

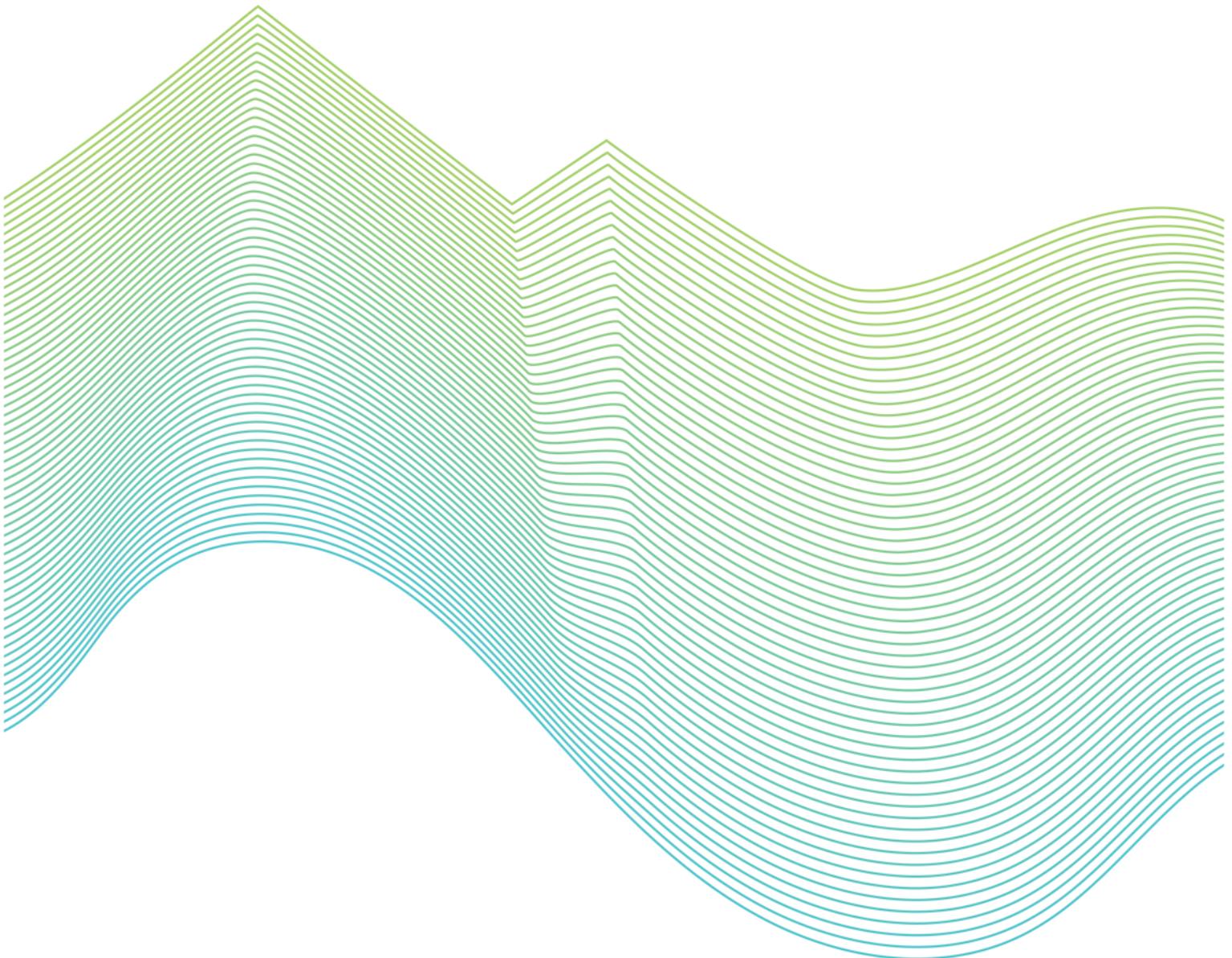
Gordon Quarry Final Report

EL 8-2019

17th December 2019 to 12th September 2023

Prepared by James Beattie

Any coordinates on GDA94



Executive Summary

The Gordon Quarry was the primary material source for the construction of the Gordon Dam in the 1970s. It has recently been reconsidered for use for future dam maintenance and other projects in the area. Historical technical information was supplemented with new information required for the different intended use of the material.

Works completed in the exploration area:

- A small drill and blast operation was completed to win material for evaluation in 2020.
- Testing and evaluation of blast materials on and off site.
- No further work was completed between the works mentioned above and the licence surrender in September 2023.

