Appendix S

Social Impact Assessment Addendum

REGIS RESOURCES LTD

McPHILLAMYS GOLD PROJECT

SOCIAL IMPACT ASSESSMENT
AMENDED PROJECT REPORT

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September 2020

For:

LFB Resources NL
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DECLARATION

This report has been prepared by Hansen Bailey Environmental Consultants Principal Social Planner Bronwyn Pressland. Bronwyn holds a Bachelor of the Built Environment (Urban and Regional Planning) and a Master of Environmental Management. Bronwyn has more than 20 years' professional experience, including 12 years with Hansen Bailey. Bronwyn has provided community engagement and social impact assessment (SIA) and management services for a diverse range of major projects in New South Wales (NSW), Queensland and the Northern Territory. For the past 12 years Bronwyn has worked almost exclusively on resource development projects, including coal, bauxite and manganese. A copy of Bronwyn's curriculum vitae is provided in Appendix A.

This report has been prepared to assess the potential social impacts and opportunities of the McPhillamys Gold Project as amended. This report should be read in conjunction with the *McPhillamys Gold Project SIA* (Hansen Bailey, 2019) (Appendix T of the EIS), which remains the primary reference document.

The information provided herein is not of a false or misleading nature. The assessment of the Amended Project was completed in July and August 2020. Hansen Bailey was engaged by LFB Resources NL, a 100% wholly owned subsidiary of Regis Resources Limited (Regis), as an independent assessor. Hansen Bailey has provided an impartial assessment of the anticipated social impacts of the McPhillamys Gold Project as amended. There are no known conflicts of interest.

No additional consultation was undertaken by Hansen Bailey to inform the SIA for the Amended Project.

I, Bronwyn Pressland, confirm that the above statements and information given is true and correct to the best of my knowledge.

Signed: Date: 1 September 2020

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ABBREVIATIONS LIST

ACHMP	Aboriginal Cultural Heritage Management Plan
Addendum CHA (MD)	Addendum to the Aboriginal and Historical Cultural Heritage Assessment - Mine Development, 3 August
Addendum CHA (PD)	Addendum Aboriginal Cultural Heritage & Historic Heritage Assessment Report - McPhillamys Gold Project Mine Access Road and Pipeline Options, August
Addendum GWA	Addendum Groundwater Assessment – McPhillamys Gold Project
AIP	Aquifer Interference Policy
Amended AQA	Amended Air Quality and Greenhouse Gas Assessment
Amended NVIA (MD)	Amended Noise, Vibration and Blasting Impact Assessment for the Mine Development
Amended NVIA (PD)	Amended Noise, Vibration and Blasting Impact Assessment for the Pipeline Development
Amended SIA	SIA Amended Project Report for the McPhillamys Gold Project
Amended VIA	Amended Visual Impact Assessment for the McPhillamys Gold Project - Mine Development
Bathurst LGA	Bathurst Region Local Government Area
BHS	Blayney High School
BSC	Blayney Shire Council
Centennial	Centennial Coal Company Limited
CCC	Community Consultative Committee
CP	Construction Phase
SEP	Stakeholder Engagement Plan
CVO	Cadia Valley Operations
CWAS	Construction Workforce Accommodation Strategy
CW Region	Central West Region
dB	Decibel
DPE	Department of Planning and Environment
DPIE	Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
EIS AQA	Air Quality and Greenhouse Gas Assessment
EIS CHA	Cultural Heritage Assessment for the Mine Development- McPhillamys Gold Project
EIS NVIA	Noise, Vibration and Blasting Impact Assessment for McPhillamys Gold Project Mine Development
EIS NVIA (PD)	Pipeline Development Noise, Vibration and Blasting Impact Assessment
EIS Pipeline Development CHA	Pipeline Development Cultural Heritage Assessment

