



Roydon Quarry Landscape Management Plan

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1.0 INTRODUCTION

1.1 Background

Management Plans have been included in Fulton Hogan's quarry consents for a number of years now. The plans inform how Fulton Hogan's quarries, and the activities associated with them, are operated and managed. They form an integral part of day to day operations and in the case of rehabilitation management plans, for example, the long term management of a site. Fulton Hogan is experienced in developing and implementing management plans and has prepared rehabilitation management plans for all of our Christchurch sites. Compliance with management plans, like all other consent and environmental compliance, is taken extremely seriously by Fulton Hogan at the Board, Executive, managerial and employee level.

Various resource consents (listed below) have been granted permitting the development and operation of the Roydon Quarry including Selwyn District Council Land Use Consent RC185627.

The development quarry will take place in a number of phases, comprising the following activities:

- Use of on-site material to create perimeter bunds, together with planting to establish boundary screening.
- Development of quarry including infrastructure such as site roading, processing plant and associated buildings
- Extraction of aggregate and
- Rehabilitation of worked out areas.

1.2 Document Purpose

This Landscape Management Plan (LMP) has been developed to address the initial establishment and ongoing management (maintenance) of landscape planting and grass bunds around the perimeter of the site in order that all operations will be in accordance with conditions 17-20 of RC185627 to ensure the effectiveness of the mitigation measures provided by the landscaping for the duration of the consent.

This LMP is implemented alongside various other Management Plans covering such matters as the management of dust and noise, and will be reviewed throughout the lifespan of the quarry and the eventual retirement of the operation.

1.3 Responsibility

The overall management of the site will be the responsibility of the Roydon Quarry Manager or delegated authority and will include:

- Ensuring compliance with relevant resource consents conditions including this LMP;
- Communicating resource consent requirements to staff, contractors and all other relevant parties;
- Implementation of inspection and maintenance activities as per this LMP;
- Holding records for any inspections and maintenance activities;
- Leading staff to ensure environmental responsibility is being practiced.

2.0 IMPLEMENTATION OF WORKS

2.1 Site Preparation phase (prior to quarrying operations)

RC185627 specifies Site Preparation as

- Topsoil stripping, overburden removal and storage
- Construction and maintenance of bunds and stockpiles

RC185627 further specifies that prior to extraction and processing of saleable aggregate various actions must be completed

- Site perimeter bunding and landscape planting established
- Perimeter walking track and viewing platform completed
- Soil scientist engaged to oversee the handling of topsoil to ensure the productive potential of the topsoil is maintained

These actions will be completed (as detailed below) during the Site Preparation phase, following which quarry operations will commence

2.2 Quarrying Operations phase

All bunding and landscape planting will be undertaken as described above prior to quarrying operations commencing. Accordingly, except for the ongoing maintenance as detailed below, no bunding and landscape planting will be undertaken during the operations phase.

2.3 Details of Bunding and Landscape Planting

The perimeter bunds and planting will be established as per the DCM Urban Design Ltd landscape drawings 2017_031/0100-0109 appended or any accepted revisions.

The bunds will be constructed from materials sourced from site, with the soils placed in accordance with the advice contained in the Boundary and CPSA Soil Management report.

Irrigation will be provided as outlined in the CPSA Soil Management report and detailed in the irrigation design. The irrigation design will incorporate for the grassed bunds as well as the planted areas, both during establishment and for any ongoing 'maintenance' requirements (for a minimum duration of 5 years for the plantings)

2.4 Establishment of Landscape Planting

Sections of the landscape planting on Jones and Dawsons Roads have been previously partially established.

The bund works are scheduled to commence May 2022, with an anticipated completion during September 2022. The handling of soils during the bund construction will be overseen by Dr Tony Davoren to ensure the productive potential of the topsoil is maintained (as required by Condition 17A – RC185627).

Landscape planting is scheduled to follow the bund construction during September – November. The installation of irrigation mains will be incorporated with the bund construction to ensure the water supply is readily available. The irrigation system will be installed as the planting occurs. All planting will be undertaken by the Fulton Hogan Landscaping Department, with rabbit barriers provided to all plants.

