive net position (+0.5 million per annum) for Selwyn District community.

Table 1.1: RQ proposal Selwyn District Benefits and Costs, per annum

Economic Assessment	Type	Selwyn District	Notes
Economic Benefits			
Aggregate Transport costs	market	≈ 0	According the FH economist, there is sufficient supply of aggregate in SDC. RQ will supply CCC. Therefore, minimal change in transport costs and externalities in the district.
Transport CO ²	externality	≈ 0	
Transport accident	externality	≈ 0	
FH operation efficiency	market	≈ 0	No data.
Reduce Aggregate Price	market	≈ 0	No impact in the medium term, maybe positive in the long term 30 years.
Employment/Income	market	\$0.7m / 12 jobs	Assuming that alternative to RQ is located in another district.
Economic Costs			
Lost Rural Production	market	Less than \$0.1m	Assuming that alternative to RQ is located in another district.
Public Infrastructure	externality	≈ 0	No data.
Road congestion	externality	≈ 0	Upgrades to local roads will accommodate vehicle activity.
Noise	externality	Less than \$0.1m	Small number of households in the area. Currently noisy, CIAL noise contour, State highway and Railway.
Dust	externality	≈ 0	Small number of households in the area and consent conditions to minimise dust.
Biophysical	externality	≈ 0	Consent conditions require site rehabilitated and existing site is already intensively farmed.
Net Position		+ ≈ 0.5m	For the District community the benefits outweigh the costs.

This results in the table are based on the following,


Benefits

- **Aggregate Transport costs, CO² and accident:** the FH Economic Assessment shows that there is currently sufficient supply of aggregate in SDC for the long term. FH considers that the purpose of RQ “provide supply to southwest Christchurch where there is the shortage of material.” Therefore, this means that RQ will result in minimal positive change in transport costs and externalities in the district. The table above shows this as ‘≈ 0’ – i.e. near zero.
- **FH operation efficiency:** there is insufficient evidence in the FH Economic Assessment to establish whether the RQ will be more or less efficient than other operations. However, most of the efficiency benefit will be minimal at best, as much of this value will flow to people who live outside of Selwyn – i.e. FH owners (who largely live outside the District) or the clients that buy aggregate from RQ (users in southwest Christchurch). The table above shows this as ‘≈ 0’ – i.e. near zero.
- **Reduce Aggregate Price:** as noted in FH Economic Assessment there is no immediate supply issue. There are existing quarries that can provide aggregate in the medium term. Therefore, RQ operation is unlikely to affect the price of aggregate in the coming decades. The table above shows this as ‘≈ 0’ – i.e. near zero.

- **Employment/Income:** the FH Economic Assessment estimates that the RQ could generate a maximum of 12 jobs and income of \$0.7 million per annum. It is noted that these jobs and income would occur regardless of the RQ proposal, as FH would develop a quarry at a different location in Greater Christchurch. However, the application document provides an assessment of alternative quarry locations in the Greater Christchurch area (Map – Analysis of Potential Quarry Sites), which indicates that most alternative options within 20km of the city are located Waimakariri District or Christchurch City. There are a few alternative options in the Selwyn, however most are in the Port Hills which are highly sensitive area. Based on the available locations it is reasonable to assume that the alternative location would be outside of the District. Therefore, the employment and income are assumed to be a net benefit to Selwyn District. The table above shows this as '\$0.7m/12 jobs'.

Costs

- **Lost Rural Production:** the lost rural production is assumed to occur on 40 ha of land at any point of time (i.e. one stage) and that the land could have been used for dairy farming. This would result in lost production of less than \$0.1 million per annum. As noted above it is assumed that a new quarry would be located outside the district, so this lost production is a net loss to the Selwyn community. The table above shows this as 'Less than \$0.1m'.
- **Public Infrastructure:** there is insufficient evidence in the FH Economic Assessment to establish whether the RQ will be more or less efficient for public infrastructure. The table above shows this as ' ≈ 0 ' – i.e. near zero.
- **Road congestion:** the upgrades to the network will mean that there is no congestion externalities. The table above shows this as ' ≈ 0 ' – i.e. near zero.
- **Noise:** there are a small number of households living near the RQ site. According to FH application there are 9 dwellings within 250 metres and a further 15 dwellings within 500 metres (map of Sensitive Nearby Receptors). Most of the dwellings (18) are south of the RQ site, located near the State highway, railway and within CIAL noise contours. The existing environment is relatively noise compared to normal rural areas. There are 6 dwellings located north of the RQ site, in relatively quiet location. Also, the staging of the quarry indicates that the Northern half of the quarry won't be used for some decades (map of Indicative Staging Plan). These issues combined suggest that the externality costs of noise are likely to be small. For example, the EEM can be used to produce an indicative estimate of the cost. The EEM considers that for every additional 1 dBA of noise that a household receives there is a externality cost of -\$350. Even applying a large increase of noise of 10 dBA would result in a cost of less than \$0.1 million. We note that the modelling in the FH



Acoustic Assessment indicates that noise impacts may be much lower.²⁷ The table above shows this as 'Less than \$0.1m'.

