NOTICE OF CHANGE TO AN ENVIRONMENTAL AUTHORITY APPLICATION

VULCAN COMPLEX PROJECT

for

Vitrinite Pty Ltd

March 2021

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TABLE OF CONTENTS

1 INTRODUCTION 1
2 DESCRIPTION OF CHANGE 2
2.1 Pre-Existing Bulk Sample Project Infrastructure 2
2.2 Optimisation of Open Cut Pit Shell 3
2.3 Surface Water Management 3
3 POTENTIAL ENVIRONMENTAL IMPACTS AND MANAGEMENT STRATEGIES 7
3.1 Surface Water 7
3.2 Groundwater 7
3.3 Terrestrial Ecology 8
3.4 Aquatic Ecology 8
3.5 Air Quality and Noise and Vibration 8
3.6 Waste 8
3.7 Soil and Land use 8
3.8 Cultural Heritage 8
3.9 Social 8
4 CLOSURE AND PRCP 9

FIGURES

Figure 2-1 Revised Site Layout 4
Figure 2-2 Project Disturbance Footprint Comparison 5
Figure 2-3 Approved BSP footprint Vs Proposed VCP footprint 6

1 INTRODUCTION

This notice of change to environmental authority (EA) application APP0051420 and associated Progressive Rehabilitation and Closure Plan (PRCP) is given to the Department of Environment and Science (DES) under Section 132 of the *Environmental Protection Act 1994* (EP Act). EA application APP0051420 seeks authorisation for the Vulcan Complex Project (VCP) on Mining Lease Application MLA700060.

The primary purpose of the change is to recognise, within EA application APP0051420, relevant ancillary supporting infrastructure that has been assessed and approved by DES through previous and separate EA application processes (EA0002054 and EPPR02425214) on tenures that underlie MLA700060. This infrastructure will be established to support approved bulk sampling activities in advance of VCP commencement and hence will be available for utilisation as part of VCP activities.

The changes are considered to be minor in nature. The resultant changes to potential environmental impacts and management measures are considered to be insignificant.

2 DESCRIPTION OF CHANGE

The purpose of this EA application change is to recognise minor ancillary infrastructure items approved to be established in advance of the VCP and acknowledge the proposed use of this infrastructure as part of the VCP. Vitrinite has also taken the opportunity to make minor refinements to the pit shell boundaries previously proposed following further mine plan optimisation activities. Minor adjustments to the conceptual mine water management system have been incorporated to integrate the approved pre-existing infrastructure and optimised pit shell boundaries.

No changes are proposed to the following project aspects:

- proponent;
- subject tenement and tenement boundaries;
- ERA's applied for;
- production rate;
- mining activities;
- types of ancillary infrastructure (only revised locations and footprints based on approved Bulk Sample Project (BSP) layout);
- water management strategy objectives; or
- project duration and timing.

The revised site layout is presented in **Figure 2-1**. A comparison between the former project disturbance footprint and the revised project disturbance foot print is presented in **Figure 2-2**. The following sections provide further discussion of the proposed changes.

2.1 PRE-EXISTING BULK SAMPLE PROJECT INFRASTRUCTURE

Assuming favourable bulk sample analysis results, the intention has been for the VCP to operate as a continuation of the activities commenced under the BSP approval and represent a transition to commercial mining operations. The bulk sample EA was approved in November 2019. The current VCP EA application considers the continued use of the infrastructure that was approved in the original BSP EA application. An application to amend the BSP EA was made in July 2020 and was approved in October 2020. This amendment proposed alternative BSP infrastructure layouts to realise a number of opportunities that had arisen since the original EA application assessment process. The incorporation of this new BSP infrastructure has resulted in a disconnect between the current VCP EA application layout and the authorised infrastructure layout approved through the BSP EA amendment application. This notice of change seeks to align the proposed VCP layout with that of the approved BSP.

The approved BSP ancillary infrastructure is located across MDL 3039 and EPC 1732. All BSP infrastructure to be utilised as part of the VCP, lies within the VCP MLA700060. As discussed above, the types of infrastructure are the same as those currently included in the VCP EA application, with this change notice, proposing minor amendments to infrastructure location and footprints.

