

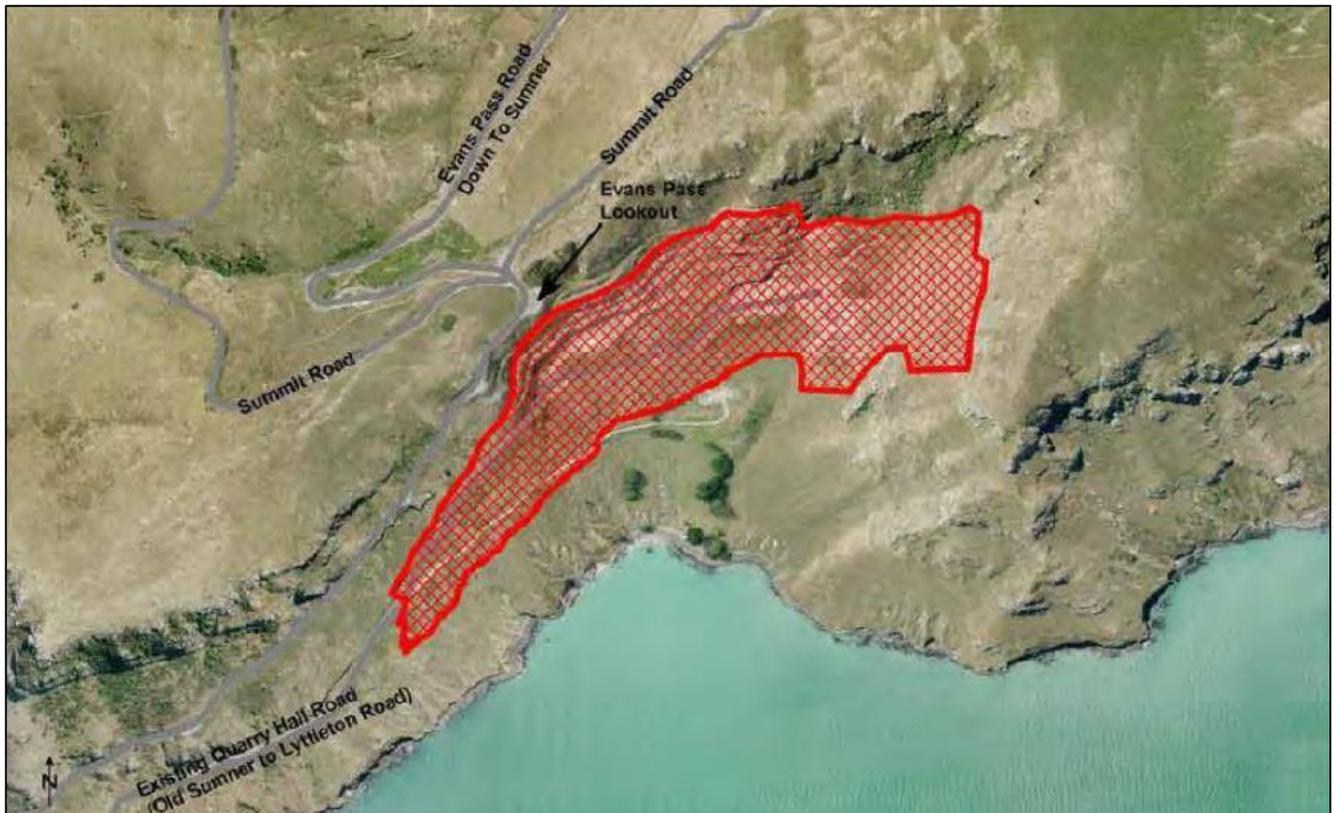
Report / Decision on a Non-notified Resource Consent Application

(Sections 95, 104 and 104A)

Application Number:	RMA/2017/869
Applicant:	Lyttelton Port Company Limited
Site address:	231 Old Sumner-Lyttelton Rd
Legal Description:	Lot 1, Lot 5 Pt Lot 6 DP 22486, Lot 5 DP 54492, Pt RS 55 (CB32F/307), Lot 1-2 DP23001 (CB3D/251)
Zoning:	Specific Purpose Lyttelton Port Zone
Overlays and map notations:	Liquefaction management Area; Remainder of Port Hills and Banks Peninsula Slope Instability Management Area; Rockfall Management Area 1 and 2; Natural Character of the Coastal Environment
Activity Status:	Controlled
Description of Application:	Land use consent to undertake quarrying operations within the identified Quarry Area of Gollans Bay Quarry

Introduction

The Canterbury earthquakes of 2010 and 2011 severely damaged the Lyttelton Port. The applicant has now begun a programme of Port recovery activities, and as part of that overall programme, they seek consent to undertake quarrying operations within Gollans Bay Quarry.



Gollans Bay Quarry Area footprint - Source Appendix 21.8.4.3 Christchurch District Plan

Gollans Bay quarry comprises material from the Lyttelton Volcanic Group which erupted as part of the Lyttelton Volcano sequence approximately 11 million years ago. The quarry was first established in the late 1950s and provided material for maintenance and development at the Port from then until 2011 when it had to be closed for

safety reasons after the Canterbury earthquakes. Since then Lyttelton Port Company Limited has had to import material from elsewhere.