- **Dust:** again there are a small number of households in the district that will be effected by dust from the RQ proposal. The applicant has put in place methods to reduce the dust, such that the externality costs.²⁸ The table above shows this as ' ≈ 0 ' – i.e. near zero.
- **Biophysical:** the site is currently being utilised intensively for rural production, such that the ecological value of the area has already been greatly modified. Also, the consent conditions require FH to rehabilitate the site after each stage. This limits the potential externality costs of the RQ proposal.²⁹ The table above shows this as ' ≈ 0 ' – i.e. near zero.

Net Position: in summary the table shows that the RQ may produce a positive net position (+0.5 million per annum) for Selwyn District community.

Conclusions

We consider that while we disagree with some of the methods applied and the ratios relied upon, in the FH Economic Assessment, the findings are not likely to be sensitive to these issues. That is, the net position from an economic perspective is likely to be positive.

We provide an assessment for Selwyn District, which shows that the RQ is likely to be positive for Selwyn community. From an RMA perspective the proposal would result in a net positive position.

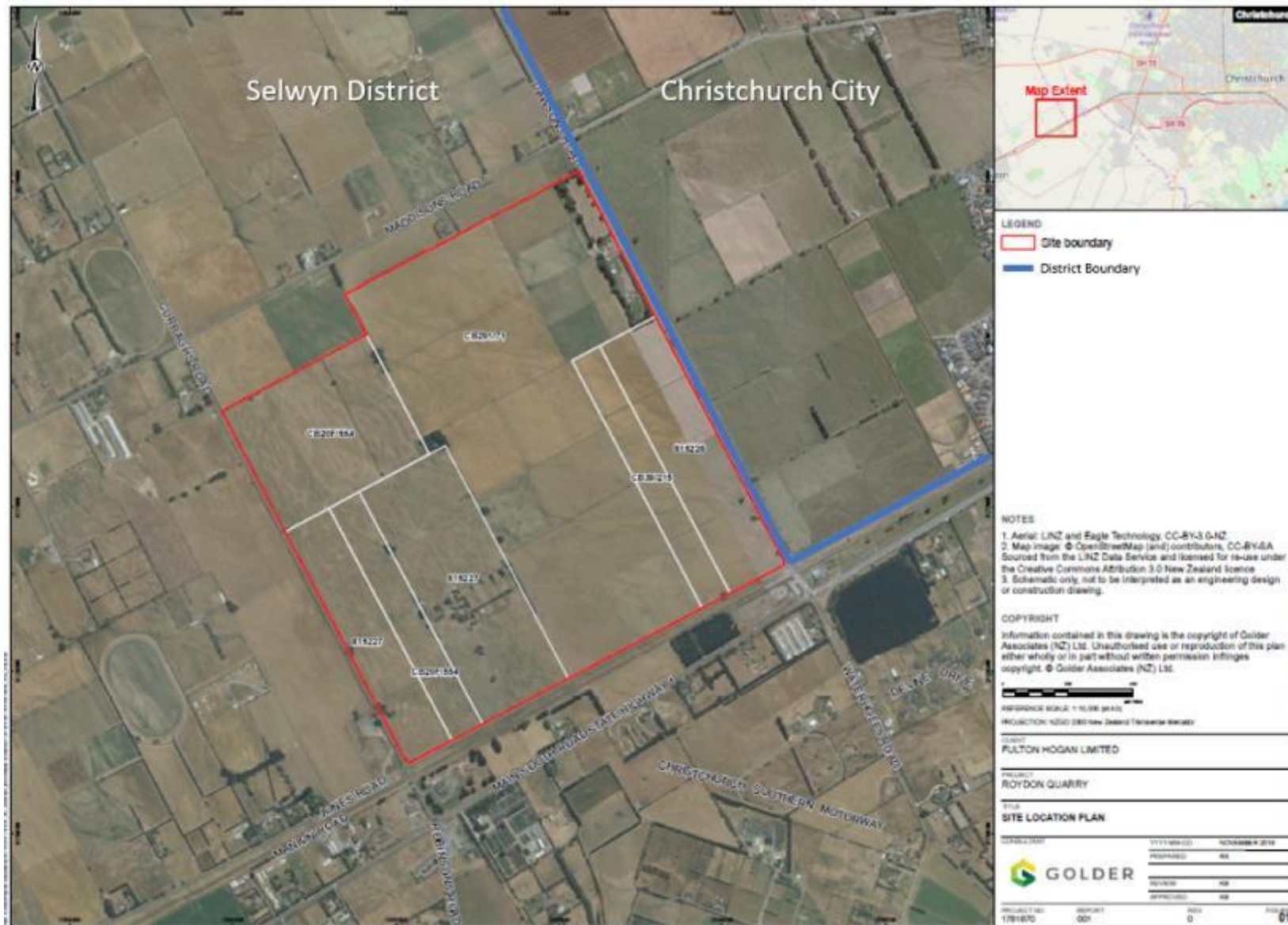
If required M.E can undertake an independent economic assessment to confirm the findings of this memo.

