



**Hy-Tec Industries Pty Limited**

ABN: 90 070 100 702

# **Austen Quarry**

## **Overburden Emplacement Modification (MOD 2 - SSD 6084)**

### **Statement of Environmental Effects**

*Prepared by:*



**R.W. CORKERY & CO. PTY. LIMITED**

**June 2019**



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ABN: 90 070 100 702

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## Statement of Environmental Effects

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## EXECUTIVE SUMMARY

Aus-10-Rhyolite Pty Ltd (trading as Hy-Tec Industries (NSW) Pty Limited (hereafter referred to as Hy-Tec)) is proposing to modify Development Consent SSD 6084 (SSD 6084) for the Austen Quarry (the Quarry) in response to the outcomes of a geotechnical review undertaken at the Quarry that identified a potential geotechnical safety risk associated with the approved design of the overburden emplacement. This would be the second modification to SSD 6084.

The proposed modification is principally required to ensure the safety of Hy-Tec personnel working in the vicinity of the overburden emplacement and ensure that environmental commitments are maintained by engineering out a geotechnical risk to the current overburden emplacement area as well as removing risks associated with natural features such as flora and fauna and the potential for sediment to enter the Coxs River.

The proposed modification to SSD 6084 includes the following components.

1. Modification of the approved overburden emplacement boundary, including:
  - the addition of approximately 1.0ha to the overburden emplacement to the north-west; and
  - the removal of approximately 1.5ha from the overburden emplacement to the south-west.
2. Associated clearing of vegetation located within the proposed addition to the overburden emplacement boundary and conservation of vegetation in the area no longer required for the development of the overburden emplacement.

The proposed modification is being made under Section 4.55(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), as it is considered that the proposed modification would result in a negligible change to overall environmental impact and provide a net benefit to biodiversity values. The proposed modification is permissible under all relevant Commonwealth, State and local planning legislation, guidelines and policies.

The proposed modification to the overburden emplacement boundary and design would engineer out a potential geotechnical risk that would result, should a large enough volume of water come to rest between the retained strip of vegetation and the overburden emplacement. In this instance, there is the potential for loss of contact between the overburden emplacement and the natural surface to occur. Such an occurrence could result in a shear failure or a localised rotational failure of the approved overburden emplacement. A geotechnical assessment report relating to the overburden emplacement design accompanies the SoEE. Overburden management at the Quarry Site would not change under the proposed modification and the proposed overburden emplacement would continue to have design characteristics consistent with the existing operation.

There would be only minor changes to the final landform from the proposed modification. Rehabilitation strategies and methods, including progressive rehabilitation would remain consistent with the existing operation.

The proposed realignment of the overburden emplacement boundary would require clearing of an additional 1.0ha of vegetation identified as the Biometric Vegetation Type HN501 – Apple Box – Broad-leaved Peppermint dry open forest of the Abercrombie – Tarlo area, South Eastern

Highlands. To ensure that there are no greater impacts to native vegetation from the proposed modification, it is proposed to reduce the overburden emplacement at its western extent to retain an approximately 1.1ha area of HN501 – Apple Box – Broad-leaved Peppermint dry open forest of the Abercrombie – Tarlo area, South Eastern Highlands in a similar condition zone to that impacted by the proposed modification. This approach would also retain approximately 0.4ha of vegetation of the Biometric Vegetation Type HN527 – Forest red Gum – Yellow Box woodland of dry gorge slopes, southern Sydney Basin and South Eastern Highlands. On balance, an additional total of 0.5ha of native vegetation would not be disturbed or removed for the construction of the overburden emplacement as a result of the proposed modification.

It is considered that all other remaining environmental impacts associated with the ongoing operations under SSD 6084, as modified, would remain generally consistent with existing approved operations.

The proposed modification presents an overall social benefit through the provision of a safe working environment for Hy-Tec employees while minimising the potential environmental risk of a structural failure in the overburden emplacement. This is consistent with Hy-Tec's Company-wide approach to the safety of its employees and the company's environment commitments.

The health and safety of employees and environmental commitments are two of the most important elements of the design and management of all of Hy-Tec's operations. Personal safety is paramount, with this and the maintenance of existing environmental controls the principal drivers for the proposed modification. It is considered that the proposed modification would result in an overall net benefit to employee safety and environmental risks, while improving geotechnical safety at the Quarry.



# 1. INTRODUCTION

## 1.1 SCOPE AND BACKGROUND

This *Statement of Environmental Effects* (SoEE) has been prepared by R.W. Corkery & Co. Pty Ltd (RWC) on behalf of Aus-10-Rhyolite Pty Ltd (trading as Hy-Tec Industries (NSW) Pty Limited (hereafter referred to as Hy-Tec)) to support an application to modify Development Consent SSD 6084 (SSD 6084) for the Austen Quarry (the Quarry). This would be the second modification to SSD 6084. The Quarry is located on rural land, owned by the Hartley Pastoral Corporation Pty Ltd (HPC), approximately 3.5km south-southwest of the village of Hartley and 10km south of Lithgow. **Figure 1** displays the local setting of the Quarry including the village of Hartley, the Great Western Highway and Jenolan Caves Road as well as location of the Quarry in relation to the Blue Mountains and Sydney.

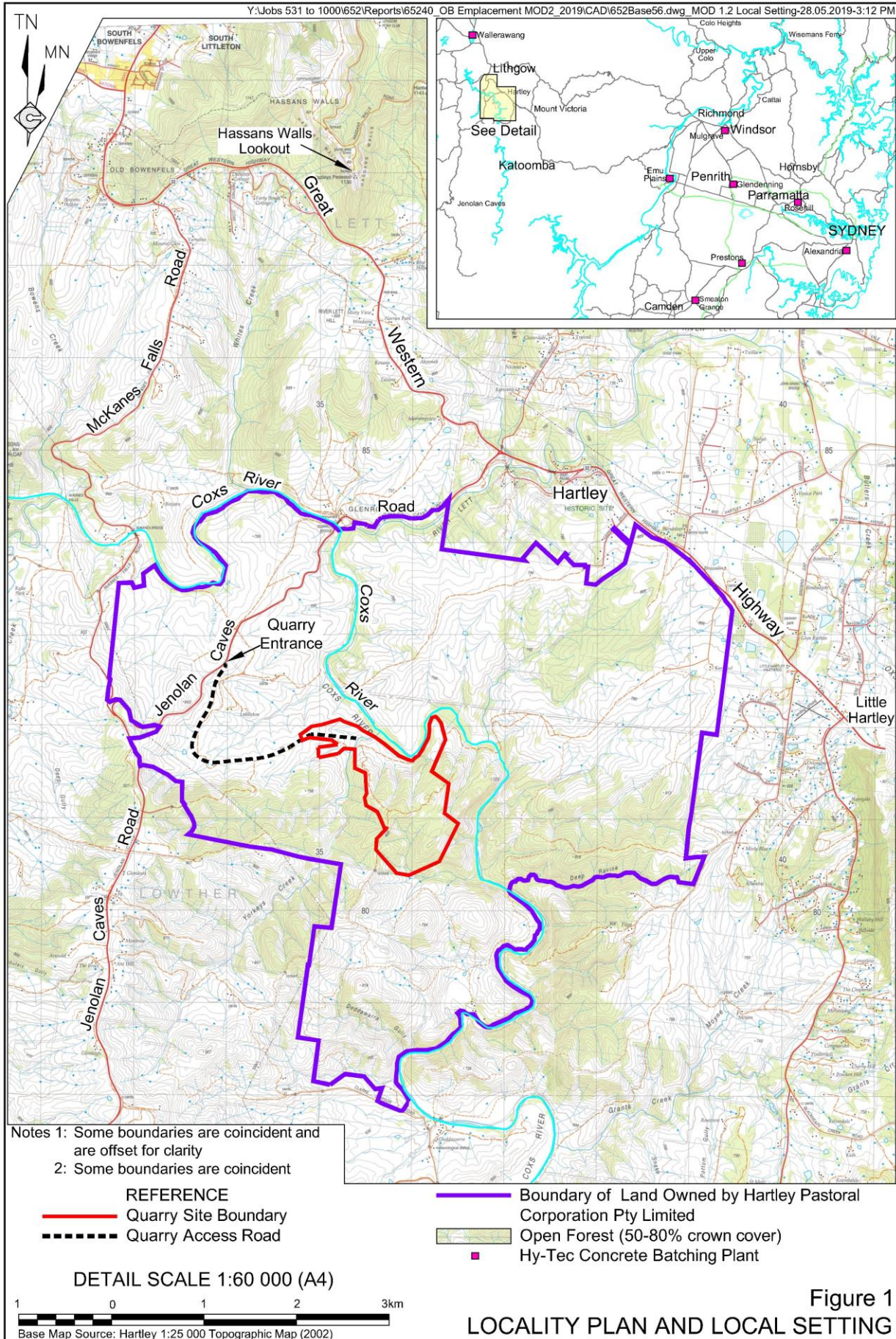
The proposed modification to SSD 6084 is being made in response to the outcomes of a geotechnical review undertaken at the Quarry and identification of a potential geotechnical safety risk associated with the approved design of the overburden emplacement. Hy-Tec takes the personal safety of its employees along with the company's environmental commitments very seriously.

The proposed modification is principally required to ensure the safety of Hy-Tec personnel working in the vicinity of the overburden emplacement and ensure that environmental commitments are maintained by engineering out a geotechnical risk to the current overburden emplacement area as well as removing risks associated with natural features such as flora and fauna and the potential for sediment to enter the Coxs River. The proposed modification to SSD 6084 includes the following components.

1. Modification of the approved overburden emplacement boundary, including:
  - the addition of approximately 1.0ha to the overburden emplacement to the north-west; and
  - the removal of approximately 1.5ha from the overburden emplacement to the south-west.
2. Associated clearing of vegetation located within the proposed addition (approximately 1ha) to the overburden emplacement boundary and conservation of vegetation in the area (approximately 1.5ha) no longer required for the development of the overburden emplacement.

Further information on each of these components and the proposed changes is provided in Sections 2 and 3. On balance, the proposed boundary change would result in a reduction in the total clearing of approximately 0.5ha required for the development of the Quarry.

The proposed modification is being made under Section 4.55(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), as it is considered that the proposed modification would result in a negligible change to overall environmental impact and provide a net benefit to biodiversity values. The development, as modified, would remain substantially the same development as that originally approved under SSD 6084. An evaluation of the proposed modification under Section 4.55(1A) of the EP&A Act is provided in Section 4.1.2. The consent authority for the modification application will be the Minister of Planning on the advice of the Secretary of DPE.