The key ancillary changes to allow the use of infrastructure are:

- the relocation of the offices from the south to the north;
- the relocation of the ROM, crushing screening and product stockpile from the south to centrally within the site;
- inclusion of the BSP water transfer pipeline corridor from BMA's Windsor Dam to the VCP; and
- Relocation of the workshop and MIA from the West Out-of-Pit-Dump to the north.

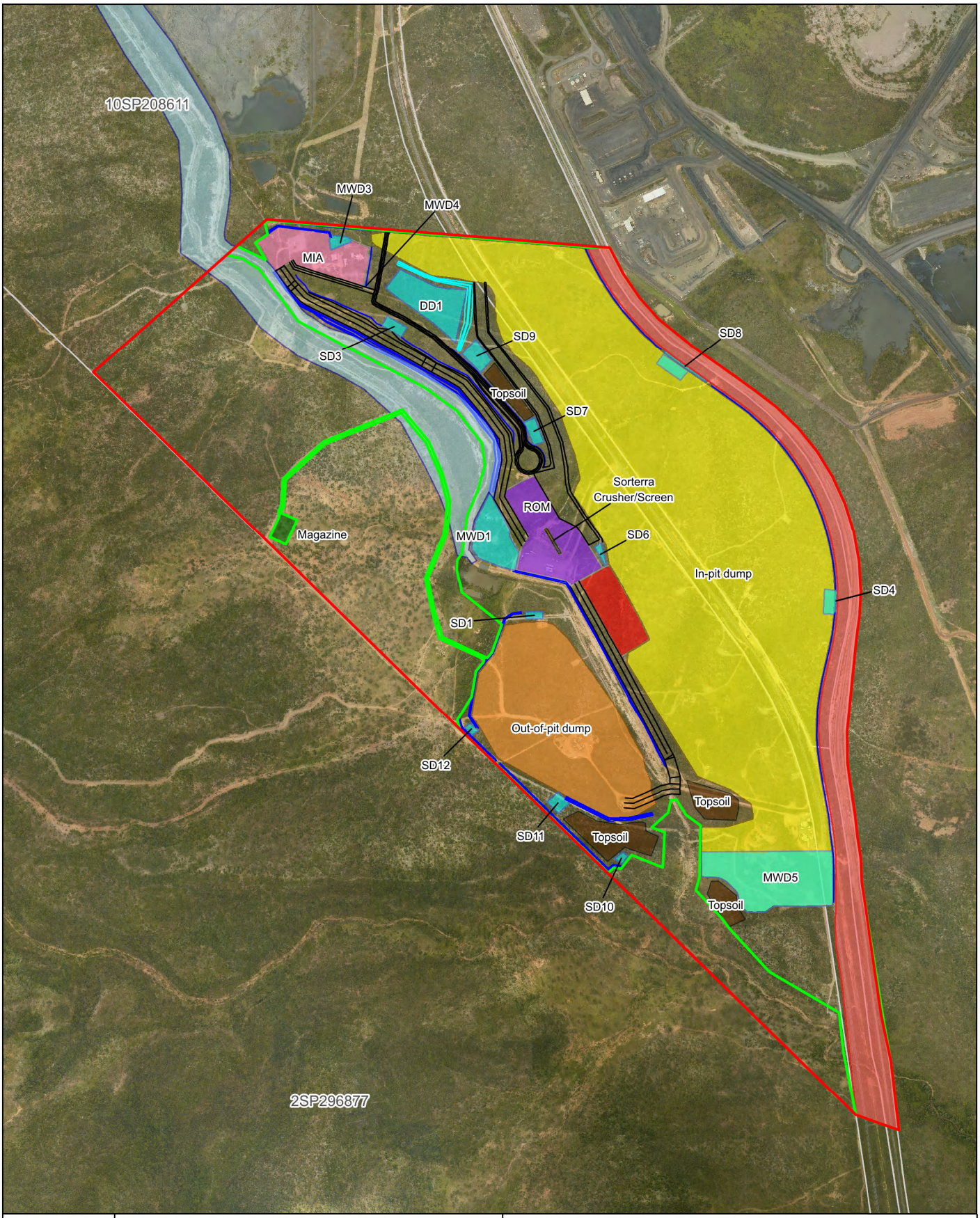
Roads and topsoil stockpiles have been adjusted where required. **Figure 2-3** presents the current approved BSP footprint and the proposed new VCP footprint.