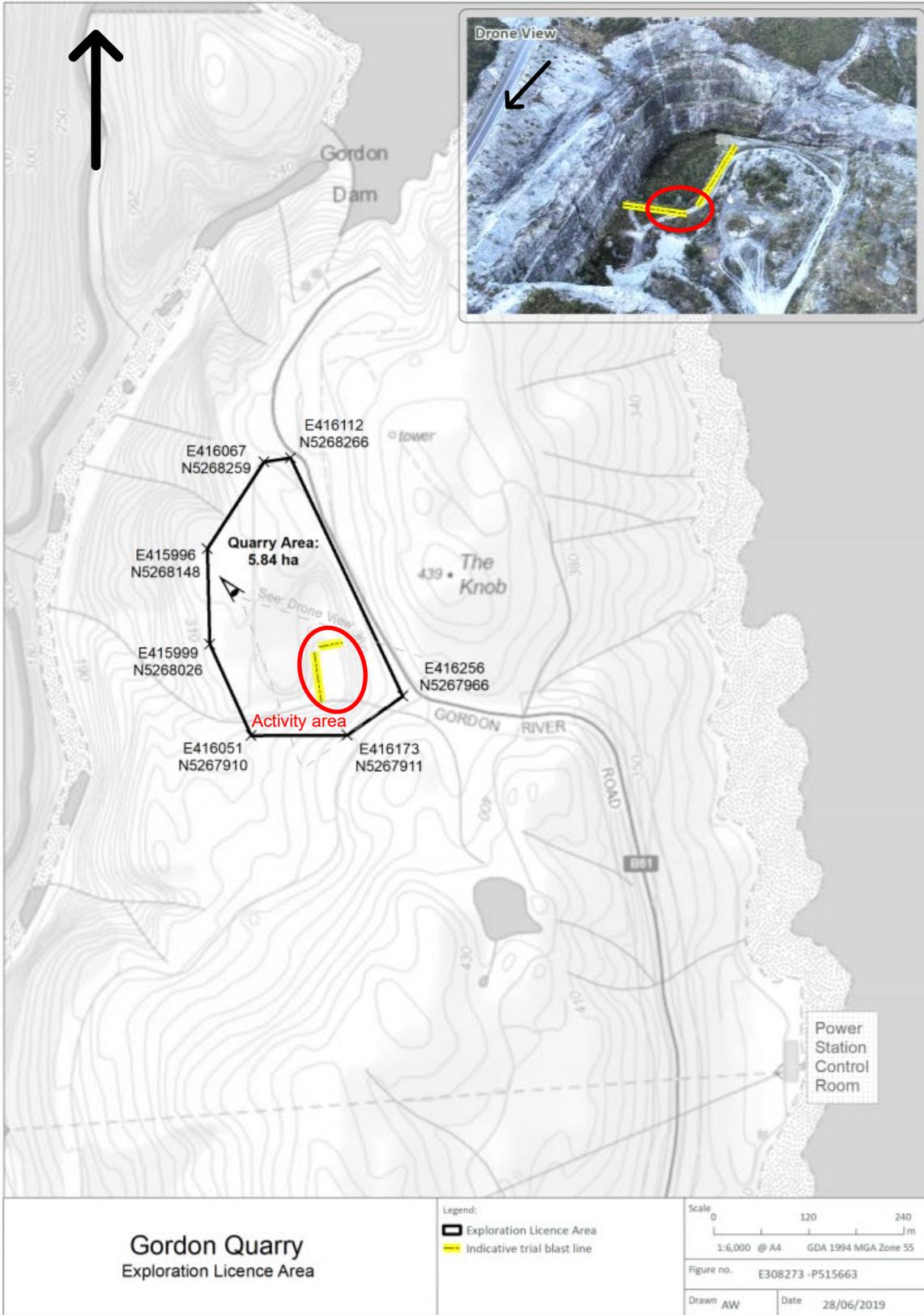
The evaluation determined there is no further need for the quarry material at this time. Despite indications the material would be suitable for a range of uses, for operational reasons, there is no current intention to use the Gordon Quarry. As such, Hydro Tasmania is surrendering exploration licence EL8/2019.