2.5 Walking Track and Viewing Platform

The walking track and viewing platform will be established as per the DCM Urban Design Ltd landscape drawings 2017_031/0100-0108 appended or any accepted revisions of the same (including that the walking track will be repositioned to the Maddisons Road verge rather than along the rear of the Maddisons Road properties).

The walking track will be subject to the engineering design acceptance of Selwyn District Council, including the retention of the rural mail access along Maddisons Road.

The viewing platform will be designed to ensure all requirements of a publically accessible space are adhered to.

3.0 LANDSCAPING MAINTENANCE

3.1 Establishment Period Inspection/Monitoring

Inspections of the irrigation system will be undertaken weekly during irrigation periods to ensure the system is functioning correctly.

Inspections of the planting and grass will be undertaken every month during the growing season (Nov – Mar) and once every two months outside this period to in particular confirm plant/grass health, weed growth and the Jones Road shelterbelt height, and to establish any maintenance requirements.

A record of all inspections and maintenance will be retained on site.

3.2 Maintenance Requirements

At each inspection all litter, stones and other debris will be removed from all planted and grasses areas.

Maintenance Works will also include:

- Any pruning or spraying necessary to control weeds, pests, and diseased or defects in the plants.
- Pruning dead wood flush with the stem.
- Grass cutting – to a minimum height of 20mm
- Firming down ground around plants, which have rocked or heaved.
- Checking rabbit proofing and removing any weeds which may inhibit plant growth
- Replacement of any dead, diseased or damaged plants (ref condition 19.f)
- Repair or replacement of any damaged or malfunctioning irrigation items

4.0 ASSURANCE

4.1 Staff Training

The Quarry Manager will ensure that all staff and contractors involved in landscape maintenance are aware of the requirements of this LMP, and have undertaken any necessary training.

4.2 Staff induction and regular training

All Fulton Hogan staff who will be onsite at Roydon Quarry must first undergo a site specific induction, which will include revision of all key operational plans and requirements. All contractors visiting the site will also be required to undergo site specific induction. The purpose of induction is to ensure all persons on site are aware of the operational requirements of the quarry and to ensure compliance with Fulton Hogan's resource consents.

Fulton Hogan also require all staff to undertake an initial training session called Environwise. Staff training is then undertaken on a regular basis.

4.3 Inspection and Auditing

The inspection and maintenance of the landscape works, considering that they are a key method for the mitigation of the effects of the quarry will be the responsibility of the Quarry Manager, with particular attention to ensuring all provisions are in good condition prior to summer.

The Roydon Quarry site will be audited annually against its resource consent requirements, and associated management plans including this LMP, by the Fulton Hogan Environmental team. Formal compliance monitoring by SDC and Ecan will be at their instigation. Informal monitoring and checks will be conducted by the Roydon Quarry Manager or appropriate delegate, on an ongoing basis through the likes of . In addition to formal inspections and compliance monitoring, informal monitoring will be conducted by the Roydon Quarry Manager or appropriate delegate, on an ongoing basis through the likes of Stay Safe Engagements or Spot Audits.

All incidents including non-compliance with environmental controls, environmental incidents, complaints, hazards and near misses will be entered into the Fulton Hogan's incident management system (CAMs – Case and Action Management Systems) to allow recording, tracking, investigated and closed off when dealt with appropriately.

As well as the standard details recorded in CAMS, for complaints it will be ensured that the following details are recorded

- Complainant details;
- Information about the incident as described by the complaint;
- Who received the complaint and how it was received;
- Weather conditions at the time of the complaint;
- Identification of the possible cause of the complaint following the investigation;
- Details of the corrective action taken at the time to resolve the incident;
- Details of the preventative actions to be taken to ensure the likelihood of such events occurring in the future are minimised.

The Quarry Manager will lead all responses to the complainant

A summary from CAMS will be provided at the CLG meetings.

5.0 DOCUMENT REVIEW

This document is intended to be a living resource, and will be regularly reviewed as below, or at a minimum five yearly

- Following the detailed irrigation design to include for any specific requirements of that system
- Following the detailed design of the Walking Track & Viewing Platform (mid 2022)
- At the completion of environmental audits;