2.2 OPTIMISATION OF OPEN CUT PIT SHELL

Further refinement of the resource target and proximity to third party infrastructure has resulted in a slight optimisation of the previously proposed pit shells. Optimisation works have resulted in an increase to the pit extent at the northern and southern extents of the previously proposed pit, however a reduction of the pit footprint to both the east and the west. The revised pit shells have also necessitated the establishment of an additional access to Saraji Road to the north (off lease). Authorisation for this access will be sought through a separate approval process. The revised pit shells are presented on **Figure 2-1**.

2.3 SURFACE WATER MANAGEMENT

The surface water management system objectives remain the same as previously proposed. Adjustments to the previously proposed water management system layout have been made to address the revised infrastructure positioning and pit shells. Vitrinite has also taken the opportunity to include a new water storage (MWD5) which will not collect runoff but will be used to store supply water and provide greater pit dewatering capacity in the event of large rainfall events. The revised water management system layout is presented on **Figure 2-1**.



LEGEND

- Access road
- Dam wall
- Drainage line
- Lotplan boundary
- Mining lease area
- Water pipeline corridor
- Maximum disturbance area

VCP Stage 2

- Crusher/Screen
- Out-of-pit dump
- Go line
- In-pit dump
- Magazine
- Stockpile
- MIA
- ROM
- Saraji Road
- Sorterra
- Dam

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Vulcan Complex Project
Proposed Site Layout

0 500 1000

Metres

Scale: 1:18,000 (A4)

03/03/2021

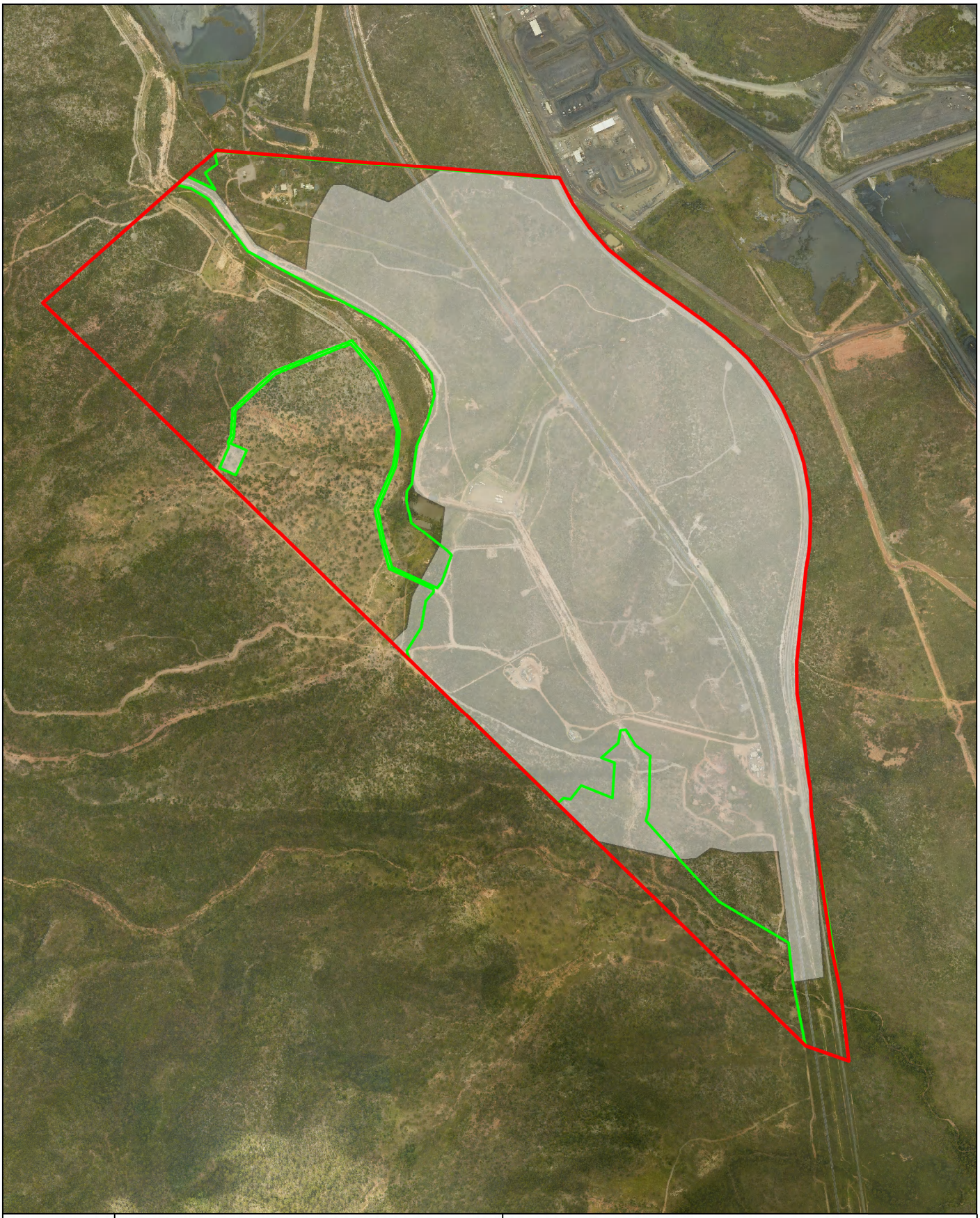
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Projection: MGA55