## 1.2 THE QUARRY SITE

The Austen Quarry Site (the Quarry Site) incorporates:

- the approved extraction area, overburden emplacement and processing area within Lot 1 and Lot 2 DP1005511; and
- miscellaneous stockpiles, road access and water management infrastructure on Lot 31 DP1009967;

The Quarry Access Road is located on Lot 31 DP1009967 and Lot 4 DP876394. A range of buffers to surrounding undisturbed areas are also located on the lots noted above. This land is leased by Hy-Tec from HPC.

## 1.3 EXISTING APPROVALS

In 1994, AUS10 Rhyolite Pty Ltd sought and obtained development consent for a hard rock quarry within the “Liddleton” property owned by HPC. Lithgow City Council issued development consent DA 103/94 on 24 November 1994 for the development and operation of the Quarry and ultimately endorsed the development consent on 22 March 1995. Hy-Tec entered into a lease to become the operator of the Quarry in early 2002 and commenced the sale of aggregates and other quarry products in 2005. DA 103/94 was relinquished on 15 September 2015 and operations commenced under SSD 6084.

The Quarry is operated with the following development consent, approvals and licences.

1. Development Consent SSD 6084 issued by DPE on 15 July 2015 to approve the Stage 2 Austen Quarry Extension Project. A modification to SSD 6084 was approved on 15 August 2018.
2. Environment Protection Licence (EPL) 12323 issued by the NSW Environment Protection Authority (EPA). This licence is renewed annually with the anniversary date being 1 July. A variation to EPL 12323 is currently pending.
3. Two Water Access Licences (WALs).
  - WAL 37423 (Aquifer) to access 20 units (currently 20ML) per annum of groundwater from the *Coxs River Fractured Groundwater Source* under the *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources and Works Approval 10WA119180*.
  - WAL 25616 (Unregulated River) to obtain 20 units (currently 20ML) of water per annum from the *Upper Nepean and Upstream Warragamba Water Source* under the *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources and Works Approval 10WA103330*
4. Approval EPBC 2013/6967 under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) that permits removal of the threatened plant Silver-leaved Mountain Gum (*Eucalyptus pulverulenta*) within disturbance areas of the Quarry that was determined to be a controlled action.

## 1.4 EXISTING QUARRY OPERATIONS

Existing approved Quarry operations include the following key activities.

- Rhyolite extraction through drilling and blasting.
- Loading and haulage of extracted material for on-site processing.
- Primary crushing of extracted material.
- Secondary processing of primary-crushed material using the on-site processing plant.
- Product stockpiling within stockpile areas.
- Placement of overburden within the defined overburden emplacement area.
- Product loading and despatch via Jenolan Caves Road and the Great Western Highway.

Further detail regarding existing approved Quarry operations is presented in the *Environmental Impact Assessment for the Austen Quarry Stage 2 Extension Project* (RWC 2014) and the *Austen Quarry Stage 2 Extension Project (MOD 1 – SSD 6084) Statement of Environmental Effects* (RWC 2018). Both documents are available from the Hy-Tec website and from the DPE Major Projects website<sup>1</sup>.

The majority of the products of the Quarry are transported to Hy-Tec concrete batching plants in the Sydney metropolitan area as well as a concrete batching plant in Wallerawang, to local road works and other destinations.

Operations at the Quarry would remain generally consistent with those approved under SSD 6084 and in some instances as was approved in the original 1994 development consent for the operation.

## 1.5 LEGISLATIVE AND PLANNING CONTEXT

### 1.5.1 Introduction

A number of Commonwealth, NSW, regional and local planning instruments or policies apply to the operation of the Quarry and the proposed modification. A brief summary of each relevant planning instrument is provided in the following subsections with the environmental aspects requiring consideration identified.

### 1.5.2 Commonwealth Legislation

As described in Section 1.4, Hy-Tec holds Approval EPBC 2013/6967 under the EPBC Act for the removal of 721 individual Silver-leaved Mountain Gum (*Eucalyptus pulverulenta*) plants which is a ‘controlled action’ as the plant is listed as vulnerable under the EPBC Act. As approval is required under the EPBC Act, biodiversity offsetting must be developed and implemented in accordance with the *EPBC Act Environmental Offsets Policy* (DSEWPac, 2012).

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<sup>1</sup> <https://www.hy-tec.com.au/> or <https://www.planningportal.nsw.gov.au/major-projects>

### 1.5.3 NSW Legislation

The following NSW legislation is relevant to the assessment of the proposed modification and is referenced throughout this document, where relevant.

- *Environmental Planning and Assessment Act 1979*
- *Protection of the Environment Operations Act 1997*
- *Water Management Act 2000*
- *Biodiversity Conservation Act 2016 and the Biodiversity Conservation Regulation 2017*

### 1.5.4 State Environmental Planning Context

#### **State Environmental Planning Policy (State and Regional Development) 2011**

As an extractive industry, the Austen Quarry is identified as State Significant Development under Schedule 1 (7(a)) of this SEPP by virtue of annual extraction exceeding 500 000tpa and resource quantity exceeding 5 million tonnes. As such, Ministerial approval for the proposed modification is required.

#### **State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007**

This SEPP (“the Mining SEPP”) was gazetted in recognition of the importance to New South Wales of mining, petroleum production and extractive industries and to provide proper management and orderly and economic use and development of land containing material resources. The Mining SEPP also establishes appropriate planning controls to encourage ecologically sustainable development through environmental assessment, and sustainable management.

The Mining SEPP describes the matters that the consent authority needs to consider when assessing a new or proposed modification. These matters are as follows.

- Clause 12AB Non-discretionary development standards for mining.
- Clause 12 Compatibility with other land uses.
- Clause 13 Compatibility with mining, petroleum production or extractive industry.
- Clause 14 Whether natural resource and environmental management will ensure that the development is undertaken in an environmentally responsible manner.
- Clause 15 Efficiency of resource recovery
- Clause 16 Transportation on public roads and potential conflict with residential areas or schools.
- Clause 17 Plans to ensure the rehabilitation of the development.

The proposed modification would not modify existing operations to the extent that the satisfaction of the matters would be compromised. While additional areas of vegetation clearing would be required following the proposed modification to the overburden emplacement

boundary, the total area subject to vegetation clearing and therefore overall impacts on biodiversity values would be reduced by approximately 0.5ha. The design of the final landform would be slightly modified, however rehabilitation methods would be applied as currently approved.

### **State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)**

Hazardous and offensive industries, and potentially hazardous and offensive industries, relate to industries that, without the implementation of appropriate impact minimisation measures, would, or potentially would, pose a significant risk in relation to the locality, to human health, life or property, or to the biophysical environment. As the only hazardous materials to be stored at the Quarry would be restricted to well managed diesel fuel and other hydrocarbon products, and the transport of ammonium nitrate for blasting does not exceed the relevant thresholds for Class 5.1 materials, the proposed modification is not classified as a potentially hazardous industry.

### **State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011**

The aims of this SEPP are to integrate the provision of healthy water catchments with development in catchment areas by ensuring that consent authorities must not grant consent to a proposed development unless it is satisfied that the proposed development will have a neutral or beneficial effect on water quality and not hinder the achievement of water quality objectives for the Sydney drinking water catchment.

The Quarry is located within the Warragamba catchment which forms part of Sydney's water supply. However, the proposed modification would not modify approved water management strategies or result in any change to approved impacts to the Coxs River. The reduced disturbance in the vicinity of the overburden emplacements may reduce the volume of sediment-laden runoff reporting to sediment basin SB3b, providing a net benefit and therefore this SEPP is not considered further in this document.

## **1.5.5 Local Planning Context**

### **Lithgow Local Environmental Plan 2014**

The Lithgow Council Local Environmental Plan (LEP) was gazetted in 2014 and guides development in the local government area by encouraging the proper management, development and conservation of natural resources and the built environment. The Quarry is located on land zoned RU1 – Primary Production under the LEP. The objectives of this zone are as follows.

- *“To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*
- *To minimise the environmental and visual impact of development on the rural landscape.*

- *To provide for recreational and tourist development and activities of an appropriate type and scale that do not detract from the economic resource, environmental or conservation value of the land.*
- *To maintain or improve the water quality of receiving water catchments.”*

The proposed modification would not limit the achievement of these objectives.

### **Lithgow City Council Land Use Strategy 2010-2030**

The Lithgow Land Use Strategy 2010-2030 (LCC, 2011) was endorsed by the then Department of Planning and Infrastructure in May 2012. It explores the land use and planning issues currently facing the LGA and provides recommendations for resolving these issues.

The proposed modification would not result in changes to the existing operation that would impact the land use and planning issues relevant to the proposed modification. Impacts to the threatened plant Silver-leaved Mountain Gum (*Eucalyptus pulverulenta*) would not change under the proposed modification.

LCC (2011) highlights that the biggest threat to primary production resources within the LGA is continued fragmentation, predominantly for rural lifestyle development. However, the proposed modification would not impact the primary production resources of the LGA.

## **1.6 CONSULTATION**

Hy-Tec has consulted with the Department of Planning and Environment to seek any assessment requirements for the proposed modification. Given that the proposed modification is principally related to the operating safety of employees and to maintain environmental controls and is predicted to result in only minor changes to the operation and its potential impacts, no broader community consultation has been undertaken.

## 2. DESCRIPTION OF THE PROPOSED MODIFICATION

### 2.1 OVERVIEW OF THE PROPOSED MODIFICATION

Hy-Tec is proposing to modify the approved boundary of the overburden emplacement to resolve an identified geotechnical risk with the approved design and to improve the safety of Hy-Tec personnel operating in the area. It is noted that the approved overburden emplacement is yet to be fully constructed to its northern boundary and therefore the risk is not with the existing landform. The risk would result from construction of the approved emplacement design.

In the event that a large enough volume of water should come to rest between the retained strip of vegetation and the overburden emplacement, there is the potential for loss of contact between the overburden emplacement and the natural surface to occur. Such an occurrence could result in a shear failure or a localised rotational failure of the approved overburden emplacement. A geotechnical assessment report relating to the overburden emplacement design is presented as **Appendix 1** and reviewed in more detail in Section 3.2.

Hy-Tec intends to modify the design of the overburden emplacement, including extending the northern boundary of the emplacement as far as the extraction area access road (the addition of 1.0ha). To ensure there are no greater impacts to native vegetation at the Quarry, the emplacement would be reduced by 1.5ha at its western extent.

**Figure 2** presents the proposed Quarry layout, noting that the only change compared to the approved layout is the boundary of the overburden emplacement.