The proposal is to excavate the quarry in a series of benches, starting at the top of the slopes and working progressively down-slope. Some of the larger rock is to be used to armour various seawalls, while the rest will be used for general fill. The quarry extraction design includes excavating below the surrounding ground level, leaving a pit some 20m deeper once the work is completed.

Access to the quarry will be along the existing quarry haul road which runs along Old Sumner Road and then down to the eastern end of the coal stockyard. The haul road will be one way with a number of passing bays along the route. Works to upgrade the haul road have already commenced under an existing land use consent.

The proposed works are described in full in section 2 of the applicant's AEE and in Appendix 1 and 2 of the application. The majority of the rock will be won from the eastern face and the quarry floor. In summary the work will consist of the following:

- a. Prior to quarrying commencing erosion and sediment control measures, safety facilities and traffic management systems will be set up, hut sites will be established and stockpiling and sorting areas will be established then rock picking clearance to manage the risk of rock fall;
- b. Reinstatement of the existing access roads along the northern wall of the quarry;
- c. Face development generally working east to west but this will depend on material requirements. The detail of excavation will be contained in the Quarry Management Plan which will be revised at regular intervals during the life of the quarry. Faces will be approximately 12m high and benches will have a width of at least 6m with a protection bund around each bench.;
- d. Excavation using a digger will be completed in the softer rock and blasting in the harder rock;
- e. The harder, large blocks of rock would be separated from the finer material and stockpiled separately for use as armour rock. The finer fractions and the softer rock would be used as bulk fill;
- f. As each section of the quarry is completed, rehabilitation would commence; and
- g. Upon completion of the bulk excavation of the quarry, a small area (or areas) will be left operational to supply material for the wider Port.

A bund is to be constructed along the southern boundary of the quarry to contain and direct stormwater to a pond at the western end of the site. When the quarry base is deepened to lower than 70 m RL, then ponded runoff will need to be pumped to the pond.

As noted in the AEE the design of the quarry is "first and foremost dictated by safety factors". Safety is also very relevant in the rehabilitation approach which is largely reliant on natural succession in areas which have, where practical, been manipulated in the quarrying process to provide habitat nodes on the benches.

A request for further information was made on 12 May 2017 on matters relating to potentially contaminated material in the base of the quarry, factors taken into account in modelling noise from the quarry, the quarry area slope stability risk values, the role of the Construction and Environmental Management Plan (CEMP) rehabilitation timing, management of surrounding native bush, potential for wetland planting in the base after quarrying completed.

The applicants provided the following information in response to the above request:

- The material on the floor of the quarry is to be deposited in the 10ha reclamation. Material deemed unacceptable will be sent to an authorised site.
- The siren that will be sounded before blasting is generally not expected to be heard in residential areas but if it did the noise would not be unreasonable and would not change predicted noise levels.
- The type of blasting technique will depend on the rock type. The adoption of delayed blasting techniques potentially reduces noise impact but other techniques are available. In the past in this quarry around 95% of blasting was by the delayed technique. Occasionally for small sections of rocks other methods are used but these involve a smaller charge and so the noise emission is unlikely to be greater.
- The Construction and Environmental Management Plan (CEMP) is not referred to in the conditions as its content is outside the scope of the matters of control in the rule.
- Revegetation within each quarried section will occur within the first planting season following completion subject to the area being safe to work, the creation of debris slopes and the area not being required in the future for port purposes.
- There is to be no direct management of patches of bush outside the quarry but weed control within the quarry is designed to control species that could invade native vegetation.
- The intended batter slopes are in the [geotechnical] Riley report and are from 45° to 79° depending on rock type. These batter slopes will not be actively revegetated but they will be modified to create a surface

conducive to natural revegetation by native species, although targeted weed control is proposed. Based on past experience this approach will result in colonisation by both native and exotic plants.

- The monitoring process to assess wetland plant habit suitability in the base of the quarry will involve a series of photographs over time for two years following completion of rehabilitation works. At this stage an assessment will be undertaken by an experienced ecologist to determine the extent and approach to restoration planting.

Resource consent is required as any quarrying activity within the footprint of the Quarry Area shown in Appendix 21.8.4.3 is a controlled activity.

A separate application is being made to Environment Canterbury for an air discharge consent for the dust associated with the quarrying activity.

The existing environment

The application site and surrounding environment are described in section 4 of the Assessment of Effects submitted with the application. In summary, Gollans Bay is a broad, shallowly indented bay with steep uniform slopes and bluffs above. The quarried benches are a notable feature of the backdrop and as such the quarry is visible from many locations within this part of the harbour and from parts of Sumner Road.

Gollans Bay Quarry has provided rock for the port for several decades for port maintenance and was a major source of rock for the Cashin Quay development in 1950s/60s as well as a source of rock used by Canterbury Regional Council for river protection. Most of the proposed quarry footprint includes past quarried slopes, benches and quarry floor that support mainly exotic weeds. The upper part of the proposed footprint is undisturbed by previous quarrying and vegetation there is mostly exotic grasses and weeds, with some regeneration of native shrub and plants.