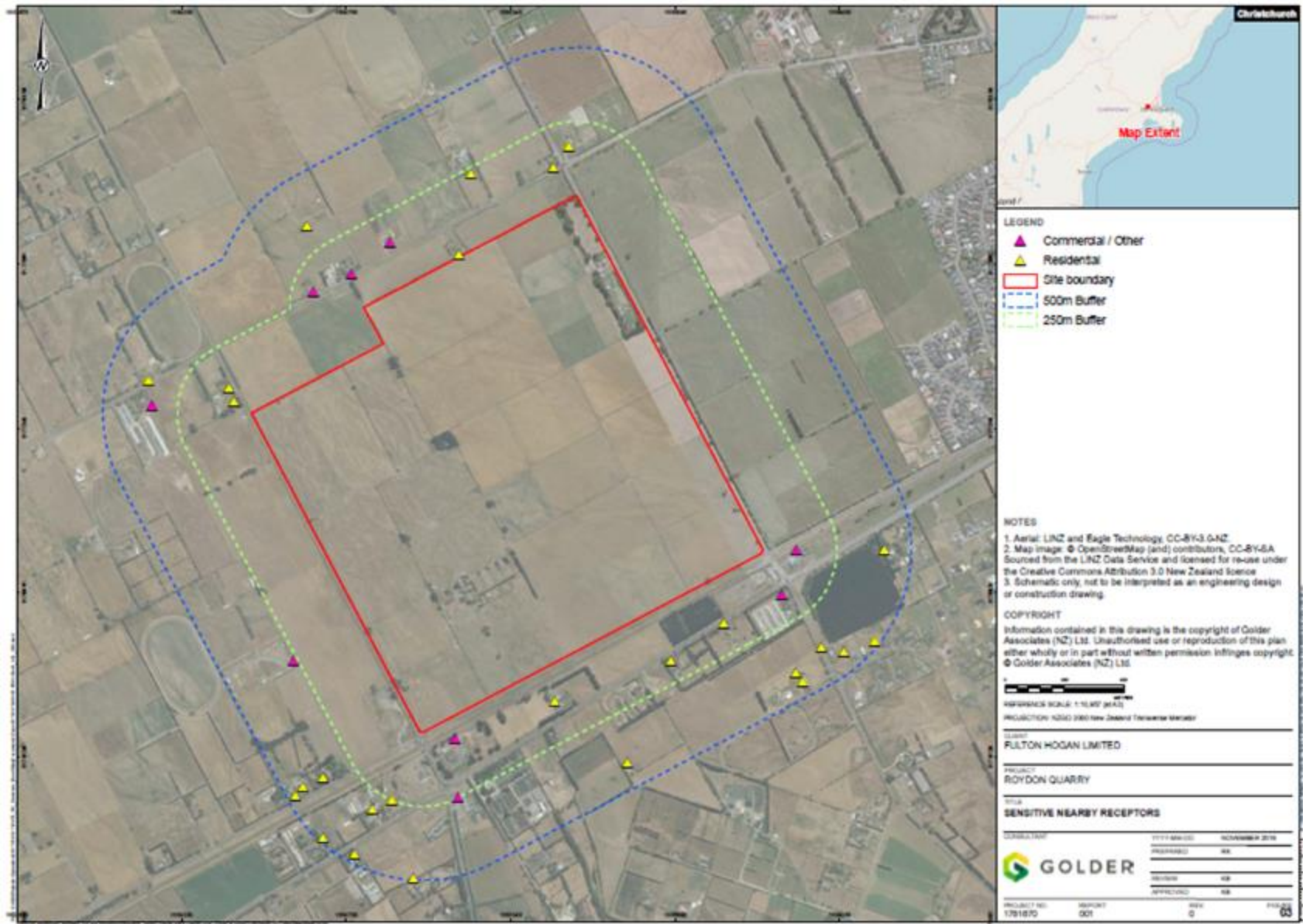
Rodney Yeoman, Associate Director, [mob 021 118 8002](tel:0211188002)