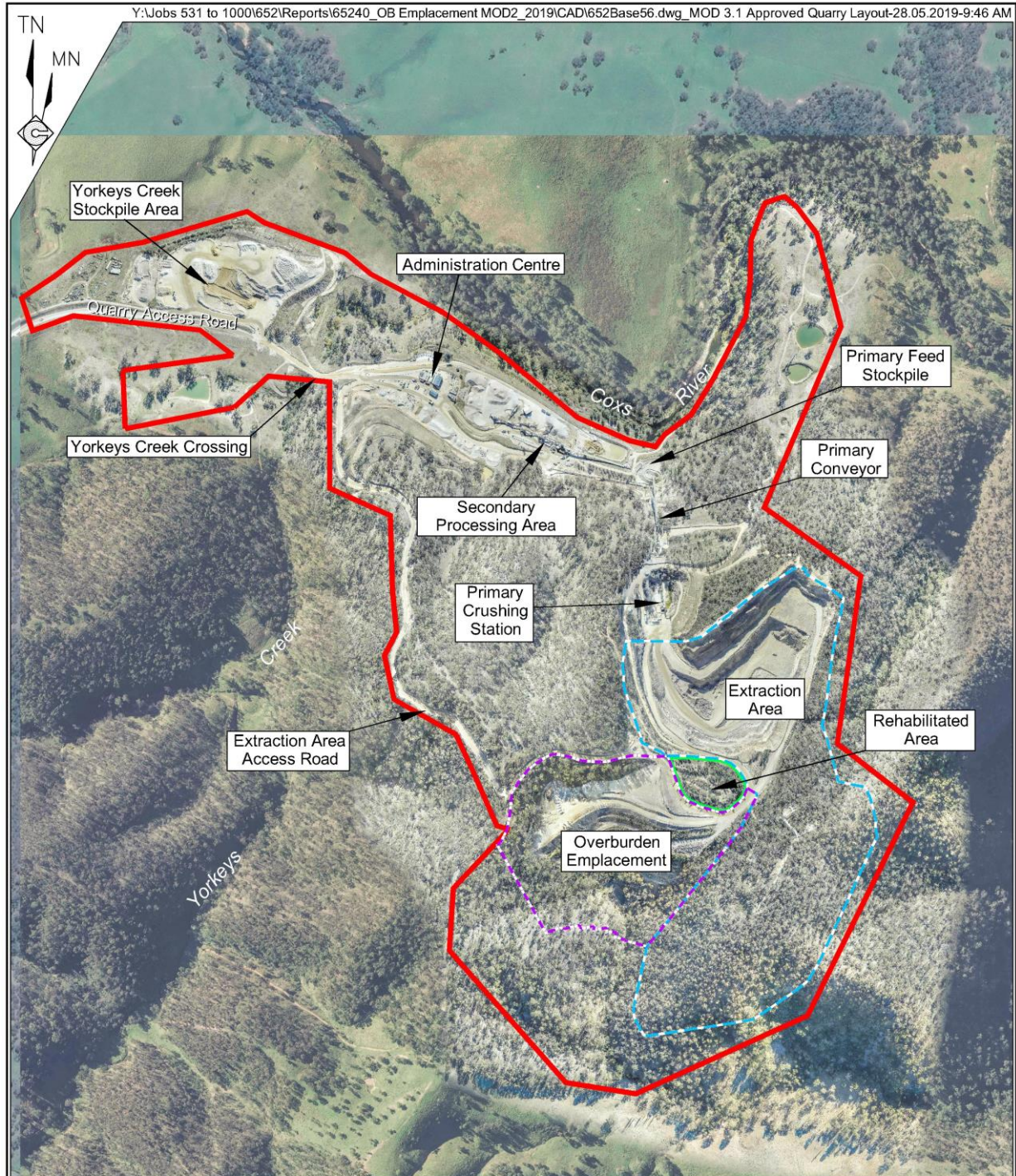
**Figure 3** presents a comparison of the approved and proposed Quarry layout with the indicative design of the extraction area and overburden emplacement.

### 2.2 APPROVALS REQUIRED

Hy-Tec is seeking a modification to the approved Quarry Layout presented as Appendix 2 of SSD6084. No changes to the wording of conditions within SSD6084 are required as a result of the proposed modification. Minor modification to the wording of Action 6.1(a) of the Statement of Commitments provided as Appendix 3 of SSD 6084 would also be required. The minor change to the landform will also require adjustment of the Conceptual Final Landform presented as Appendix 4 of SSD 6084.

No modification to the Scheduled Activity specified in EPL 12323 would be required as the operation would remain within the existing scale of 500 000t to 2 000 000t of material extracted, processed or stored.





**Note:** Some boundaries are coincident and are offset for clarity

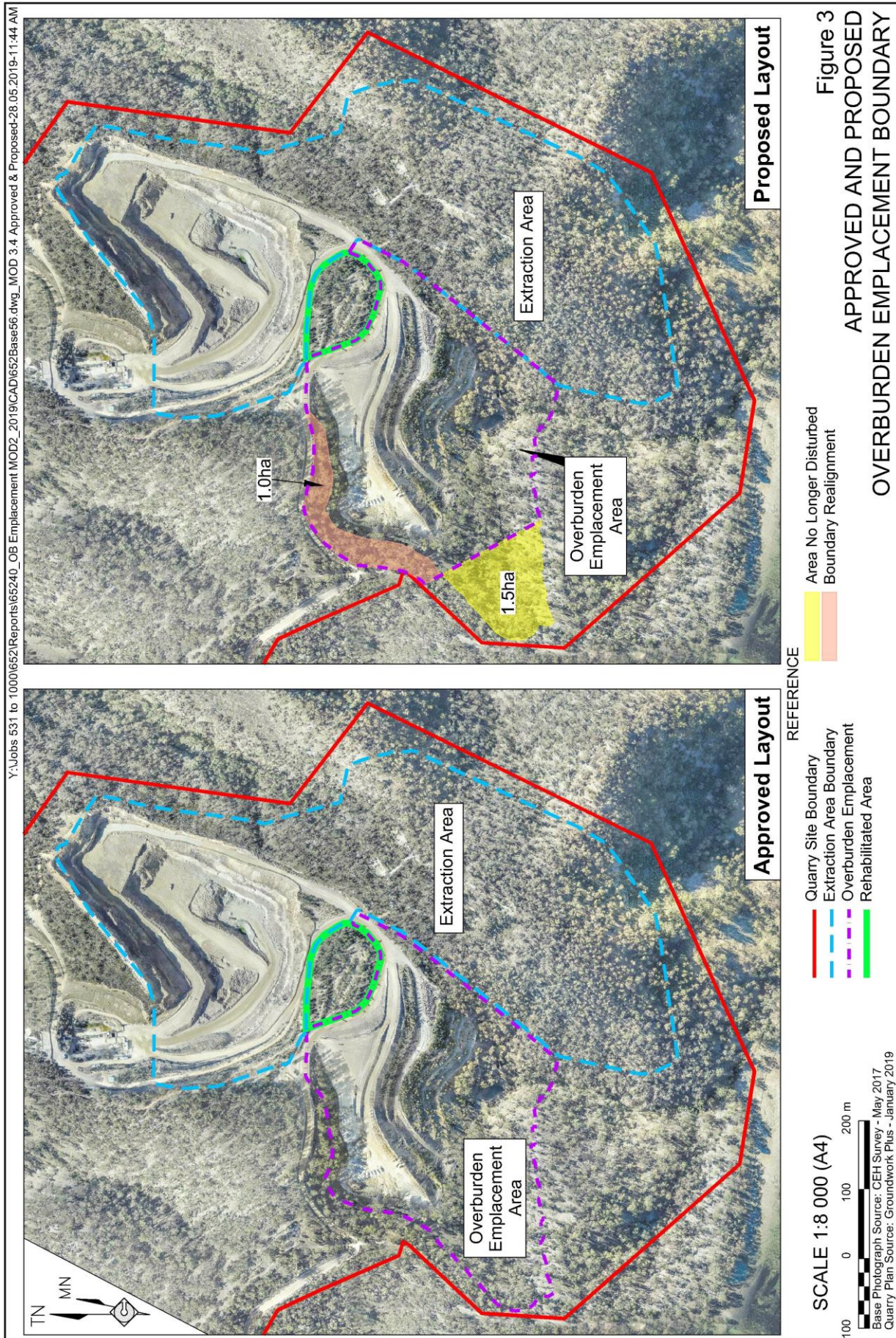
- REFERENCE
- Quarry Site Boundary
  - - - Extraction Area Boundary
  - - - Overburden Emplacement Area Boundary
  - Rehabilitated Area (Offset for Clarity)

SCALE 1:12 000 (A4)



Quarry Plan Source: Groundwork Plus - December 2017  
 Base Photograph Source: CEH Survey - May 2017 & Google Earth -  
 October 2016 (surrounds)

Figure 2  
 PROPOSED QUARRY LAYOUT



### 2.3 OVERBURDEN EMPLACEMENT DESIGN

The currently approved overburden emplacement design retains a thin strip of vegetation between the extraction area access road and the northern side of the overburden emplacement (see **Plate 1**). This strip of vegetation occurs on a south-facing slope which falls approximately 18m in elevation from the extraction area access road (approximately 822m AHD) to the northern edge of the approved overburden emplacement (approximately 804m AHD). From its northern edge, the overburden emplacement as designed would rise 24m to a maximum elevation of 828m AHD. It is proposed that this strip of retained vegetation be incorporated into the overburden emplacement.



**Plate 1 Overburden Emplacement and Retained Vegetation Strip**  
(Photo Source: Groundwork Plus)

In order to address the identified geotechnical risk associated with the approved overburden emplacement design, the proposed modification would expand the boundary of the emplacement by approximately 1.0ha on its northern side (**Figure 3**). To avoid additional impacts upon vegetation which would alter the approved biodiversity offsetting obligations for the Quarry, Hy-Tec would reduce the western extent of the overburden emplacement by approximately 1.5ha (**Figure 3**). In total, the proposed modification would therefore result in a reduction of the overburden emplacement area by approximately 0.5ha. Hy-Tec does not propose to alter the approved biodiversity offsetting obligations to reflect this reduction in the total disturbance area.

The proposed realignment of the overburden emplacement would slightly decrease the total storage capacity of the structure. However, compaction over time is likely to slightly increase the density of the overburden stockpiled and therefore it is anticipated the modified design would result in only a small change to the total available storage volume. Additionally, Hy-Tec has recently found that there is a growing market for fill and other materials such that some of this material that was planned to be stored in the emplacement structure can now be sold as product. Practically this further decreases the storage requirements of the structure. Importantly given the long life of the Quarry, it is considered realistic that demand for civil and other infrastructure projects would require more of this material, further reducing the estimated total storage requirements.