The application identifies that several rare or threatened plants and lizards are likely to be present within the upper benches of the quarry where native scrubland regeneration is most advanced, or to undisturbed slopes above the existing quarry. These species include Banks Peninsula Blue Tussock, Annual fern, Waitaha gecko and Southern grass skink.

Planning Framework

The operative Christchurch district plans are under review. The Independent Hearings Panel has made a number of decisions on specific parts of the Proposed Replacement District Plan, including 'Strategic Directions and Strategic Outcomes'. Some of the rules have legal effect pursuant to section 86B of the Resource Management Act, while others are fully operative or treated as operative pursuant to section 86F of the Act. The rules applicable to this proposal have been assessed and the breaches are identified below. Relevant objectives and policies are discussed in a later section of this report.

Christchurch District Plan

The site is zoned as Specific Purpose (Lyttelton Port) Zone within the Christchurch District Plan. This zone applies to land occupied and owned by the Lyttelton Port Company for the purposes of the operation of port activities and its recovery and growth needs. The zone is divided into three management areas to recognise and provide for the elements of recovery within the Port, one of them being the Port Quarry area at Gollans Bay which is the area subject to this application.

The proposal requires resource consent under the following rule in the Christchurch District Plan:

- **Specific Purpose Zones – Lyttelton Port 13-8.4.1.2 – C2 (Previously numbered 21-8.2.2.2 – C2)**
Port Quarrying activity within the quarry footprint of the Quarry Area as shown in Appendix 21.8.4.3 is a Controlled activity, with the Council's control limited to
 - a) Slope stability and natural hazard mitigation – 13-8.5.3.1
 - b) Management of terrestrial ecology and rehabilitation – 13-8.5.3.2
- **Natural Hazards 5-6.1.3 C26 and C27**
Controlled Activity as quarrying within the Rockfall Areas 1 and 2 with the Council's control matters listed in **5.6.1.5 Slope Instability Areas** limited to:
 - a. Effects of natural hazards on people and property
 - b. Location, size and design of roads, structures, access in relation to natural hazard risk
 - c. Clearance of vegetation of other natural features
 - d. Potential for activity to exacerbate natural hazard risk
 - e. Mitigation of effects as they impact slope instability hazards

The proposal meets all the built form standard applying to Quarrying in the Port Quarry area; in particular it meets the noise and vibration standards. There are no built form standards that apply to quarrying under the Natural Hazard provisions. The proposal falls within the limits for storage of hazardous substances.

Replacement Christchurch District Plan

I agree with the applicant's assessment of the Replacement District Plan with regard to the Natural and Cultural Heritage chapter as follows:

- Chapter 9.1 addresses indigenous biodiversity and ecosystems. Rule 9.1.3 (f) states "The rules in Subchapter 9.1 do not apply to the Specific Purpose (Lyttelton Port) Zone". This sub-chapter has been appealed to the High Court by Forest and Bird. However, the appeal does not relate to this exemption and an email from Forest & Bird confirming that has been provided.
- Chapter 9.5 sets out rules that apply to identified sites of Ngāi Tahu Cultural Significance. The rules are not relevant because this is a Controlled activity. Notwithstanding, LPC is volunteering a condition for an accidental discovery protocol.

Christchurch City Plan

There are no relevant City Plan rules that relate to this activity.

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

As noted in the application, demolition material from the earthquakes has been placed in the base of the quarry. It is possible that this material may include material that is hazardous including asbestos. At some stage during quarrying the applicant is intending to take this material away and use it for Port reclamation or similar purposes. The Lyttelton Port Company (LPC) has a global consent from the Christchurch City Council (RMA92025316) which relates to a number of its landholdings, including the quarry area, which provides for excavation and disposal of contaminated soil. The consent however excludes deposition of such material in the coastal marine area. LPC also have a current reclamation consent from Environment Canterbury (CRC111659) which specifically provides for deposition in the coastal marine area subject to detailed procedures relating to acceptance of material with only material on an approved list being accepted. All other material is therefore taken to an authorised facility. On the basis of these consents it is considered that no additional consent is required for this activity under the NES.

Written approvals [Sections 95D, 95E(3)(a) and 104(3)(a)(ii)]

Sections 95A(3)(a) and 95B(2) of the Resource Management Act enable an application to be processed without public or limited notification on any affected persons where a rule in a Plan or a National Environmental Standard provides for this.

In this case, rule 13-8.4.1.2.d in the Lyttelton Port zone and rule 5.6.1.3.e in the Natural Hazards rules provide that any application arising from these rules will not be publicly or limited notified.

Effects on the environment and adversely affected persons [Sections 95A, 95B, 95E(3) and 104(1)(a)]

As a controlled activity, Council's control to impose conditions is reserved to matters relating to slope stability, natural hazard mitigation, and management of terrestrial ecology and rehabilitation.

Slope Stability and Natural Hazard Mitigation

A slope stability hazard assessment was prepared by Riley Consultants on behalf of the applicant and was attached as Appendix 2 of the application.