FIGURE 2-1

Data Source: Property Boundary - QLD Gov. (2012-2019); MDL Application Area, Infrastructure, Aerial Imagery - Vitrinite (2019).

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LEGEND

- Maximum disturbance footprint - proposed
- Maximum disturbance footprint - current
- Mining lease area
- Lotplan boundary

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Vulcan Complex Project
Proposed Disturbance Footprint versus Current Disturbance Footprint

0 500 1000
Metres

Scale: 1:18,000 (A4)

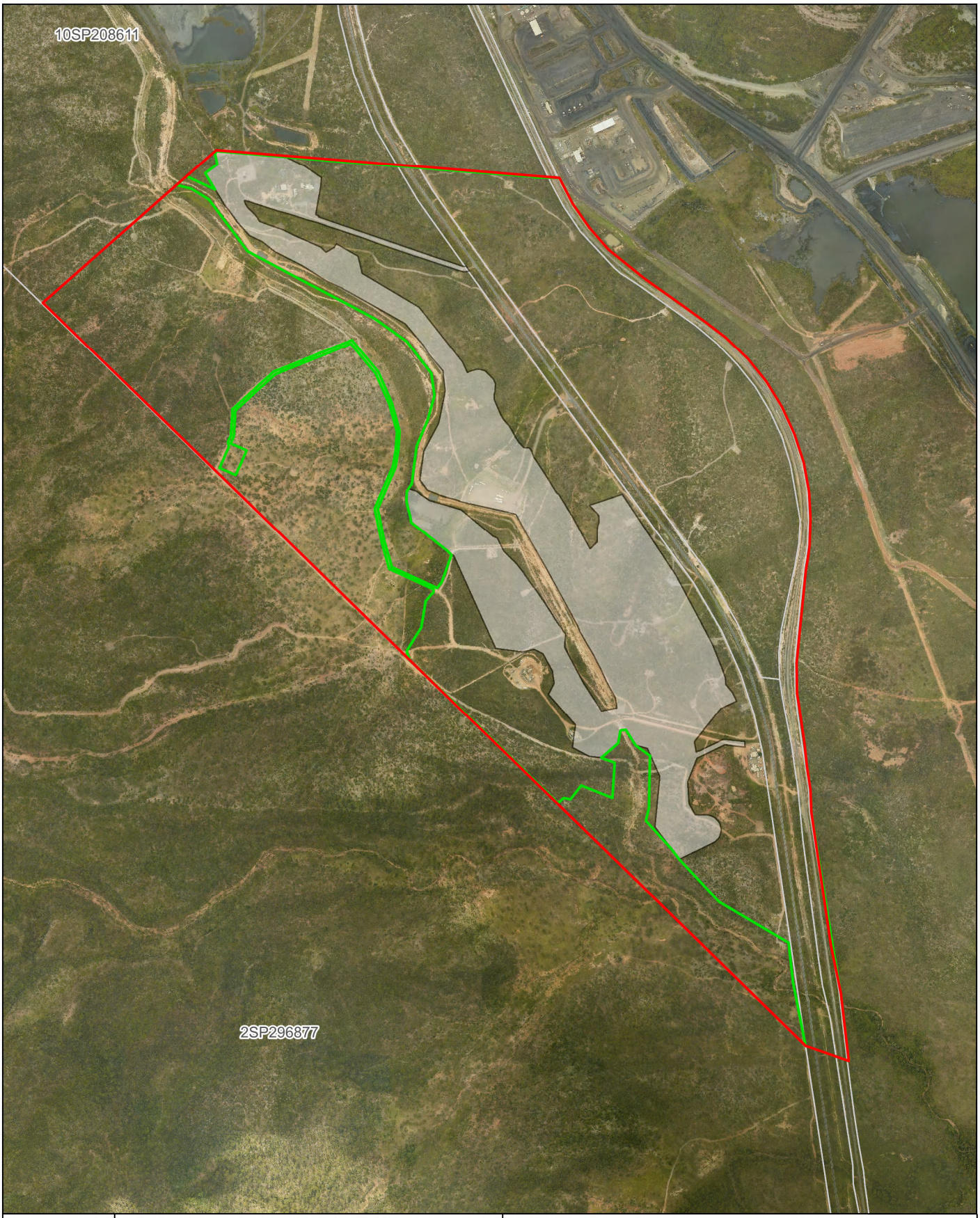
Data Source: Property Boundary - QLD Gov. (2012-2019); MDL Application Area, Disturbance footprints, Aerial Imagery - Vitrinite (2019).

03/03/2021

Datum: GDA94
Projection: MGA55

FIGURE 2-2

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LEGEND

- BSP approved maximum disturbance footprint
- VCP proposed maximum disturbance footprint
- Lotplan boundary
- Mining lease area

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Vulcan Complex Project
Proposed Site Layout versus Approved BSP Site Layout

0 500 1000

Metres

Scale: 1:18,000 (A4)

Data Source: Property Boundary - QLD Gov. (2012-2019); MDL Application Area, Disturbance footprints, Aerial Imagery - Vitrinite (2019).

03/03/2021

Datum: GDA94
Projection: MGA55

FIGURE 2-3

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3 POTENTIAL ENVIRONMENTAL IMPACTS AND MANAGEMENT STRATEGIES

Brief commentary on the effects of the proposed changes on various environmental aspects is provided in the following sections. This commentary is provided in the context of the supporting environmental assessments that accompanied the current VCP EA application.

3.1 SURFACE WATER

The proposed strategy for the management of surface water at the Project remains unchanged and is based on the separation of water from different sources based on anticipated water quality.

The main components of water-related infrastructure include:

- diverted water drains to divert runoff from undisturbed catchments around areas disturbed by mining;
- a flood protection levee along the western side of the proposed pit that may be formed by a haul road embankment;
- sediment dams and drains to collect and treat runoff from waste rock emplacement areas; and
- mine-affected water drains and dams to store water pumped out of the open cut mining areas and to collect runoff from the infrastructure areas.