EIS SIA	The EIS Social Impact Assessment
EIS TIA	EIS Traffic Impact Assessment
EIS TIA (PD)	Pipeline Development Traffic Impact Assessment Report for McPhillamys Gold Project
EIS VIA	Visual Impact Assessment for the McPhillamys Gold Project - Mine Development
EMM	EMM Consulting
EP&A Act	Environment Planning and Assessment Act 1979
EPA	Environmental Protection Authority
ES	Ecosystem Services
ha	Hectare
HHIA	Human Health Impact Assessment
HV	Heavy Vehicle
IPP	Indigenous Participation Plan
km	kilometre
LCP	Local Content Plan
LGA	Local Government Area
LH	Local Hire
Lithgow LGA	Lithgow City Local Government Area
Local Area	The area within an approximate one hour commute of the mine project area
L/sec	Litres Per Second
m	metres
mine development	Construction and operation of the mine and associated mine infrastructure within the project area
MPPS	Mt Piper Power Station
Mtpa	Million tonnes per annum
Newcrest	Newcrest Mining Limited
NCA	Noise Catchment Area
NLH	Non-Local Hire
NML	Noise Management Level
NSW	New South Wales
OLALC	Orange Local Aboriginal Land Council
PAA	Primary Assessment Area
pipeline development	Construction and operation of the water supply pipeline and ancillary infrastructure to transfer water to the mine development within the defined pipeline corridor
Pipeline Development CHA	Pipeline Development Cultural Heritage Assessment
PMP	Property Management Plan

PNTL	Project Noise Trigger Levels
PY	Project Year
RAA	Regional Assessment Area
RAPs	Registered Aboriginal Parties
RFB	Rural Fire Brigade
RMP	Rehabilitation Management Plan
ROM	Run-Of-Mine
RTS	Recruitment and Training Strategy
SAA	Secondary Assessment Area
SEARs	Secretary's Environmental Assessment Requirements
SEP	Stakeholder Engagement Plan
SIA	Social Impact Assessment
SIA Amended Project Report	The SIA report to assess the potential impacts and opportunities of the amended project
SIMP	Social Impact Management Plan
TfNSW	Transport for NSW
TMP	Traffic Management Plan
TSF	Tailings Storage Facility
RAA	Regional Assessment Area
RRPM	Raised Reflective Pavement Marker
Regis	Regis Resources Limited
Revised SWA	Revised Surface Water Assessment McPhillamys Gold Project
RMP	Rehabilitation Management Plan
The project	McPhillamys Gold Project including both mine development and pipeline development
VLAMP	Voluntary Land Acquisition and Mitigation Policy
VPA	Voluntary Planning Agreement
VSF	Vittoria State Forest
WMF	Water Management Facility
WRE	Waste Rock Emplacement
WREA	Waste Rock Emplacement Area

McPHILLAMYS GOLD PROJECT
SOCIAL IMPACT ASSESSMENT AMENDED PROJECT REPORT

for
LFB Resources NL

1 INTRODUCTION

1.1 BACKGROUND

LFB Resources NL is seeking State significant development consent under Division 4.7 of Part 4 of the NSW Environmental Planning and Assessment Act 1979 (EP&A Act) to develop and operate a greenfield open cut gold mine, associated mine infrastructure and a water supply pipeline in Central West NSW. The project application area is illustrated at a regional scale in Figure 1. LFB Resources NL is a 100% owned subsidiary of Regis Resources Limited (herein referred to as Regis).

As shown in Figure 1, the McPhillamys Gold Project (the project) is comprised of two key components; the mine site where the ore will be extracted, processed and gold produced for distribution to the market (the mine development), and an associated water pipeline which will enable the supply of water from approximately 90 kilometres (km) away near Lithgow to the mine site (the pipeline development). The mine development is around 8 km north-east of Blayney, within the Blayney and Cabonne local government areas (LGAs).

Up to 8.5 Million tonnes per annum (Mtpa) of ore will be extracted from the McPhillamys gold deposit over a total project life of 15 years. The mine development will include a conventional carbon-in-leach processing facility, waste rock emplacement, an engineered tailings storage facility (TSF) and associated mine infrastructure including workshops, administration buildings, roads, water management infrastructure, laydown and hardstand areas, and soil stockpiles.