The assessment confirms that no significant or persistent defects through the quarry were observed and no large scale or active faults have been mapped in close proximity to the quarry. In addition, no static groundwater tables were observed or recorded in proximity to the quarry.

It confirms that the existing faces in the quarry generally show good stability. The existing batter slopes have performed well during the earthquake sequence. In evaluating long-term batter stability, consideration has been given to seismic effects. Therefore the batters have been designed such that larger failures under 500-year return period seismic conditions have a Factor of Safety in excess of 1.0 and for a lesser 100-year return period earthquake a Factor of Safety greater than 1.2.

The assessment recommends batter angles, maximum slope heights and minimum bench widths and concludes that if these are met then the natural hazard risk to workers and infrastructure is considered to be at an acceptable level. It also acknowledges that there are other operational risks such as possible topping in the basaltic lava and small rock falls that will need to be managed through scaling, and recommends blasting trials to evaluate the best technique.

This assessment provides information relating to the quarry design with the goal of enabling an arrangement that maximises access to the resource while creating a quarry profile which will withstand earthquakes to the degree that they create an acceptable risk. It is noted that the quarry is largely self-contained in the sense that falling material from the quarried faces will fall into the quarry itself and that there is therefore limited risk to people or property below the quarry. The progressive quarrying will actually lower the floor of the quarry thereby reducing the risk of rock fall below the site.

Council engineering staff have raised concerns regarding the basis for choosing the factors of safety referred in the Riley Assessment. Information was requested on this matter and additional explanation provided. Following this a meeting was held between the applicant's geotechnical engineer and Council engineering staff to discuss this matter where it was clarified that the MBIE guidelines were used to choose a conservative force level as a basis for modelling of likely impacts on the various rock types within the quarry with various seismic events.

A further matter raised by Council engineering staff relates to the natural hazard risk outside the quarry site which could impact on the quarry. This concern is based on the experience with Sumner Road and efforts to reduce the risk of rockfall impacts on occasional users of the road. In response to this concern the applicants have clarified their approach by proposing amendments to the Quarry Management Plan requiring the following:

- 6.3 *A geotechnical report on the slope stability which includes an assessment of the risk of rock-fall from the bluffs located immediately to the east of Evans Pass; and*
- 6.5 *A description of any works required to ensure that there are no unacceptable risks associated with potential rock-fall from the bluffs located immediately to the east of Evans Pass; and*
- 6.6 *Details of monitoring of slope stability and associated risk of rock-fall within the quarry footprint and from the bluffs located immediately to the east of Evans Pass, which is to be carried out during extraction activities.*

I consider this approach is appropriate given the ongoing risk associated with the quarry site being impacted from beyond the site. I note that this risk cannot be easily predicted and that ongoing monitoring and clearance is the most practical approach.

Finally it is noted that the Slope Stability report sets out in Table 7 recommended batter profiles for the different rock types which have been based on their analysis of stabilities. I recommend that these be the subject of a consent condition.

Management of terrestrial ecology and rehabilitation

The following matters of control relating to management of terrestrial ecology and rehabilitation are set out in 13-8.5.3.2 and consist of:

- a) Methods to manage adverse effects on existing terrestrial ecology and in particular lizards' species and to enhance indigenous habitats as part of site rehabilitation;
- b) Methods to stabilise disturbed ground;
- c) Methods to ensure the geotechnical stability of rock faces for mitigating long-term natural hazard risk to land outside of the Specific Purpose (Lyttelton Port) Zone;
- d) Whether the plant species selected for rehabilitation works are appropriate native species; and
- e) The extent to which the type of methods selected will reduce the adverse visual effects of haul road formation.

The third matter regarding the geotechnical stability of rock faces has been assessed above.

An Ecology Assessment was prepared by RMA Ecology Ltd. on behalf of the applicant and was attached as Appendix 3 of the application. This report provides an assessment of the ecological values within the existing worked quarry and proposed quarry footprint, and identifies approaches and methods by which unavoidable adverse effects on indigenous plant communities and wildlife can be minimised or mitigated.

Existing values were acknowledged as consisting of:

- Vegetation communities characterised by weed species, principally gorse, broom, Old man's beard, spur valerian (*Centranthus ruber*), Pride of Madeira (*Echium candicans*), pig's ear (*Cotyledon orbiculata*), common

polypody (*Polypodium vulgare*), pampas (*Cortaderia selloana*), boneseed (*Chrysanthemoides monilifera*) and exotic pasture grasses.

- Exotic plants which dominate the site, with many considered to be ecological weeds.
- No obvious sign of pest animals, however it is likely that rats and rabbits are present at the site; possums may be present in the taller scrub and forest in areas nearby or further along the Sumner Road area outside of the quarry area.
- Abundant sign of geckos around rock outcrops within the upper northern slopes and on the ridges above Gollans Bay quarry on LPC land and on adjoining Council Reserves. No sightings or sign of skinks or geckos were found on the quarry floor, lower slopes or mid-slope areas.