Contents

Executive Summary	2
1.0 Summary Activity Map	4
2.0 Introduction	5
2.1 Objective	5
2.2 Licence information	5
2.3 Previous works prior to current licence	5
2.4 Activities under the current licence	5
3.0 Exploration in current period	5
4.0 Environmental management	6
5.0 Expenditure	6
6.0 Conclusions	7
7.0 Future exploration	7
8.0 References	8
9.0 Appendices	9

Hydro Tasmania Standard			
Title	Gordon Quarry Final Report		Version: 0
17 th December 2019 to 12 th September 2023		Document owner:	Andrew Fowler
		Date created:	22 September 2023
Approver:	Andrew Fowler	Date approved:	16 October 2023
		Date effective:	16 October 2023

1.0 Summary Activity Map



Map: C:\Project\Quarry_half\Draw\gordon_enviro\Prod_02.mxd exported on 28/06/2019 11:53:18 AM by mlyyuda
 Source: Contour map: The LIDT, Tasmania; Base map: ESRI, DigitalGlobe, GeoEye, Earthstar, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS Community

2.0 Introduction

2.1 Objective

The objective of the exploration activities at Gordon Quarry was to determine whether its material was suitable for a range of uses, including the production of dam filters and rockfill.

2.2 Licence information

Parameter	Detail
Licence number	EL8-2019
Name	Gordon Quarry
Reporting period	17 th December 2019 to 12 th September 2023
Tenement holder and Land Owner	Hydro Electric Corporation ABN 48 072 377 158
Quarry Area	58,400 m ²
Exploration program details (first 2 years)	<ul style="list-style-type: none"> • Blast approximately 500 m³ from existing quarry face. • Sample no more than 1000 tonnes of material for processing and bulk test work. • On site testing for rockfill suitability • Disinfection, transport, off-site crushing and evaluation for filter suitability

2.3 Previous works prior to current licence

Prior to the issue of the licence in 2019, there had been no quarrying activity by Hydro Tasmania since construction of the Gordon Dam in the 1970s.

2.4 Activities under the current licence

2020 was the first and only year under this licence when quarry works were performed. A list of activities completed during the life of the licence are summarised in Section 3.0.

3.0 Exploration in current period

No exploratory activities were undertaken in the current period or since submission of the previous report. The activities conducted under the licence were limited to:

1. Investigation for limited drilling

2. Investigation and testing of *Phytophthora cinnamomi*
3. Establishment of local edge protection
4. Drilling in the location advised in the licence application
5. Charging and stemming of holes and controlled blasting
6. Preparing a level working floor in an adjacent area of the quarry
7. Carting of material to internal stockpile
8. Screening of blast materials
9. Determining blast rock particle size distribution by measurement and weighing of large particles
10. Testing particle size distribution and other characteristics of the fine particles
11. Construction of trial rockfill embankment within the quarry
12. Testing of the seismicity and infiltration/permeability of the embankment
13. Fumigation of rock material windrows to remove *Phytophthora cinnamomi*
14. Export of fumigated material for processing evaluation after disinfection of trucks

4.0 Environmental management

The quarry site has the following environmental concerns, with management undertaken as stated:

- The quarry contains *Phytophthora cinnamomi* (PC), a soil borne fungus. It produces an infection in plants that causes dieback/root rot. The site was broadly tested, with partial presence detected, but sufficiently extensive that the entire site was considered infected. This fungus is difficult to treat, so no treatment of the site prior to works was proposed or completed. Blasted material was windrowed and fumigated to remove PC prior to loading onto trucks and truck tyres were disinfected prior to transport to another location for testing.
- There are some weeds present, including Spanish heath along the access roads. The limited activities were considered unlikely to present an environmental risk, so no treatment was completed.
- There were no drainage or other issues identified at the site during the works.

Given the details above no rehabilitation after the work was proposed and site is deemed to have been left in an appropriate state.

5.0 Expenditure

Item	Expenditure
Geoscience	\$0

Drilling	\$17,000
Site preparation (hardstand)	\$15,000
Material fumigation	\$70,000
Material processing and evaluation	\$90,000
Administration	\$15,000
Surrender fee	\$187
Total	\$207,187

6.0 Conclusions

The exploration and evaluation proposed under this licence were impacted by COVID-19 and the presence of *Phytophthora cinnamomi* (PC) at the site, so extended beyond the suggested 3 months.

The evaluation completed confirmed the material in the quarry is suitable for production of a range of strong, well-graded, durable materials. The site is also suitable for the establishment and operation of crushing and processing plant, with minimal community impact.

For the following reasons the quarry is incompatible with Hydro's future planned works:

- the presence of PC
- the need to construct a truck wash and disinfection facility
- the need to disinfect material prior to export.