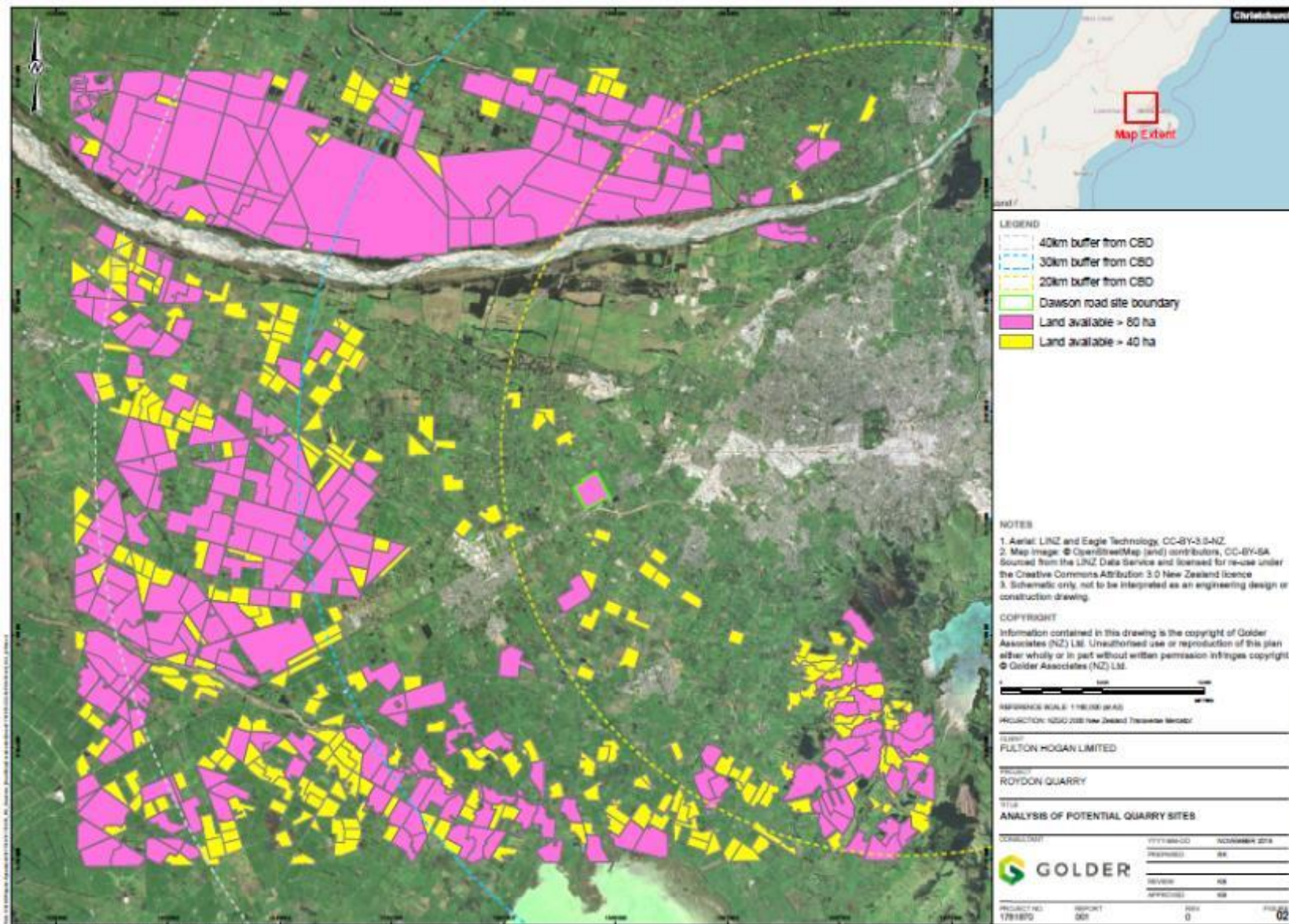
²⁷ Marshall Day (2018) Fulton Hogan Roydon Quarry Environmental Noise Assessment.