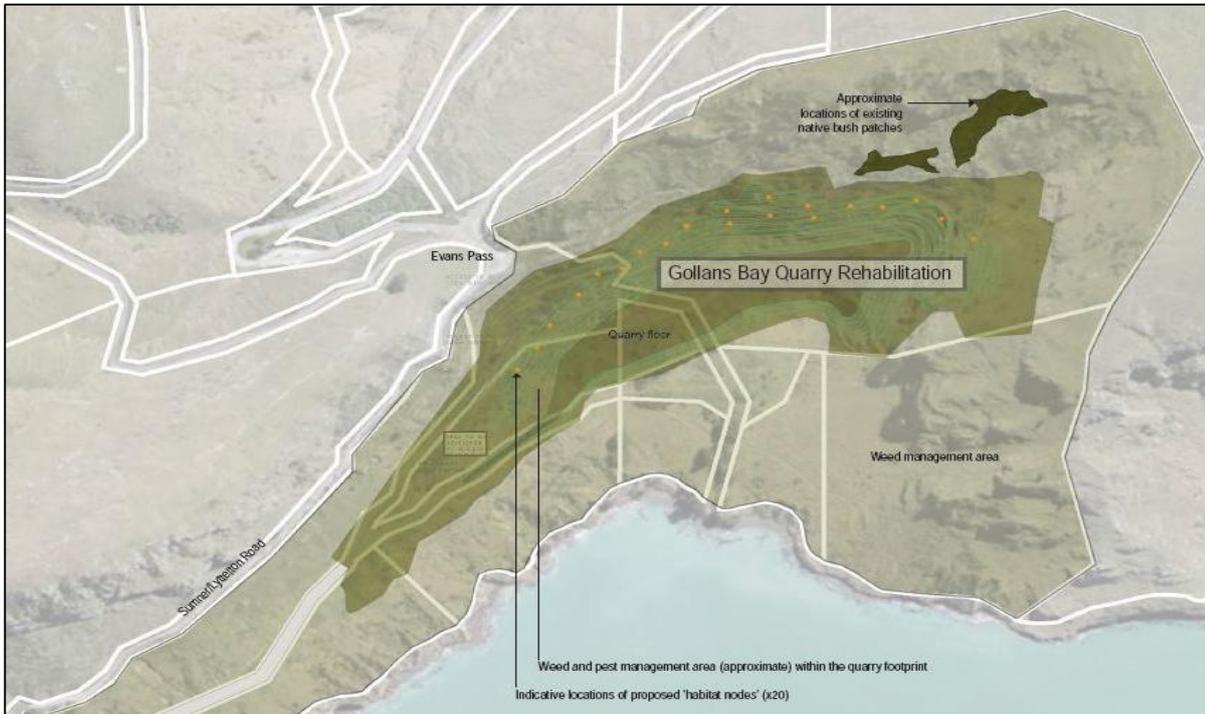
The assessment explains that ecological significance is measured against the criteria for assessing ecological values of a site in the Canterbury Regional Policy Statement. When judged against the ten criteria for assessing significance, the lower and middle quarry benches and faces dominated by weedy communities do not trigger any of the criteria. The upper benches and slopes, and the undisturbed areas within the footprint trigger at least one criteria, that of rarity. The rarity criterion states that a site is deemed ecologically significant if it contains (Criterion 4); *Indigenous vegetation or habitat of indigenous fauna that supports an indigenous species that is threatened, at risk, or uncommon, nationally or within the relevant ecological district.*

Due to signs of Waitaha gecko presence, Naturally Uncommon Banks Peninsula blue tussock and the Nationally At Risk Southern grass skink, the upper 25 % of the site (3 ha) is considered to support vegetation and habitats of fauna that are ecologically significant in terms of Criterion 4.

A Quarry Rehabilitation Plan (QRP) has been prepared by Boffa Miskell as part of this application. The proposed methods contained in the QRP are based on the recommendations in the Gollans Bay Quarry Ecological assessment prepared by RMA Ecology referred to above. The QRP contain a number of recommended methods to manage adverse effects on existing terrestrial ecology, summarised in the AEE as follows:

- a) Introducing variability to the cut faces including debris slopes to enable native plants to establish over time and will provide lizard habitat;
- b) Introducing a growth medium (e.g. weed-free topsoil) on some sections of benches and plant nursery-raised trees to create habitat nodes from which natural establishment of surrounding surfaces by native plants is accelerated;
- c) Controlling invasive ecological weeds within accessible parts of the quarry footprint, and invasive or unwanted ecological weeds from colonising areas outside of the quarry footprint;
- d) Salvaging lizards where possible on the upper benches on the eastern face of the quarry subject to safety requirements;
- e) Rehabilitating faces to create rock debris habitat for lizards; and
- f) Facilitating the establishment of vegetation cover by passive means, and by active planting of habitat nodes, as a means to supporting diverse native shrubland that in turn will support skinks and geckos.