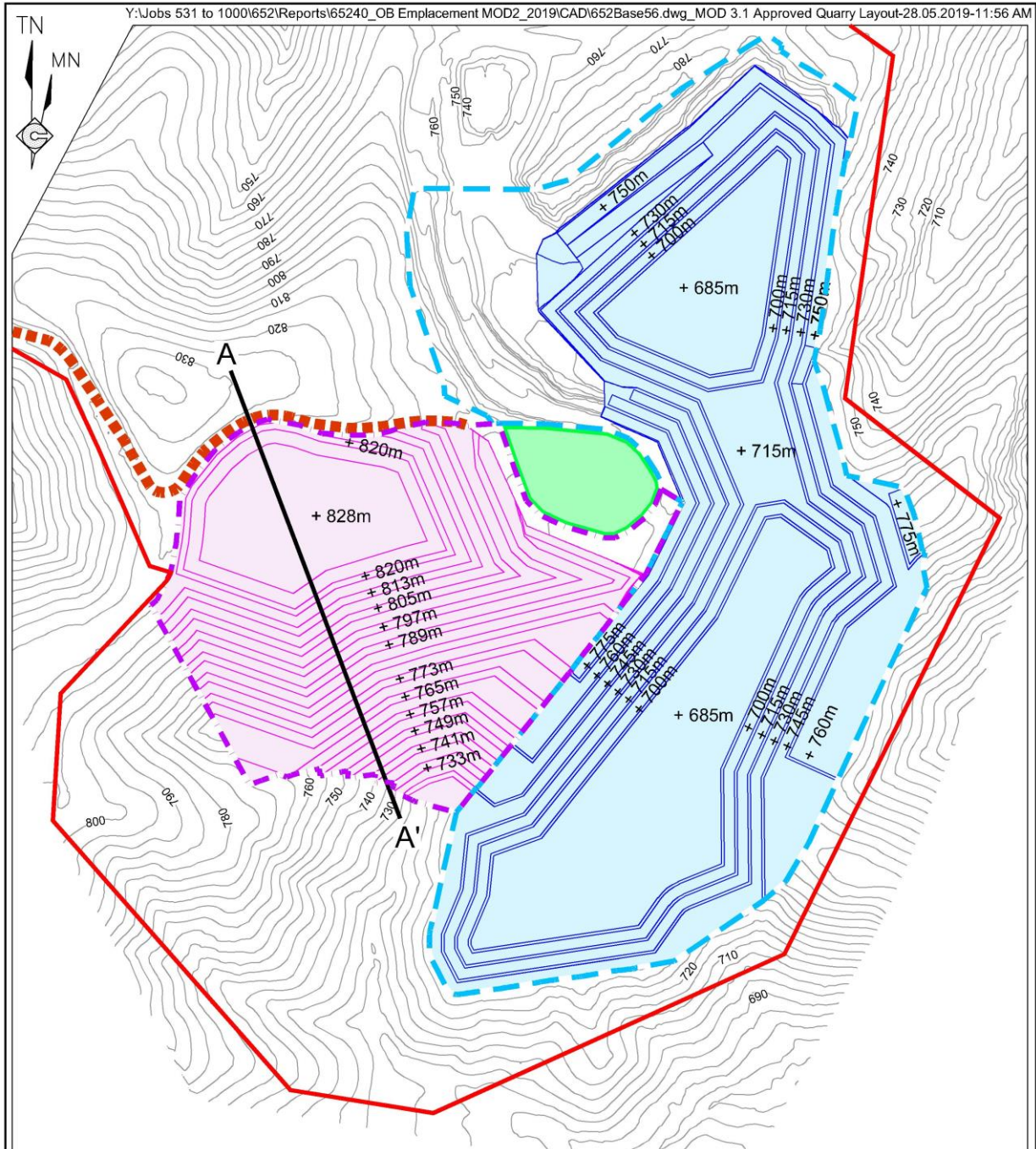
Hy-Tec is confident that the storage volume available remains sufficient for the overburden material that will be generated over the life of the Quarry. The change in volume is presented in **Table 1**. The proposed overburden storage capacity remains 1.38Mt higher than anticipated production.

**Table 1**  
**Existing Approved and Proposed Production and Overburden Storage Capacity**

	Units	Existing Approved	Proposed	Change in Production
Total Production	bcm	18 870 400	18 870 400	No Change
Rhyolite Production <sup>1</sup>	bcm	17 252 592	17 252 592	No Change
	t	44 856 739	44 856 739	No Change
Overburden Production <sup>2</sup>	bcm	1 617 808	1 617 808	No Change
	t	3 235 616	3 235 616	No Change
Overburden Storage Capacity <sup>2</sup>	bcm	2 669 292	2 308 600	-360 692
	t	5 338 584	4 617 200	-721 384
bcm = bank cubic metres				
Note 1: In situ density = 2.6t/m <sup>3</sup>				
Note 2: In situ density = 2.0t/m <sup>3</sup>				
Source: Groundwork Plus				

**Figure 4** presents the indicative design of the approved extraction area and the proposed overburden emplacement while **Figure 5** presents a cross section of the existing approved overburden emplacement layout and the proposed overburden emplacement layout. The cross section in **Figure 5** demonstrates the area where it has been identified that water may pool and result in geotechnical failure.

In order to ensure that water is not pooling against the proposed design of the overburden emplacement, a drain would be constructed on the southern side of the extraction area access road. Runoff would be diverted away from the northern boundary of the overburden emplacement. A drain on the northern boundary of the overburden emplacement is consistent with water management approved for the existing operations and described in the approved *Water Management Plan* (Groundwork Plus, 2018). There would therefore be only minimal changes to existing approved water management structures. Water captured on and directly to the north of the overburden emplacement would continue to be managed in accordance with the approved *Water Management Plan* (Groundwork Plus, 2018). Ultimately, the total volume of water reporting to dam SB3b would be reduced under the proposed modification due to the reduced total area of the overburden emplacement.



Note: Some boundaries are coincident and are offset for clarity

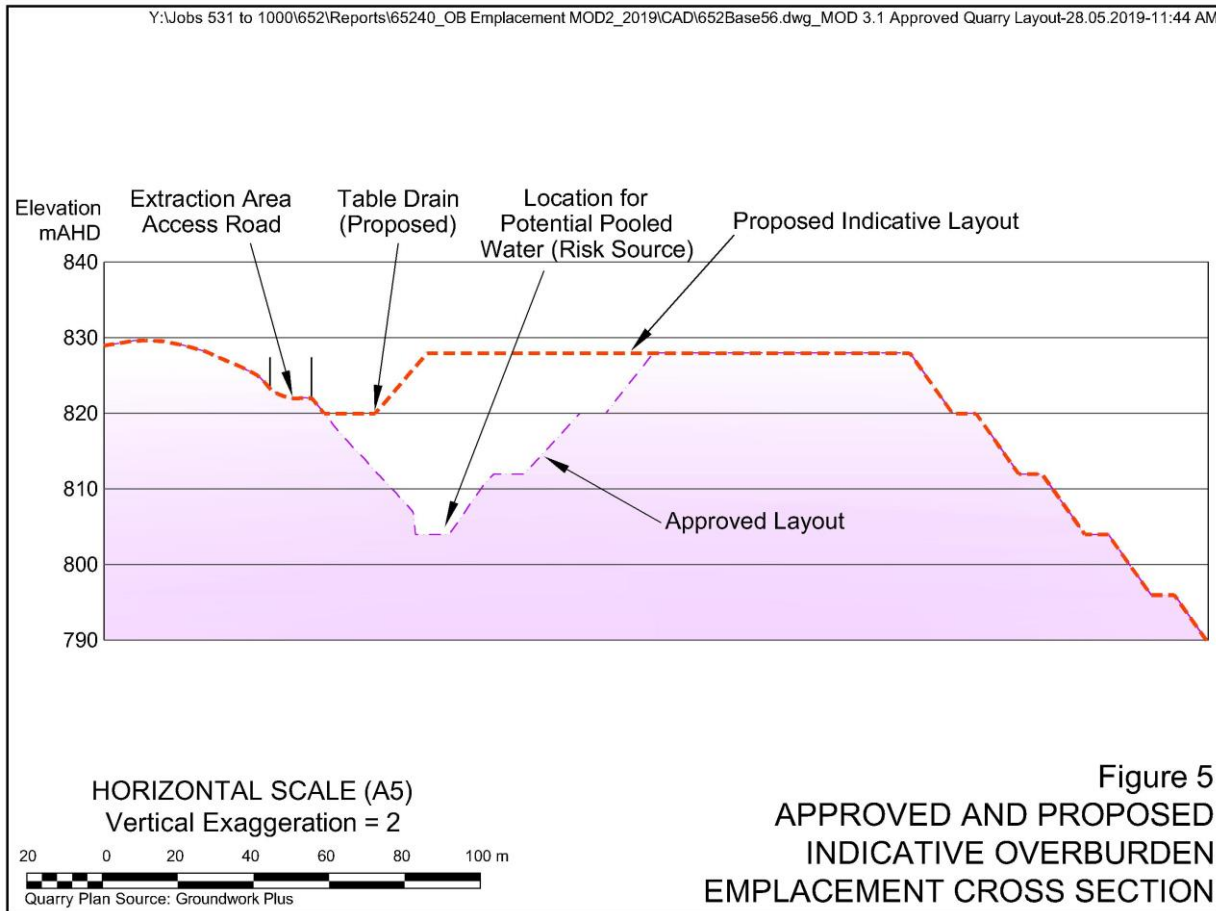
- REFERENCE
- Quarry Site Boundary
  - - - Extraction Area Boundary
  - - - Overburden Emplacement Area Boundary
  - Rehabilitated Area (Offset for Clarity)
  - - - Extraction Area Access Road
  - Existing Contour (mAHD)(Interval = 5m)
  - Design Contour (Extraction Area)
  - Design Contour (Overburden Emplacement)
  - + 685m Spot Height (mAHD)
  - Section Line (See Figure 5)

SCALE 1:6 000 (A4)



Quarry Plan Source: Groundwork Plus

Figure 4  
INDICATIVE EXTRACTION  
AREA AND OVERBURDEN  
EMPLACEMENT DESIGN



## 2.4 OVERBURDEN MANAGEMENT

Hy-Tec notes that the management of overburden would not change as a result of the proposed modification. Overburden management at the Quarry Site is summarised as follows.