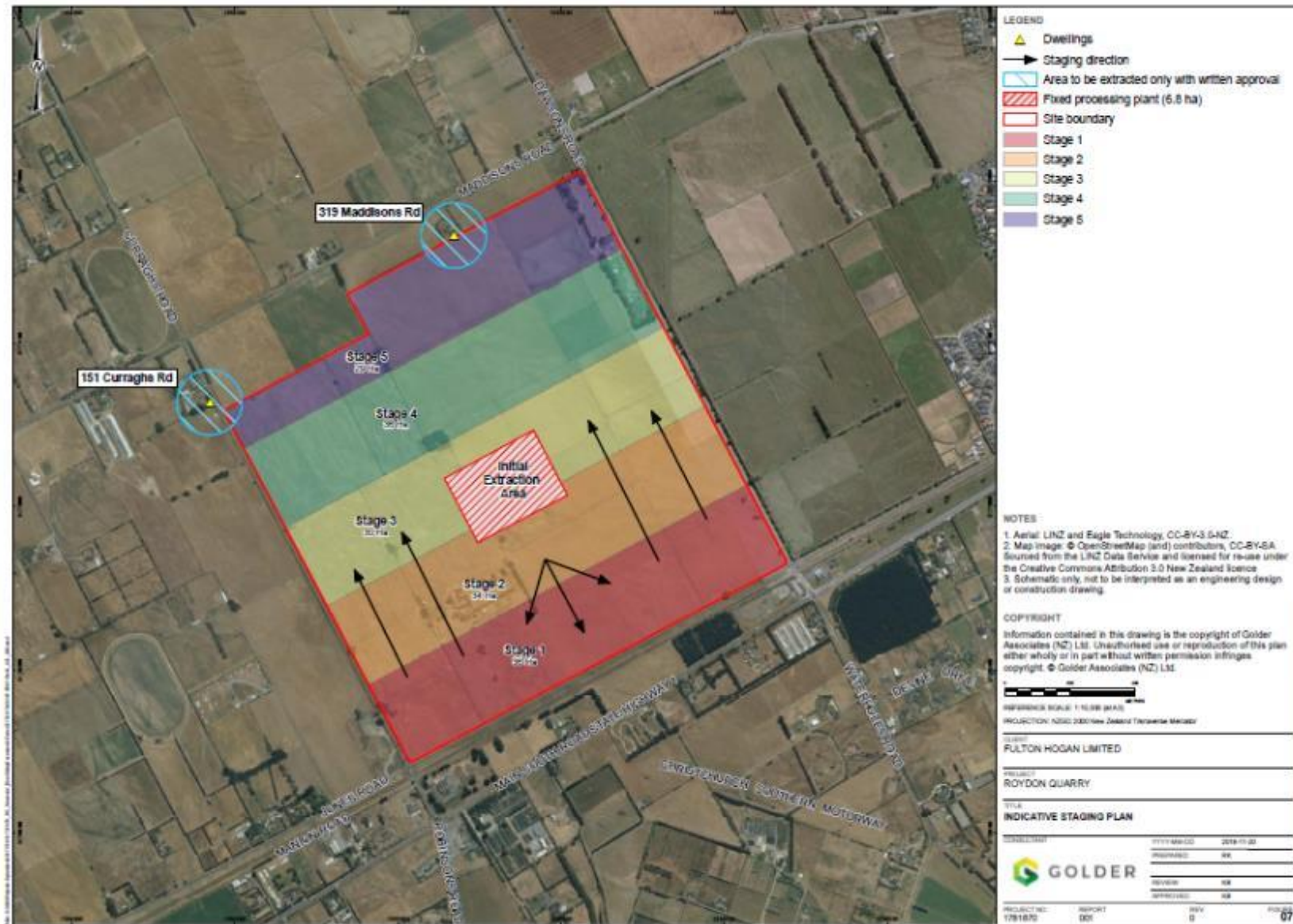
²⁸ Golder (2018) Assessment of Air Quality Effects – 'Proposed Roydon Quarry', Templeton.

²⁹ DCM Urban (2018) Roydon Quarry Proposal LVIA.