The water management system for the Project has been adjusted to address the minor changes to the project layout, however still aims to protect the identified downstream EVs through the same key objectives:

- separate diverted water from mine affected water to ensure that up catchment water and mine affected water do not mix wherever practicable;
- capture of mine affected runoff (e.g. mine industrial area, haul road/ROM pad runoff), storage and priority reuse as mine water supply;
- divert up-catchment water runoff from upstream catchments around the active mining area;
- limit external catchment runoff draining into pits;
- manage sediment from disturbed catchment areas (e.g. out-of-pit waste rock emplacements, cleared/pre strip areas) by using erosion and sediment control (ESC) measures prior to release offsite;
- reuse onsite water (e.g. mine affected water) where possible to support mine operational water demands (and therefore limit mine affected water inventories under normal operating conditions); and
- manage any mine affected water releases to the receiving environment to meet environmental release conditions (not currently proposed).

It is proposed that a Water Management Plan and Erosion and Sediment Control Plan be conditioned as part of the project EA. Those plans will incorporate the revised surface water management infrastructure.

3.2 GROUNDWATER

In the vicinity of the Project, all geological formations yield low volumes of groundwater and hence would not typically be classified as aquifers in most hydrogeological settings. Based on the limited extent of groundwater in the project area and the limited changes to the pit extents, little change to the outcomes of the previous groundwater impact assessment is anticipated. That is:

- Groundwater driven pit dewatering is not anticipated to be required;
- The extent of drawdown is limited;
- Impacts on GDEs as a result of drawdown are not anticipated;
- Impacts on the existing poor quality groundwater are not anticipated; and
- Impacts on other groundwater users are not anticipated.

Potential impacts on groundwater will continue to be monitored as previously proposed.

3.3 TERRESTRIAL ECOLOGY

The change in project footprint is minor and there are no changes to the types of proposed activities to be completed on site. Slight reductions to the potential impacts on ecology are anticipated in some areas while slight increases are anticipated in others. These are however anticipated to be insignificant.

Vitrinite is currently preparing a preliminary documentation assessment and offsets strategy under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) addressing impacts on the Squatter Pigeon and the Koala. That documentation, including the offsets strategy, will be updated to address the revised footprints prior to submission in the near future. Any State offset requirements for the Echidna will be considered in the context of the revised footprints.

3.4 AQUATIC ECOLOGY

Limited aquatic ecological values exist within and downstream of the project area. The proposed changes are considered to be of no consequence to aquatic ecology values.

3.5 AIR QUALITY AND NOISE AND VIBRATION

There are no significant changes to the proposed activities on site and no sensitive residential receptors in close proximity to the Project. The proposed changes are considered to be of no consequence to the current assessment of potential impacts on acoustic and air quality values within the area and at sensitive receptors.

3.6 WASTE

No changes to waste generated and managed on site will result from the proposed changes.

3.7 SOIL AND LAND USE

As is the case with ecological values, the proposed changes will result in minor changes to the disturbance to, stockpiling of and use of the soils within the project area. All soil types with the proposed footprint have been assessed and no new soil types will be introduced. These soils are well understood along with their required management.

The PRCP (Section 4) will be updated to address the use of these soils in mine rehabilitation.

3.8 CULTURAL HERITAGE

No changes to the potential impacts or proposed management of potential cultural heritage matters are necessitated by the proposed changes.

3.9 SOCIAL

No changes to the project workforce or accommodation proposals are required by the proposed changes.

4 CLOSURE AND PRCP

This notice of change also applies to the VCP Progressive Rehabilitation and Closure Plan (PRCP). The PRCP is being updated to reflect the changes proposed. Minor updates to the project description, discussion of various rehabilitation areas and the progressive availability of those areas will be required. The project rehabilitation layout plans will be updated along with various aspects of the PRCP schedule. No significant changes to the PRCP are proposed.

No alternative post mine land uses are proposed and no change to the timeframe within which the site will be progressively rehabilitated is required.

The changes to address the project updates discussed in this change notice are being made in addition to consideration of the recently received comments from the DES PRCP team on the PRCP.