- The total volume of overburden generated by the Quarry would be 3 235 616t (1 617 808bcm).
- The overburden management strategy at the Quarry Site involves overburden placement to form an emplacement with the following features (see Figure 1 of **Appendix 1** for detailed design).
  - Batter angle – no greater than 35°
  - Total slope angle (toe to crest of emplacement) – no greater than 25°
  - Lift height – approximately 10m
  - Bench width – approximately 6m.
  - Maximum elevation of approximately 828m AHD.
- Benches within the Overburden Emplacement would be internally draining to reduce sheet flow erosion, with a windrow at the crest of each bench.
- Fine material and low strength clays would continue to be encapsulated in the centre of the emplacement lifts to ensure stability.

- Emplacement lifts would be progressively stabilised, a suitable growth medium applied and groundcover established to reduce dust generation and potential erosion.
- There would be no changes to the proposed progressive and final rehabilitation strategy or final land use (native vegetation conservation).

## 2.5 REHABILITATION

The proposed modification to the boundary of the overburden emplacement would result in only minor amendments to the shape and design of the indicative final landform (**Figure 6** and **Figure 7**). Overall, the reduction to the overburden emplacement footprint area would reduce the areas that would require treatment and revegetation activities. Therefore, the progressive development and progressive rehabilitation activities would remain consistent with the approved development, albeit within a slightly smaller area.

Rehabilitation strategies and methods would remain generally consistent with that described in the *Environmental Impact Statement for the Austen Quarry Stage 2 Extension Project* (RWC 2014) and the *Austen Quarry Stage 2 Extension Project (MOD 1 – SSD 6084) Statement of Environmental Effects* (RWC 2018). Progressive rehabilitation activities are also described in the approved *Landscape and Rehabilitation Management Plan* (RWC, 2016) for the Quarry.

The realigned overburden emplacement would not result in significant changes to the outlook of vantage points to the north and northeast such as Hassan's Walls and the outlook from properties to the south and southeast of the Quarry Site. **Figure 7** presents cross-sections of the final landform indicating that the final overburden emplacement would be developed to an elevation of approximately 828m AHD, which is consistent with both the approved overburden emplacement and the nearby ridge.

The proposed final landform (**Figure 6**) is not sufficiently different to the currently approved final landform to require alternative strategies for erosion and sediment control.

Finally, it should be noted that the approved *Landscape and Rehabilitation Management Plan* (RWC, 2016) for the Quarry would be updated following determination of the modification application to reflect the realigned boundaries and updated final landform. This document already provides a comprehensive guide to progressive and final rehabilitation of the Quarry and would be subject to the approval of the DPE and ongoing review by Hy-Tec throughout the life of the Quarry.

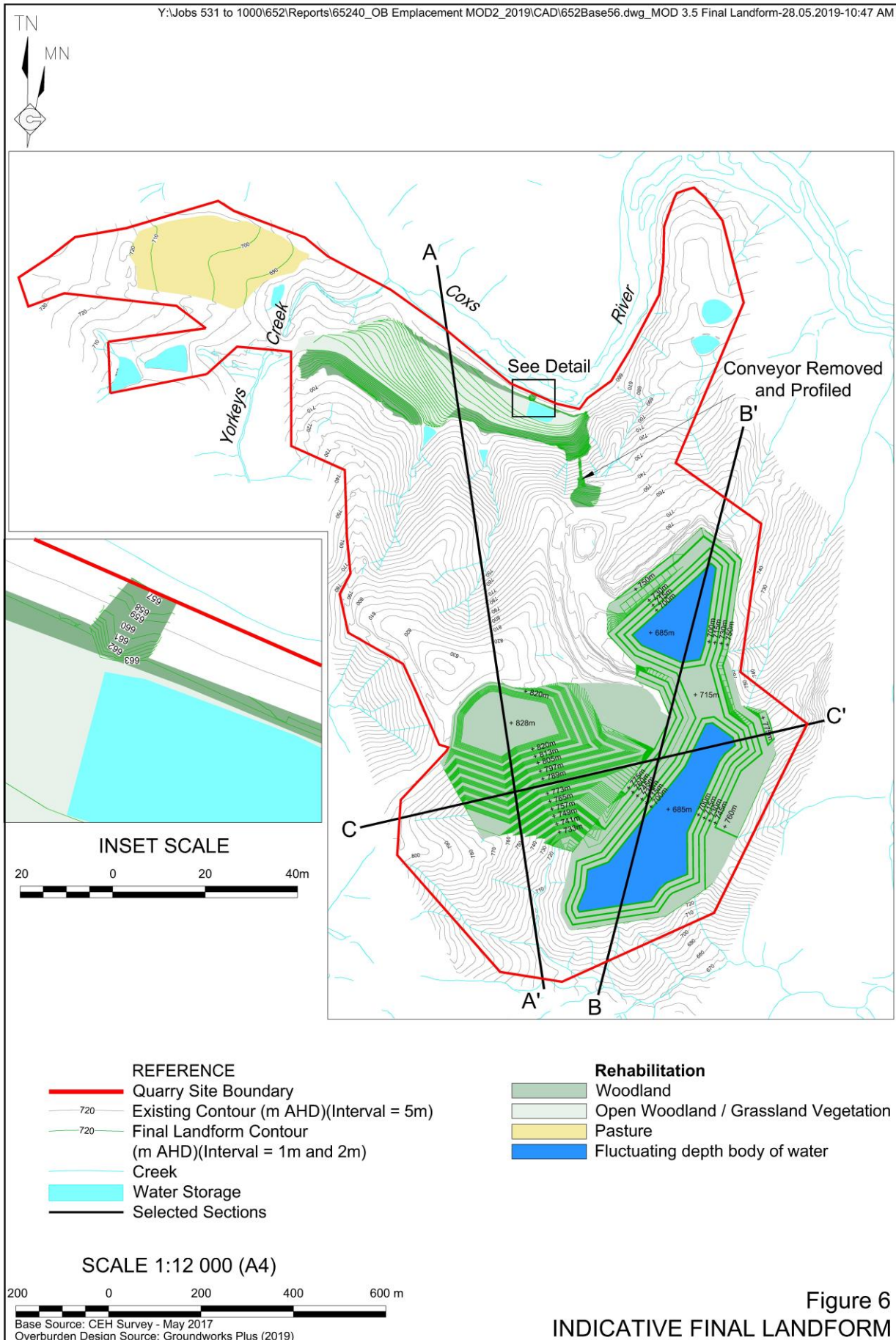
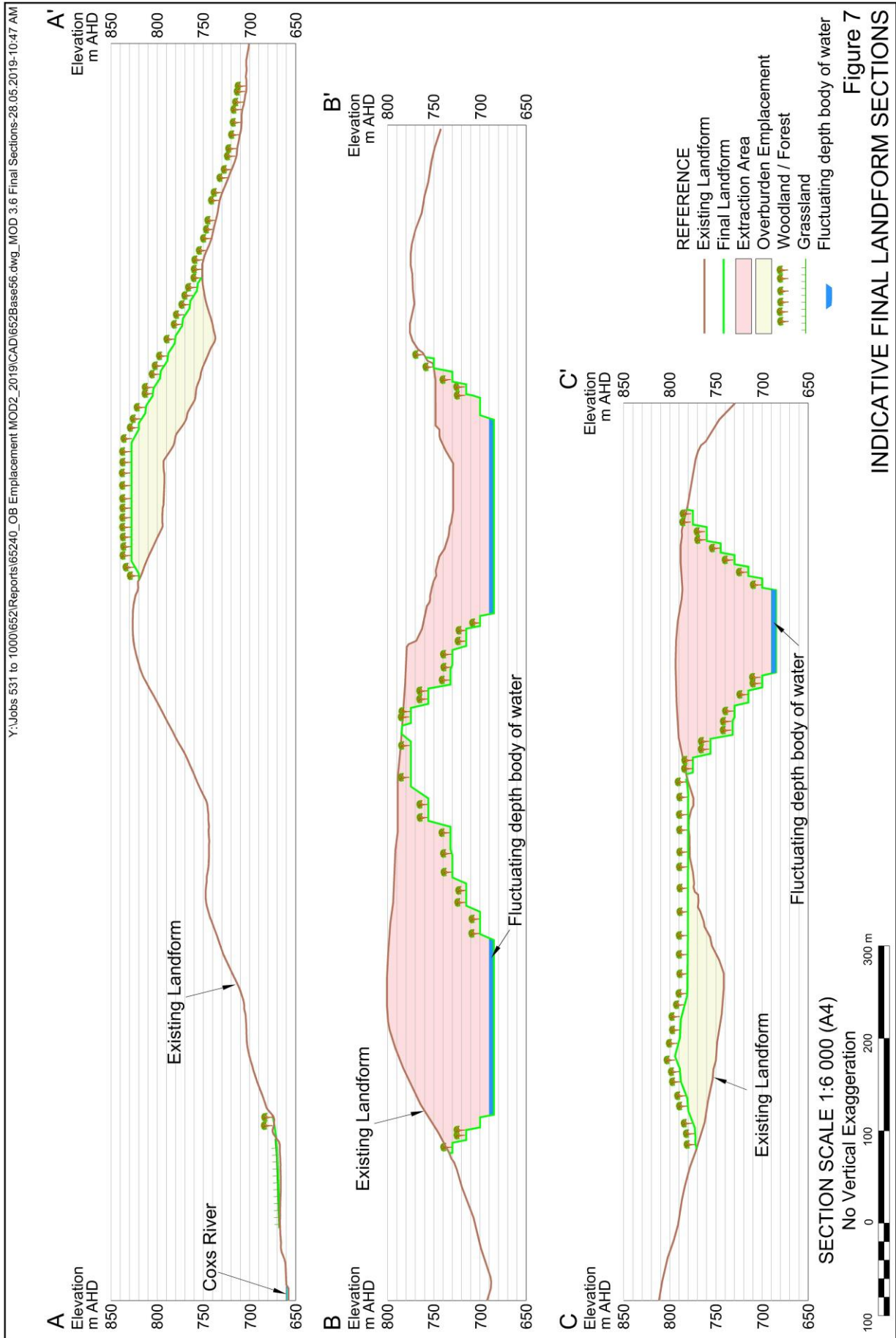


Figure 6  
 INDICATIVE FINAL LANDFORM





### 3. ASSESSMENT OF ENVIRONMENTAL EFFECTS

#### 3.1 INTRODUCTION

The following subsections provide an overview and assessment of the key environmental issues that have been identified as potential constraints on the proposed modification.