The indicative planting nodes and the area subject to weed control are shown below:



Source: Boffa Miskell Rehabilitation Plan

The reports clearly identify the ecological values in the quarry site and surrounding area and the potential to enhance these over time. They also identify the challenges in rehabilitating areas within the quarry area due both to safety concerns relating to accessing the upper reaches and to weed infestation. The rehabilitation measures set out an approach which is sufficiently detailed in relation to each of four phases of progressive rehabilitation, mechanical manipulation of the quarry to achieve good growing media, revegetation and weed control. It is considered that the rehabilitation approach and measures contained in the draft QRP are appropriate and sufficiently detailed given these challenges and have the potential to result in enhanced ecological values in the area.

Conclusion of effects

On the basis of this assessment it is considered that the potential adverse effects of the proposed re-establishment of quarrying on this site are limited, and that there is potential for enhancement of ecological values in the area over time.

Relevant objectives, policies, rules and other provisions of the Plan [Section 104(1)(b)(vi)]

Regard must be had to the relevant objectives and policies in the Christchurch District Plan. Of particular note, Chapter 3 of the Christchurch District Plan contains a number of high level strategic objectives to guide the recovery and future development of the City. In addition the following objectives and policies are particularly relevant to the re-establishment of quarrying at the Gollans Bay quarry:

- 13.8.2.1 Objective – Recovery and growth of Lyttelton Port
- 13.8.2.1.1 Policy – Elements of recovery
- 13.8.2.1.2 Policy – Management areas and activities
- 13.8.2.2 Objective – Effects of Lyttelton Port recovery and operation
- 13.8.2.2.1 Policy – Recovery opportunities to reduce adverse effects
- 13.8.2.2.3 Policy – Port quarrying activities

The applicant provided an objective and policy assessment in section 7 of the application addressing these objectives and policies. I agree with this assessment which indicates that the application is consistent with the above objectives and policies in the Plan. In particular, I note that the recovery and growth of the Port cannot occur without quarried material and that this is most efficiently achieved by utilising the Port's own quarry which is close to the Port. Regarding the direct impacts of the quarrying activity referred to in policy 13.8.2.2.3 these are quite limited due to the quarrying being set in a bay away from the residential areas of Lyttelton, such that noise and vibration are within the Plan's standards and are not expected to be particularly noticeable. Further the

application sets out a detailed approach to progressive rehabilitation of the quarry in accordance with the second element in this policy.

The Natural Hazard Objectives and policies are also relevant. These provisions were not assessed in the application. The only objective in the Natural Hazards Chapter refers back to Strategic Objective 3.3.6. This Objective specifically refers:

- b. New critical infrastructure or strategic infrastructure may be located in areas where the risks of natural hazards to people, property and infrastructure are otherwise assessed as being unacceptable, but only where:
 - i. there is no reasonable alternative; and*
 - ii. the strategic infrastructure or critical infrastructure has been designed to maintain, as far as practicable, its integrity and form during natural hazard events; and*
 - iii. the natural hazard risks to people, property and infrastructure are appropriately mitigated**

The Port of Lyttelton is listed as strategic infrastructure and I assume this would include the quarry. Technically the quarry is not “new” but as it has not been operational for a long period I consider it could reasonably be considered to fall within this part of the objective. I also note that clause d of this objective refers to “*the repair of earthquake damaged land*” being facilitated as part of the recovery.

I consider that the proposals contained in the proposed Quarry Management Plan provide for appropriate mitigation of natural hazard risks to people and property both by a series of steps being taken prior to any quarrying activity and by the final design of the quarry faces. This approach is also consistent with the following policies:

5.2.2.1.2 Policy - Manage activities to address natural hazard risks

- a. Manage activities in all areas subject to natural hazards in a manner that is commensurate with the likelihood and consequences of a natural hazard event on life and property.*

5.2.2.1.3 Policy - Infrastructure

- a. Avoid locating new critical infrastructure where it is at risk of being significantly affected by a natural hazard unless, considering functional and operational requirements, there is no reasonable alternative location or method.*
- b. Enable critical infrastructure to be designed, maintained and managed to function to the extent practicable during and after natural hazard events.*
- c. Recognise the benefits of infrastructure and the need for its repair, maintenance and ongoing use in areas affected by natural hazards.*

Non-notification of this application is consistent with strategic Objective 3.3.2 of the Christchurch District Plan which states that requirements for notification and written approval are to be minimised when implementing the Plan.

Part II of the Resource Management Act and any other relevant matters [Section 104(1) and 104(1)(c)]

I consider the proposal to be in keeping with Part II of the Act as it will provide for the restoration and maintenance of the Port of Lyttelton which is required for the economic wellbeing of Canterbury. It will also provide for rehabilitation of the site to enable the return of indigenous flora and fauna, subject to the limitations placed on this rehabilitation due to safety concerns.

General notification provisions [Sections 95A(1), 95A(4) and Section 104(3)(d)]

In this case, rule 13-8.4.1.2.d in the Lyttelton Port zone and rule 5.6.1.3.e in the Natural Hazards rules provide that any application arising from these rules will not be publicly or limited notified. Notwithstanding this, I am satisfied that there are no special circumstances or other aspects of the application that warrant public notification.