Attachment 3: Mahaanui Iwi Management Plan (2013) Provisions

Mahaanui Iwi Management Plan Objectives and Policies

5.4 Papatūānuku

Ngā Paetae/ Objectives

- (1) The mauri of land and soil resources is protected mō tātou, ā, mō kā uri ā muri ake nei.
- (3) Land use planning and management in the takiwā reflects the principle of Ki Uta Ki Tai.
- (4) Rural and urban land use occurs in a manner that is consistent with land capability, the assimilative capacity of catchments and the limits and availability of water resources

Ngā Kaupapa / Policies

P1.1 To approach land management in the takiwā based on the following basic principles:

- (a) Ki Uta Ki Tai;
- (b) Mō tātou, ā, mō kā uri ā muri ake nei; and
- (c) The need for land use to recognise and provide for natural resource capacity, capability, availability, and limits, the assimilative capacity of catchments.

As a means to:

- (a) Protect eco-cultural systems (see Section 5.3 Issue WM6 for an explanation);
- (b) Promote catchment based management and a holistic approach to managing resources;
- (c) Identify and resolve issues of significance to tāngata whenua, including recognising the relationship between land use and water quality and water quantity;
- (d) Provide a sound cultural and ecological basis for assessments of effects of particular activities; and
- (e) Recognise and provide for the relationship between healthy land, air and water and cultural well-being.

P2.1 Rural land use must prioritise the protection of resources and environmental health for future generations. Economic gain must not have priority over the maintenance of the mauri of Papatūānuku, the provider of all things of nature and the world.

P2.2 The adverse effects of intensive rural land use on water, soil and biodiversity resources in the takiwā must be addressed as a matter of priority.

P6.1 To require on-site solutions to stormwater management in all new urban, commercial, industrial and rural developments (zero stormwater discharge off site) based on a multi tiered approach to stormwater management:

- (a) Education - engaging greater general public awareness of stormwater and its interaction with the natural environment, encouraging them to take steps to protect their local environment and perhaps re-use stormwater where appropriate;
- (b) Reducing volume entering system - implementing measures that reduce the volume of stormwater requiring treatment (e.g. rainwater collection tanks);
- (c) Reduce contaminants and sediments entering system - maximising opportunities to reduce contaminants entering stormwater e.g. oil collection pits in carparks, education of residents, treat the water, methods to improve quality; and
- (d) Discharge to land based methods, including swales, stormwater basins, retention basins, and constructed wetponds and wetlands (environmental infrastructure), using appropriate native plant species, recognising the ability of particular species to absorb water and filter waste

P6.3 Stormwater should not enter the wastewater reticulation system in existing urban environments

P9.1 To sustain and safeguard the life supporting capacity of soils, mō tātou, ā, mō kā uri ā muri ake nei.

P10.1 The management of contaminated land must recognise and provide for specific cultural issues, including:

- (a) The location of contaminated sites;
- (b) The nature of the contamination;
- (c) The potential for leaching and run-off;
- (d) Proposed land use changes; and
- (e) Proposed remediation or mitigation work.

P11.1 To assess proposals for earthworks with particular regard to:

- (a) Potential effects on wāhi tapu and wāhi taonga, known and unknown;

- (b) Potential effects on waterways, wetlands and waipuna;
- (c) Potential effects on indigenous biodiversity;
- (d) Potential effects on natural landforms and features, including ridge lines;
- (e) Proposed erosion and sediment control measures; and
- (f) Rehabilitation and remediation plans following earthworks.

P11.6 To avoid damage or modification to wāhi tapu or other sites of significance as opposed to remedy or mitigate.

P13.2 To assess mining and quarrying proposals with reference to:

(a) Location of the activity

- What is the general sensitivity of the site to the proposed activity?
- How well does the proposed activity 'fit' with the existing landscape?
- Is there significant indigenous biodiversity on the site, including remnant native bush?
- What waterways, wetlands or waipuna exist on the site?
- Are there sites of significance on or near the site?
- What is the risk of accidental discoveries?
- What is the wider cultural landscape context within which the site is located?

(b) Type of mining/quarrying

- What resource is being extracted, what will it be used for, and is it sustainable?

(c) Avoiding and mitigating adverse effects

- What provisions are in place to address sediment and erosion control?
- What provisions are in place for stormwater management?
- What provisions are in place for waterway protection?
- How will the site be restored once closed?

P13.3 To require all applications for mining and quarrying activities to include:

- (a) Quarry management plans for earthworks, erosion and sediment control, waterway protection, on site stormwater treatment and disposal and provisions for visual screening/ barriers that include indigenous vegetation; and

- (b) Site rehabilitation plans that include restoration of the site using indigenous species.