#### 3.2 GEOTECHNICAL SAFETY

##### 3.2.1 Introduction

The proposed modification represents a response to the findings of a geotechnical review undertaken at the Quarry by Mr Rod Huntley of Groundwork Plus (BSc, MAppSc (Mining and Economic Geology), MEng (Rock Mechanics)). The outcomes of that review and the intended design response to the identified risk are presented as **Appendix 1** and hereafter referred to as Groundwork Plus (2019).

##### 3.2.2 Geotechnical Risk

A site inspection and review of the overburden emplacement structure was completed by Groundwork Plus following the identification of water ponding, which was observed to occur intermittently between the overburden emplacement structure and the adjacent natural surface. It was recognised that water ponding could provide a potential mechanism for shear or localised rotational failure of the approved overburden emplacement structure, representing a threat to the long-term stability of the landform and therefore a geotechnical risk with potential to cause significant personal or environmental harm. A geotechnical audit of the emplacement structure is provided in **Appendix 1**, which identifies that there has been no significant incidents with the existing structure, however, notes the potential risk associated with the structure, as designed and approved. Groundwork Plus (2019) assessed the approved design of the overburden emplacement and determined that the approved design included a potential failure mechanism which threatened the long-term geotechnical stability of the landform.

##### 3.2.3 Design and Operational Controls

Groundwork Plus (2019) presents a modified overburden emplacement design aimed at addressing the identified geotechnical risk associated with the approved emplacement structure (also presented as **Figures 3 and 4**). In summary, the area where water was observed to pool would be filled with overburden material to the approved height of approximately 828m AHD, with a drain constructed on the southern side of the existing extraction area access road to divert water around the structure. Groundwork Plus (2019) notes that filling this additional area and diverting water away from the emplacement structure would effectively engineer out the identified geotechnical risk.

In addition to the above modification of the overburden emplacement boundary, the only further changes to the approved overburden emplacement design would include modification to the landform geometry and the widening of the upper bench to accommodate the additional fill area (see **Figure 3 and 4**). The following approved design criteria and construction processes,

having been demonstrated to be both geotechnically stable and suitable for the Quarry Site, would not be changed as a result of the proposed modification.

- Approximately 10m batter heights, placed at the angle of repose of the material.
- Approximately 6m wide outer bench widths.
- A maximum total slope angle of the structure of 25 degrees.
- Placement of fines, clays and lower strength material within the core of the structure, followed by encapsulation using higher strength rubbles.
- Grading of downstream faces at between 3 and 5 degrees towards the centre of the structure to help manage water quality and prevent batter erosion.
- Rehabilitation upon completion of the structure in accordance with the approved rehabilitation strategy.

A detailed design of the overburden emplacement is provided Figure 1 of Groundwork Plus (2019) and would be used to guide progressive development of the structure.

### 3.2.4 Assessment of Environmental Effects

The proposed modification to the design of the overburden emplacement would minimise geotechnical risks associated with the landform by addressing the identified potential mechanism for failure associated with the approved emplacement design.

Considering the above, Hy-Tec contends that the proposed modification would represent an improvement in the safety and stability of the final overburden emplacement landform while also generating a net positive environmental outcome by reducing the total amount of native vegetation cleared at the Quarry Site by approximately 0.5ha.

A minor reduction in storage capacity in the designed structure would remain satisfactory for the volume of overburden material estimated to be generated over the life of the Quarry.

## 3.3 BIODIVERSITY

### 3.3.1 Introduction

Landscape management activities including vegetation clearing and progressive rehabilitation are outlined in the approved *Landscape and Rehabilitation Management Plan* (RWC, 2016) for the Quarry Site. A field survey and terrestrial ecology assessment of the Quarry Site was originally undertaken by Niche Environment and Heritage Pty Ltd (Niche) for the preparation of the *Environmental Impact Statement for the Stage 2 Expansion Project* (RWC, 2014) to identify the biodiversity setting and biodiversity features of the Quarry (Niche 2014). Niche has relied upon the information gathered for this assessment and reviewed potential impacts to biodiversity value for the proposed modification. A letter report (Niche 2019) summarising this review is provided as **Appendix 2**.

### 3.3.2 Vegetation Communities

The Quarry Site forms part of an area of native remnant vegetation, assessed to be in moderate to good condition, which spans approximately 500ha. Niche (2014) identified six distinct vegetation communities within the Quarry Site (**Figure 8**). The proposed modification to the overburden emplacement boundary, including both the expansion of the boundary on the northern side by approximately 1.0ha as well as the reduction of the boundary on the western side by approximately 1.5ha, would result in changes to approved areas of vegetation clearing.

Both the additional area of disturbance as well as the area to be removed from the overburden emplacement disturbance footprint contain the ‘Stringybark – Apple Box open forest’ vegetation community (defined by Niche as Unit C5, see **Figure 8**). The Biometric Vegetation Type applied to this vegetation community by Niche (2014) is ‘HN501 – Apple Box – Broad-leaved Peppermint dry open forest of the Abercrombie – Tarlo area, South Eastern Highlands’.

The area to be excised from the overburden emplacement also contains the ‘Forest Red Gum grassy open forest’ (Biometric Vegetation Type: ‘HN527 – Forest red Gum – Yellow Box woodland of dry gorge slopes, southern Sydney Basin and South Eastern Highlands’).

### 3.3.3 Threatened Flora and Fauna

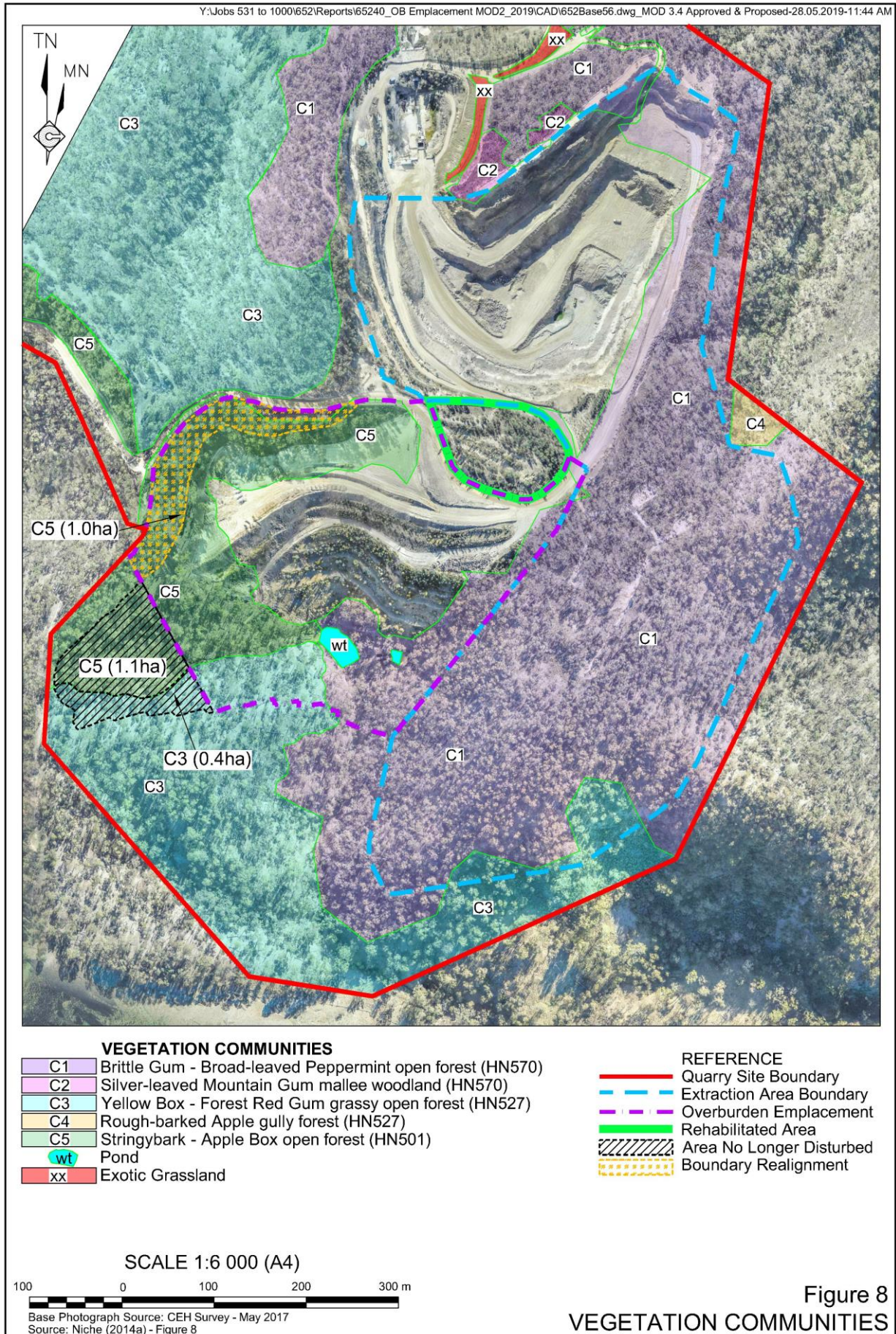
Niche (2014) identified a total of 214 flora species within the Quarry Site, including 41 weeds and 1 threatened species. Whilst the Silver-leaved Mountain Gum (*Eucalyptus pulverulenta*), listed as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), is known to occur at the Quarry Site, this species does not occur in the areas which are the subject of the proposed modification. Additionally, the ‘Stringybark – Apple Box open forest’ and the ‘Forest Red Gum grassy open forest’ vegetation communities are not listed as critically endangered, endangered, or threatened ecological communities under the *Biodiversity Conservation Act 2016* (BC Act).

A total of 89 vertebrate fauna species, including 86 native species and 3 introduced species, have been observed at the Quarry Site (Niche 2014). Since 1994, 12 threatened fauna species listed under the EPBC Act and/or the BC Act have either been identified or are considered likely to occur on or in areas adjoining the Quarry Site. None of the 12 threatened fauna species were originally identified within the area the subject of the proposed modification.

### 3.3.4 Assessment of Environmental Effects

Niche (2019) confirmed that the proposed modification would have a net positive impact upon biodiversity at the Quarry Site. **Table 2** presents a comparison of the approved and proposed vegetation clearing required for development of the Quarry. **Table 2** demonstrates that the proposed modification results in either the same or less vegetation clearing as that for the approved boundary for each plant community type and condition zone.

In summary, the proposed modification would reduce direct impacts on vegetation (i.e. clearing) by 0.5ha, with indirect impacts on vegetation being reduced by a further 0.3ha based on the 10m buffer applied by Niche (2019) to account for indirect impacts.