Recommendations

That, for the above reasons:

- A. The application be processed on a **non-notified** basis in accordance with Sections 95A - 95F of the Resource Management Act 1991.
- B. The application **be granted** pursuant to Sections 104, 104A, and 108 of the Resource Management Act 1991, subject to the following conditions:
 1. The development shall proceed in accordance with the information and plans submitted with the application, including the further information dated 24 May 2017. The Approved Consent Documentation has been entered into Council records as RMA/2017/869 (149 pages).

General

1A. The following definitions shall apply to the conditions on this consent:

- Consent Authority Manager means the Head of Resource Consents Unit, Christchurch City Council, or nominee.
- Habitat Node means a node of native plants approximately 3-4m wide and 6-7m long consisting of hardy, fast-growing native species to be planted at approximately 100m intervals across the quarry site.
- Lizards means the Waitaha Gecko and Southern Grass Skink.
- Tangata Whenua means Te Hapū o Ngāti Wheke (Rāpaki) and Te Rūnanga o Ngā Tahu.

1B This Resource Consent shall lapse 10 years after the commencement of the consent in accordance with Section 125(1) of the Resource Management Act, 1991.

2 The Consent Holder shall inform the Consent Authority Manager in writing when this consent is first exercised.

Location of the Quarry

3 The quarrying associated with this consent shall not generally exceed the footprint as shown in Figure 1 of Assessment of Environmental Effects attached to and forming part of this consent.

4 Works shall be limited to:

- 4.1 The extraction of minerals and overburden by mechanical means, including blasting and using excavators, from an open quarry;
- 4.2 The stacking, depositing and storage of quarry material;
- 4.3 The crushing, screening or handling of quarry material;
- 4.4 The transporting of quarry material; and
- 4.5 Any other activities and buildings ancillary to the above activities including rehabilitation and mitigation of hazard risks from rockfall.

Quarry Management Plan (QMP)

5 At least two working days prior to the commencement of the works specified in condition 4, the Consent Holder shall provide a QMP to the Consent Authority Manager. A copy of the QMP shall be provided to Tangata Whenua.

6 The QMP shall be prepared by a suitably qualified person(s) and its purpose is to set out the measures required for the safe excavation and removal of quarry material. The QMP shall include, but not be limited to, the following:

- 6.1 An overview of the proposed quarry excavation methods, including explosives to be used in blasting;
- 6.2 Details on the proposed staging of quarrying activities;
- 6.3 A geotechnical report on the slope stability which includes an assessment of the risk of rock-fall from the bluffs located immediately to the east of Evans Pass; and
- 6.4 Stabilisation techniques to be used, including final bench design consistent with a geotechnical assessment.
- 6.5 A description of any works required to ensure that there are no unacceptable risks associated with potential rock-fall from the bluffs located immediately to the east of Evans Pass; and
- 6.6 Details of monitoring of slope stability and associated risk of rock-fall within the quarry footprint and from the bluffs located immediately to the east of Evans Pass, which is to be carried out during extraction activities.

7 A QMP prepared under condition 6 may be amended at any time. Any amendments shall achieve the purpose of the QMP and shall be provided in writing to the Consent Authority Manager. A copy of any amended QMP shall also be provided to Tangata Whenua.

- 8 The consent holder shall carry out the quarrying in accordance with the QMP and the Quarry Rehabilitation Plan (QRP). The results of the monitoring carried out in accordance with the QMP during extraction activities shall be made available to the Consent Authority on request.

Quarry Rehabilitation Plan (QRP)

- 9 At least two working days prior to the commencement of the works specified in condition 4, the Consent Holder shall provide A QRP to the Consent Authority Manager. A copy of the QRP shall be provided to Tangata Whenua.
- 10 The purpose of the QRP is to set out the proposed rehabilitation works for the quarry. To achieve this purpose, the QRP shall include but not be limited to the following topics:

General

10.1 Details of:

- (a) The proposed rehabilitation having particular regard to the QMP, including any staging;
- (b) Access and safety constraints identified by the QMP; and
- (c) On-going monitoring and review of the most suitable techniques for successful rehabilitation, including the monitoring of natural succession processes.

Mechanical manipulation of quarry

10.2 A description of the methods used to prepare the site for a Habitat Node by adding variability to rock faces, including but not limited to:

- (a) The creation of loose rock and gravel slopes through depositing material or collapsing (with explosives) the upper faces; and
- (b) Breaking-up of hard rock bench surfaces by machine ripping where the rock or soil substrate allows.

Revegetation

10.3 A description of the how the following methods will be used to achieve revegetation of the quarry site:

- (a) Hydro-seeding of grasses for fast initial cover in areas of high erosion; and
- (b) Planting of woody native plants in each Habitat Node as a means to provide relatively quick establishment of plants and a subsequent seed source, and where practicable incorporate rare and/or threatened native plant species found at the quarry.

Targeted weed control

10.4 A description of ongoing weed control as set out in the Weed Control Management Plan required under condition 18 of this consent.

Monitoring and reporting

10.5 A description of the monitoring programme that will include measures that report on:

- (a) Plant survival within planted nodes and replacement planting (if necessary) that is undertaken until plants are established;
- (b) The progression of plant communities from weed plants towards native plants;
- (c) Damage to plantings or native plant communities caused by pest animals, as observed during maintenance of planted areas, and the need for any pest animal control as a result; and
- (d) The effectiveness of the weed control programme implemented through the Weed Control Management Plan required under condition 18 of this consent.