The inefficiencies in doing these activities outweigh the benefit of using this quarry. The material could potentially be used in areas already infected with PC.

There is no current intention to establish an extractive operation in the Gordon Quarry. Hydro Tasmania have chosen to surrender the exploration licence.

7.0 Future exploration

No future activities in the Gordon Quarry are currently planned.

8.0 References

Fowler, A. (2021) *Annual Report Hydro Tas EL8/2019*

9.0 Appendices



Figure 1: Blasted material.

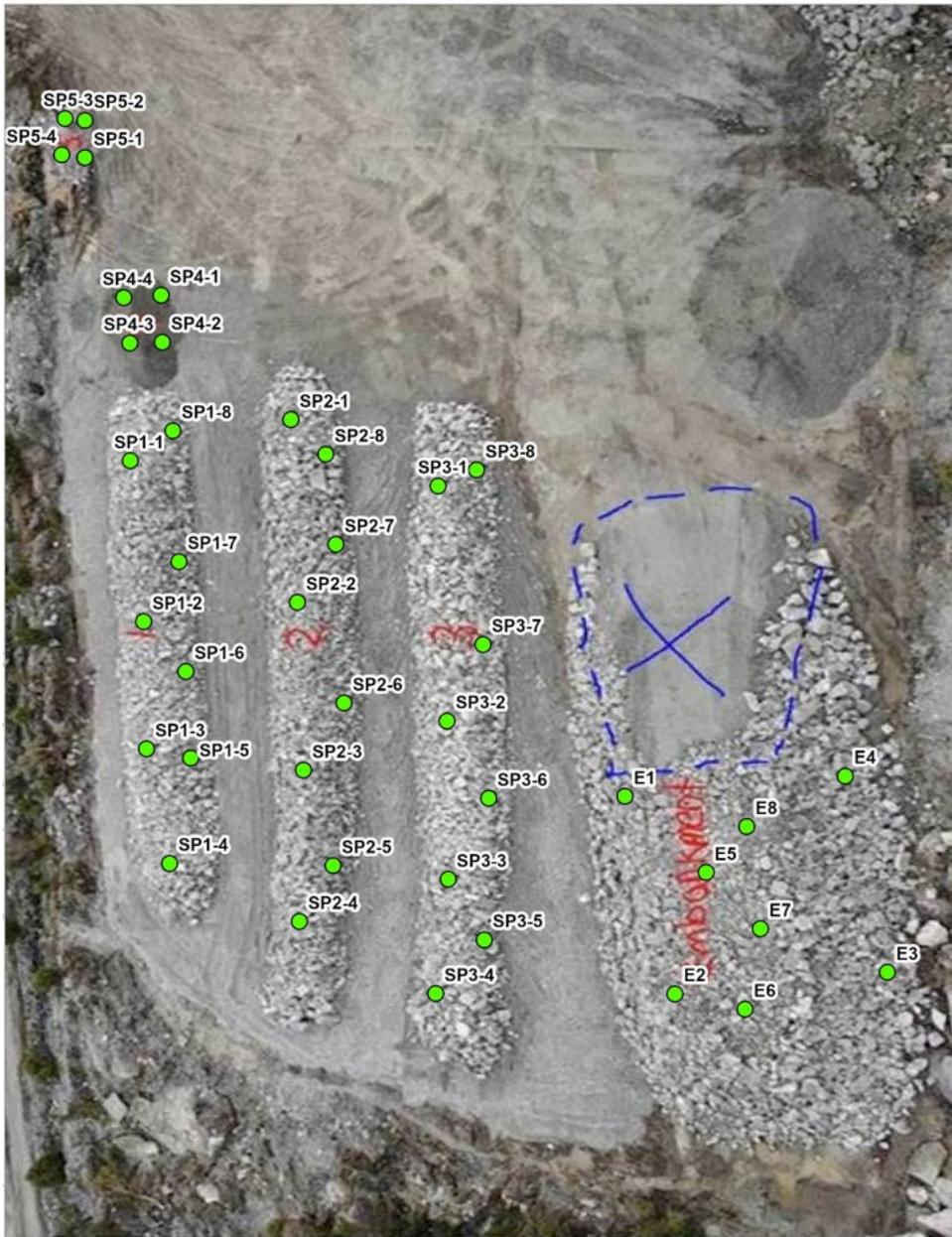


Figure 2: Windrowed material for fumigation and compaction testing.