**Table 2**  
**Modified Vegetation Communities**

Vegetation Community Unit <sup>1</sup>	Vegetation Type <sup>1</sup>	Approved Boundary		Proposed Boundary		Net Change
		Direct Impact (ha)	Indirect Impact (ha)	Direct Impact (ha)	Indirect Impact (ha)	
c3	Forest Red Gum grassy open forest	1.9	0.6	1.5	0.5	0.4 ha reduced direct impact; 0.1ha reduced indirect impact.
c5	Stringybark – Apple Box open forest	4.2	0.5	4.1	0.3	0.1 ha reduced direct impact; 0.2ha reduced indirect impact.
c1, c2, c3a, c3b, c4, c6	Various	-	-	-	-	No change

Note 1: Units and Types as defined by Niche.  
Source: Niche (2019), modified after Table 1.

As both the area added to the emplacement on its northern side and the area removed from the emplacement on its western side contain approximately 1ha and 1.1ha of the ‘Stringybark – Apple Box open forest’ vegetation community respectively, it is anticipated that the modification of the overburden emplacement boundary would reduce the total area of ‘Stringybark – Apple Box open forest’ to be cleared by 0.1ha (**Table 1**). Additionally, a further area of approximately 0.4ha containing the ‘Forest Red Gum grassy open forest’ vegetation community would be removed from the approved overburden emplacement boundary, with this area representing a net positive outcome for biodiversity at the Quarry Site.

All measures outlined in the current *Landscape and Rehabilitation Management Plan* (RWC 2016) which aim to minimise biodiversity impacts, including pre-clearance surveys, soil stripping and stockpiling procedures, and commitments to minimise damage to adjacent vegetation, would be applied to the area added to the overburden emplacement boundary under the proposed modification.

Considering the above, Hy-Tec contends that the proposed modification would have a net positive impact on biodiversity values at the Quarry Site.

### 3.4 GENERAL ASSESSMENT OF ENVIRONMENTAL EFFECTS

Hy-Tec considers that the remaining environmental impacts associated with the ongoing operations under SSD 6084, as modified, would remain generally consistent with existing approved operations. It is proposed that there would not be any changes to environmental impacts associated with the following matters as a result of the proposed modification.

- Waste Management
- Aboriginal Cultural Heritage
- Historic Heritage
- Agricultural Resources

### 3.4.1 Noise and Air Quality

The proposed modification would result in minor changes to areas subject to vegetation clearing and overburden placement activities as a consequence of changes to the overburden emplacement boundary. Equipment operating within the Quarry Site would be working in areas not previously assessed for noise or dust generation. However, Hy-Tec does not anticipate that these minor changes would significantly alter the outcomes of previous noise and air quality impact assessments undertaken for the Quarry. As a result, Hy-Tec contends that the impact of the proposed modification on both noise and air quality would be negligible and the operation would continue to satisfy the assessment criteria prescribed in SSD 6084 in relation to noise and air quality management.

### 3.4.2 Visibility

The proposed modification would not alter the approved maximum elevation (828m AHD) of the overburden emplacement landform. Additionally, the expansion of the emplacement on its northern side would largely be shielded from view as the proposed expansion area currently represents a valley between the approved overburden emplacement and a natural hill (830m AHD). Due to the reduction in the total overburden emplacement disturbance footprint, it is anticipated that the proposed modification would likely reduce the total area of exposure that would be visible from those high elevation vantage points considered in the *Environmental Impact Statement for the Austen Quarry Stage 2 Extension Project* (RWC 2014).

Furthermore, the proposed modification would not alter existing rehabilitation objectives associated with the overburden emplacement, including the reduction of potential impacts on visual amenity through the early establishment of vegetation on completed lifts of the overburden emplacement. Hy-Tec would also maintain existing environmental monitoring commitments, including the commitment to periodically review the visibility of Quarry components from Hassans Walls Lookout to establish the effectiveness of on-site mitigation measures.

Considering the above, Hy-Tec does not anticipate that the proposed modification would adversely impact upon the visual amenity of either surrounding residences or the broader region.

### 3.4.3 Water Resources

Water resources are currently managed in accordance with the approved *Water Management Plan* for the Quarry (Groundwork Plus, 2018). The implementation of surface water management procedures and erosion and sediment control methods would not change under the proposed modification.

In order to address the identified geotechnical risk associated with the approved overburden emplacement design, a drain would be constructed along the southern side of the extraction area access road. Combined with the expansion of the overburden emplacement on its northern side to occupy the valley where water pooling represented a potential risk, the drain would allow surface water runoff to be more effectively diverted around the western side of the overburden emplacement.

A schematic of water management at the Quarry Site is presented in **Figure 9**. Surface water diverted around the overburden emplacement, representing potentially sediment-laden water from areas of disturbance within the Quarry Site, would report to Sediment Basin 3a (SB3a) and ultimately Sediment Basin 3b (SB3b) in accordance with the approved *Water Management Plan* (Groundwork Plus, 2018). Consistent with the approved *Water Management Plan*, SB3b would undergo staged development to Type-D sizing if required, with the timing of the development of SB3b dependent upon extraction area and overburden emplacement staging as driven by market demands. In accordance with EPL 12323 and the approved *Water Management Plan* (Groundwork Plus, 2018), water captured in SB3a or SB3b would be treated in-situ, if required, prior to discharge into Coxs River at the currently approved EPA Point 9.

The proposed modification would result in an overall minor reduction to the overburden emplacement catchment (Catchment A1) and therefore anticipates that impacts upon water resources would remain negligible and may be improved.

#### **3.4.4 Social and Economic Impacts**

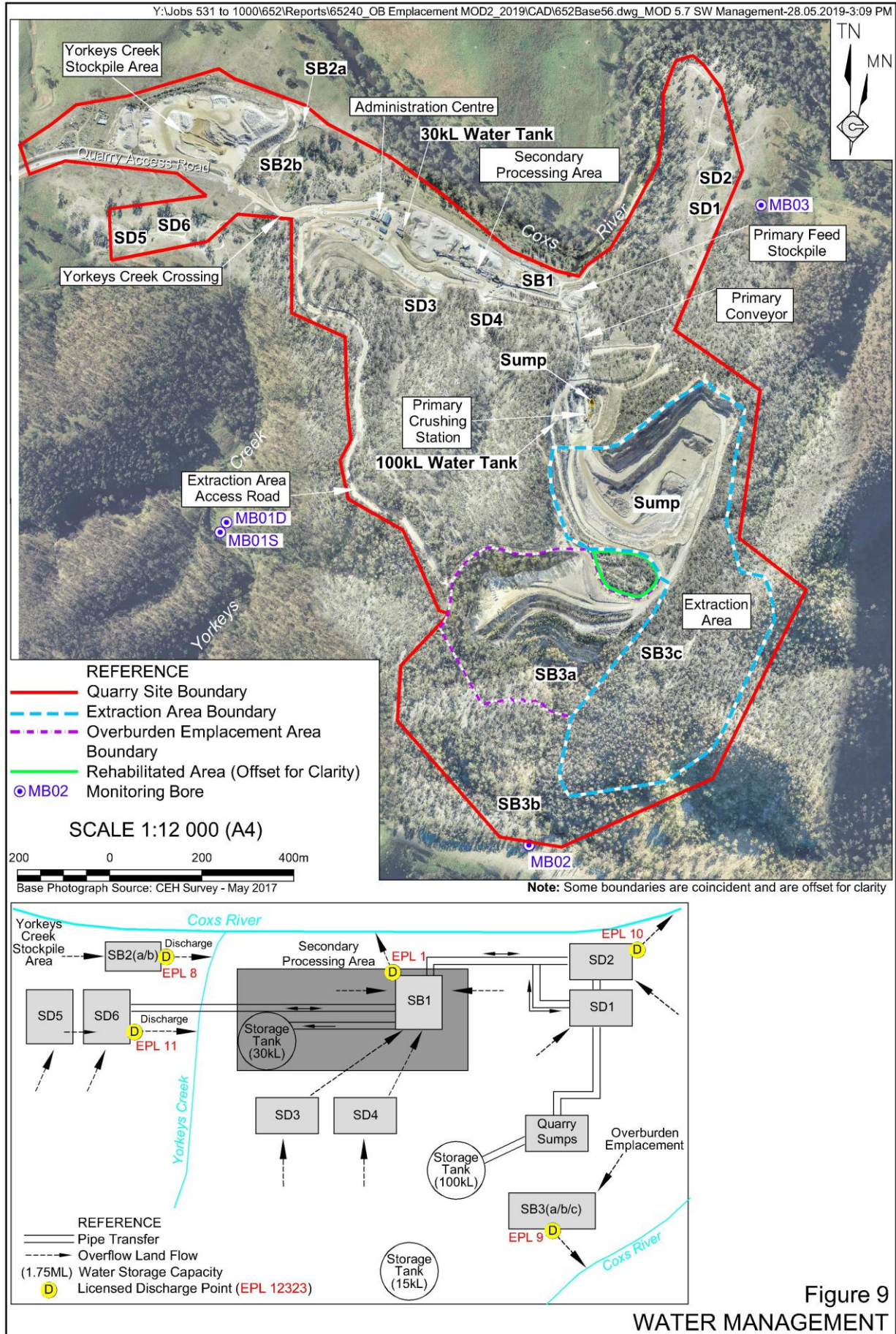
The proposed modification would not alter the approved extraction and product despatch rates for the Quarry and would not adversely impact the ability of the overburden emplacement to store overburden generated by extraction activities. Furthermore, the proposed modification would not involve changes to the approved hours of operation or product despatch and routes for the Quarry.

The proposed modification to the overburden emplacement boundary would not result in significant changes to the approved amenity impacts such as operational noise, air quality, water quality, or visual amenity.

The reduction to the extent of the overburden emplacement would result in benefits to native vegetation conservation which Hy-Tec hopes will be perceived as a positive outcome by the local community.

Finally, the management of operations at the Quarry, including the approved rehabilitation and water management strategies as well as existing environmental monitoring programs, would remain unchanged. Ongoing community engagement through the Hy-Tec website, local contacts along with continued liaison with the Hartley District Progress association, blasting notifications and the ease of access to the complaints phone line will continue to provide the local community with access to Quarry management to express any concerns they may have on an ongoing basis.





## 4. EVALUATION AND JUSTIFICATION OF THE MODIFICATION

### 4.1 EVALUATION

#### 4.1.1 Introduction

Evaluation of the proposed modification is presented through consideration of:

- Section 4.55(1A) of the EP&A Act in relation to the permissibility of modification to development consent for State significant development; and
- Section 4.15(1) of the EP&A Act in relation to the evaluation of applications for development in general.