10.6 A report shall be prepared annually for a period of 10 years after the first commencement of this consent detailing the results of the monitoring carried out as under condition 10.5.

10.7 The annual report prepared under condition 10.6 shall be provided in writing to the Consent Authority Manager within one month of completion of the report.

- 11 A QRP prepared under condition 9 may be amended at any time. Any amendments shall achieve the purpose of the QRP and shall be provided in writing to the Consent Authority Manager. A copy of any amended QRP shall also be provided to Tangata Whenua.

- 12 The consent hold shall carry out the quarry rehabilitation in accordance with the QRP

- 12A Rehabilitation of each completed quarry section within six months of the area being stabilised such that it is safe to carry out the work.

Lizard Management Plan (LMP)

- 13 Prior to commencing work under this consent, the Consent Holder shall engage a geotechnical engineer to conduct a site inspection of the quarry to determine, in consultation with an appropriately experienced ecologist, whether a salvage operation for Lizards from the quarry site is safe and feasible.

- 14 If the inspection required by condition 13 determines that the salvage operation is not safe and feasible, the Consent Holder shall prepare a report that sets out in detail the reasons why and the report shall

be provided to the Consent Authority Manager. A copy of the report shall be forwarded to Tangata Whenua.

- 15 If the inspection required by condition 13 determines that a salvage operation is safe and feasible, the Consent Holder shall prepare a LMP and shall provide the LMP to the Consent Authority Manager. A copy of the LMP shall be forwarded to Tangata Whenua. The purpose of the LMP shall be to detail the locations and methods to salvage Lizard in areas safe to do so. The LMP that shall include, but not be limited to:
- 15.1 A description of the salvage locations;
 - 15.2 Salvage methods to be used;
 - 15.3 Timing of salvage operations;
 - 15.4 Proposed release/relocation area(s) for Lizards; and
 - 15.5 Management of release areas to enable as far as practicable the survival of the relocated Lizards.
- 16 A LMP prepared if required by condition 15 may be amended at any time. Any amendments shall achieve the purpose of the LMP and shall be provided in writing to the Consent Authority Manager. A copy of any amended LMP shall also be provided to Tangata Whenua.
- 17 The consent hold shall carry out a Lizard salvaging operation in accordance with the LMP.

Weed Control Management Plan (WCMP)

- 18 At least ten working days prior to the commencement of the works specified in condition 4, the Consent Holder shall provide a WCMP to the Consent Authority Manager. A copy of the WCMP shall be forwarded to Tangata Whenua.
- 19 The purpose of the WCMP is to minimise the spread of invasive weeds from the quarry to neighbouring properties as far as practicable. To achieve this purpose, the WCMP shall include but not be limited to:
- 19.1 A description of the methods to control invasive ecological weeds within accessible parts of the quarry;
 - 19.2 A description of the methods to monitor for and control weed species that could invade native vegetation on LPC land adjoining the quarry; and
 - 19.3 A description of the methods to monitor for and control weed species that could potentially invade neighbouring properties not owned by the Consent Holder.
- 20 Weed control measures in the WCMP shall follow best practice advocated by Environment Canterbury.
- 21 The Consent Holder shall regularly monitor the presence of weed species within and the quarry footprint and the immediate surrounds and the results shall be incorporated into the monitoring report required under condition 10.6.
- 22 The WCMP may be amended at any time. Any amendments shall achieve the purpose of the WCMP as set out in condition 19 and shall be provided in writing to the Consent Authority Manager. A copy of any amended WCMP shall also be provided to Tangata Whenua.
- 23 The consent hold shall carry out weed control measures in accordance with WCMP.

Te Hapū o Ngāti Wheke (Rāpaki) Accidental Discovery Protocol

- 24 If kōiwi (human skeletal remains), wāhi taonga (resources of importance), wāhi tapu (places or features of special significance) or artefact material are discovered, the consent holder shall:
- 24.1 Stop work immediately;
 - 24.2 Immediately advise the affected Papatipu Rūnanga, Te Hapū o Ngāti Wheke (Rāpaki) or their representatives of the disturbance; and
 - 24.3 Allow a site inspection by Te Hapū o Ngāti Wheke (Rāpaki) and their advisors, who shall determine whether the discovery is likely to be extensive and whether a thorough site investigation is required.
- 25 Material discovered shall be handled and removed by tribal elders responsible for the tikanga (custom) appropriate to their removal or preservation.

Review

- 26 Pursuant to Section 128(1) of the Act, the Christchurch City Council may, on the last 5 working days of May and November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent.

Reported and recommended by: Patricia Harte, Consultant Planner

Date: 3 July 2017

Reviewed by: Ruth Markham-Short, Planning Team Leader

Date: 3 July 2017

Decision

That the above recommendations be adopted for the reasons outlined in the report.

Commissioner:

Name: David Mountfort

Signature: 

Date: 3 July 2017