#### 4.1.2 Section 4.55(1A) Considerations (EP&A Act)

As described in Section 1.1, the proposed modification is being made under Section 4.55(1A) of the EP&A Act. Section 4.55(1A) of the EP&A Act is provided in full below.

*(1A) A consent authority may, on application being made by Hy-Tec or any other person entitled to act on a consent granted by the consent authority and subject to and in accordance with the regulations, modify the consent if:*

- a) “it is satisfied that the proposed modification is of minimal environmental impact;*
- b) it is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which consent was originally granted and before that consent as originally granted was modified (if at all), and*
- c) it has notified the application in accordance with:*
  - (i) the regulations, if the regulation so require, or*
  - (ii) a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent, and*
- d) it has considered any submissions made concerning the proposed modification within the period prescribed by the regulations or provided by the development control plan, as the case may be.”*

The following subsections provide an evaluation of the proposed modification against these provisions.

#### **Minimal Environmental Impact**

The environmental impact associated with the proposed modification would be minimal for the following reasons.

- The total area of disturbance associated with the overburden emplacement would be reduced by approximately 0.5ha. This represents an overall net benefit of biodiversity values.

- Impacts to each vegetation community type affected by the proposed modification are either the same as or less than those associated with the approved overburden emplacement boundary.
- There would be no additional impacts to threatened flora or fauna as a result of the proposed modification and no new vegetation communities or habitat types impacted.
- Water resources and their management would not significantly change and would continue to be managed in accordance with the approved *Water Management Plan*.
- Changes to the generation and dispersion of noise and dust associated with the operation would be negligible.
- Impacts on visual amenity associated with the modification of the overburden emplacement boundary would be negligible.
- There are no additional social amenity impacts associated with the proposed modification.

### Substantially the Same Development

Under the proposed modification, the Stage 2 Project would remain ‘substantially’ the same development as that currently approved under SSD 6084 for the following reasons.

- There would be no additional impacts to threatened flora or fauna as a result of the proposed modification and no new vegetation communities or habitat types impacted.
- There is no proposed change to the existing extraction methods or equipment and no changes to the methods, configuration or location of fixed processing plant.
- It is not proposed to extend the life of the Quarry (currently approved to 30 June 2050).
- Operating hours would not change.
- Environmental management of the Quarry Site and community engagement would remain consistent with existing approved operations.

Finally, it should be noted that the proposed reduction to the extent of the overburden emplacement represents a **total reduction of 0.5ha of disturbance** for the development. Therefore, the proposed modification would result in an overall net decrease in disturbance and native vegetation clearing.

### Consultation with the Relevant Minister, Public Authority or Approval Body

This is a matter for DPE, however it is anticipated that consultation with the relevant government agencies would occur during exhibition of the application and *Statement of Environmental Effects*.

## Notification of the Application

It is expected that DPE will notify the relevant parties in accordance with Clause 118 of the *Environmental Planning and Assessment Regulation 2000*.

## Submissions Regarding the Proposed Modification

This is a matter for the DPE to consider. However, Hy-Tec would be pleased to respond to any submissions received by DPE during the assessment process.

### 4.1.3 Section 4.15(1) Considerations (EP&A Act)

Section 4.15(1) of the EP&A Act sets out the matters for consideration by a consent authority when determining an application for development consent.

(1) ***“Matters for consideration—general***

*In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:*

- (a) *the provisions of:*
  - (i) *any environmental planning instrument, and*
  - (ii) *any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and*
  - (iii) *any development control plan, and*
  - (iiia) *any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and*
  - (iv) *the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and*
  - (v) *any coastal zone management plan (within the meaning of the Coastal Protection Act 1979),*  
*that apply to the land to which the development application relates,*
- (b) *the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,*
- (c) *the suitability of the site for the development,*
- (d) *any submissions made in accordance with this Act or the regulations,*
- (e) *the public interest.”*

The following subsections provide an evaluation of the proposed modification against these provisions.

### Environmental Planning Instruments, Plans and Regulations (Section 79C (1a))

All relevant environmental planning instruments, plans and regulations were addressed in Section 1.6. In summary, the proposed modification is permissible under the relevant local and State environmental legislation and guidelines.

### **Likely Impacts of the Development (Section 79C (1b))**

Section 3 provides an assessment of the environmental factors potentially impacted by the proposed modification. The existing design and operational controls and environmental management measures would continue to be implemented to limit potential environmental impacts.

The proposed modification would not generate adverse environmental impacts beyond those already approved for the Quarry.

There would be an overall net positive change due to the realignment of the overburden emplacement boundaries and the associated reduction of vegetation clearing by approximately 0.5ha.

### **Suitability of the Site (Section 4.15 (1c))**

Quarrying has been occurring at the location of the Quarry Site since 2002 and the existing operation is approved to continue operating until 30 June 2050.

### **Submissions (Section 4.15 (1d))**

It is anticipated that DPE will take any submissions into consideration during the assessment of this application.

### **The Public Interest (Section 4.15 (1e))**

Hy-Tec considers that the proposed modification serves the public interest principally as the modification would permit the ongoing safe operation of the Austen Quarry whilst minimising potential personal and environmental hazards associated with the design of the Quarry Site.

In addition to the benefits from the Quarry products and their uses, the Quarry has an important role in the local community. The Quarry currently employs between 20 and 29 full-time local operational personnel and approximately 60 transportation contractors. Ten people are employed as part-time or full-time contractors. Employment of local personnel provides additional flow-on benefits to the local community.

It is therefore concluded that the proposed modification is in the public interest through the continued operation of the Quarry in a safe and environmentally responsible manner, the provision of ongoing local economic benefits, and the formation of a safe and stable post-extraction landform.

## **4.2 JUSTIFICATION OF THE MODIFICATION**

### **4.2.1 Introduction**

In assessing whether modification of the overburden emplacement footprint and final landform of the Quarry under the proposed modification is justified, consideration has been given to a range of biophysical, social and economic factors, including the predicted residual impacts on the environment together with the potential benefits of proposed changes.

## 4.2.2 Biophysical Considerations

The principal residual biophysical impacts relating to operations under the proposed modification are summarised in the following subsections.

### Hazards

The modification of the overburden emplacement boundary would improve safety by addressing the identified risk to geotechnical stability associated with the approved overburden emplacement design.

### Biodiversity

The minor additional areas of disturbance would not impact any known threatened flora, threatened fauna or Endangered Ecological Communities. When considered on balance with the areas that would no longer be disturbed under the proposed modification, the proposed modification represents a net positive outcome for vegetation at the Quarry Site.

### Other Environmental Impacts

It is acknowledged that minor changes would be required to management of environmental resources within the Quarry such as the reduction to the size of catchment areas reporting to existing sediment basins. However, it is concluded that the following matters would remain generally consistent with the existing approved operations.

- Blasting and blast management.
- Management of water resources
- Traffic and transportation
- Air quality (dust generation) and its management.
- Noise generation and noise management.
- Waste management
- Aboriginal cultural heritage
- Historic heritage
- Agricultural resources

## 4.2.3 Social and Economic Considerations

The proposed modification presents an overall social benefit through the provision of a continued safe working environment for Hy-Tec employees and maintains the company's environmental commitments. This is consistent with Hy-Tec's Company-wide approach to the safety of its employees and environmental commitments. Hy-Tec considers that the following economic benefits would continue to be generated under proposed modification, but would occur in a safer and more environmentally responsible manner.

- Ongoing employment of between 20 and 29 full-time local operational personnel, approximately 60 transportation contractors, and 10 part-time or full-time contractors.
- Ongoing supply of products to local markets.

The management of operations at the Quarry, including environmental management, would remain largely unchanged. Ongoing community engagement through the Hy-Tec website, blasting notifications and the ease of access to the complaints phone line would continue to provide the local community with access to Quarry management to express any concerns they may have on an ongoing basis.

#### 4.2.4 Consequences of Not Proceeding with the Proposed Modification

Hy-Tec considers that the proposed modification is an operational necessity to ensure the long-term safety of the landform and the Hy-Tec personnel operating the Quarry and maintaining the environmental controls of the operation.

#### 4.2.5 Objects of the Environmental Planning and Assessment Act 1979

The EP&A Act provides the framework for the assessment and approval of development in NSW. This subsection provides a justification for the proposed modification based on review of the objects of the EP&A Act, which include the following.

(a) *“to encourage:*

- (i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
  - (ii) the promotion and co-ordination of the orderly and economic use and development of land,*
  - (iii) the protection, provision and co-ordination of communication and utility services,*
  - (iv) the provision of land for public purposes,*
  - (v) the provision and co-ordination of community services and facilities, and*
  - (vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species and ecological communities, and their habitats, and*
  - (vii) ecologically sustainable development, and*
  - (viii) the provision and maintenance of affordable housing, and*
- (b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.”*

The proposed modification would not limit the achievement of these objects.

The proposed modification would provide Hy-Tec with the opportunity to continue operations in an orderly, economically efficient, and most importantly in a safe and environmental responsible manner. This includes a reduction in total land disturbed for the operation and through the realignment of the approved overburden emplacement.

Environmental management at the Quarry would also continue in a manner generally consistent with the existing approved operation and consistent with Hy-Tec's reputation for environmental and social responsibility.

Ongoing operations under the proposed modification would remain generally consistent with the existing approved operations and therefore would remain consistent with the principles of ecologically sustainable development.

### **4.3 CONCLUSION**

The health and safety of employees is one of the most important elements of the design and management of all of Hy-Tec's operations, be they quarrying, concrete production or masonry operations. Personal safety is paramount, with this and the maintenance of existing environmental controls the principal drivers for the proposed modification. Risks associated with local flora, fauna and water resources would also be avoided or minimised under the proposed overburden emplacement design.

In order to facilitate this modification, Hy-Tec is proposing an overall reduction to the overburden emplacement by approximately 0.5ha. It is therefore considered that the proposed modification would result in an overall net benefit to employee safety and environmental risks, while improving geotechnical safety at the Quarry.



## 5. REFERENCES

**R.W. Corkery & Co. (2014).** *Environmental Impact Statement for the Austen Quarry Stage 2 Extension Project.* R.W. Corkery & Co. on behalf of Hy-Tec Industries Pty Limited.

**R.W. Corkery & Co. (2016).** *Austen Quarry – Landscape and Rehabilitation Management Plan.* R.W. Corkery & Co. on behalf of Hy-Tec Industries Pty Limited.

**R.W. Corkery & Co. (2018).** *Austen Quarry Stage 2 Extension Project (MOD 1 – SSD 6084) Statement of Environmental Effects* R.W. Corkery & Co. on behalf of Hy-Tec Industries Pty Limited.

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