In accordance with the requirements of the EP&A Act, the NSW Environmental Planning & Assessment Regulation 2000 (EP&A Regulation) and the Secretary's Environmental Assessment Requirements (SEARs) for the project, an Environmental Impact Statement (EIS) was prepared to assess the potential environmental, economic and social impacts of the project. The development application and accompanying EIS was submitted to the NSW Department of Planning, Industry and Environment (DPIE) and subsequently publicly exhibited for six weeks, from 12 September 2019 to 24 October 2019. During this exhibition period Regis received submissions from government agencies, the community, businesses and other organisations regarding varying aspects of the project.

In response to issues raised in submissions received, as well as a result of further detailed mine planning and design, Regis has made a number of refinements to the project. Accordingly, an Amendment Report has been prepared by EMM Consulting Pty Ltd (EMM 2020a) to outline the changes to the project that have been made since the public exhibition of the EIS and to assess the potential impacts of the amended project, compared to those that were presented in the EIS. This report forms part of the Amendment Report and presents an assessment of the social impacts of the amended project.

1.2 PROJECT AMENDMENT OVERVIEW

A summary of the key amendments to the project since the exhibition of the EIS are summarised below and described in detail in Chapter 2 of the Amendment Report (EMM, 2020a):

- Site access - a new location for the site access intersection off the Mid Western Highway is proposed, approximately 1 km east of the original location assessed in the EIS, in response to feedback from Transport for NSW (TfNSW) and the community. A new alignment is subsequently proposed for the site access road to the mine administration and infrastructure area.
- Mine and waste rock emplacement schedule - revision of the mine schedule and the subsequent construction sequence of the waste rock emplacement (WRE) has been undertaken in order to reduce predicted noise levels in Kings Plains. The revised schedule achieves a reduction in predicted noise levels at nearby residences while extending the construction timeframe for the southern amenity bund.
- Pit amenity bund - the size of the pit amenity bund has been reduced as a result of optimisation of the open cut pit design and the improved location of exit ramps for haul trucks.
- Tailings Storage Facility (TSF) - amendments to the design include changes to the embankment design and construction timing, the TSF footprint, and the TSF post closure landform.
- Water management system - the secondary water management facility (WMF) has been removed from the water management system resulting in an avoidance of impacts to a potential item of historic heritage (MGP 23 - Hallwood Farm Complex (Hallwood)). The size of the WMFs has also been revised to achieve a reduced likelihood of discharge from the storages within the operational water management system as part of a revised nil discharge design.
- Mine administration and infrastructure area - the layout of this area has been revised and optimised.
- Mine project area - a very small change has been made to the mine project area along the eastern boundary (an additional 1 ha, or 0.04% change), to accommodate the

required clean water management system. The change increases the project area from 2,513 hectares (ha) to 2,514 ha.

In the EIS project description:

- Construction of the waste rock emplacement (WRE) was proposed to start at the southern end of the WRE area (forming the southern amenity bund).
- The southern amenity bund was scheduled to be constructed early in the mine life in order to shield nearby residents from activities occurring across the mine project area.

The amended project involves a revised construction sequence. Construction of the WRE is now proposed to commence at the northern end of the WRE area. Waste rock will be dumped at the northern end of the WRE area until pit benches are in place in the open cut to shield pit activities. Work will then commence on the southern amenity bund (anticipated to commence at the start of Project Year 2 (PY 2)). This will avoid the concentration of construction activity at the southern end of the mine project area as proposed in the original EIS.

Due to changes in the waste rock emplacement schedule, the timeframe for construction of the southern amenity bund has increased. In the EIS the southern amenity bund was scheduled to be constructed between PY 1 and PY 4. Construction of the southern amenity bund is now anticipated to begin in PY 2 and continue until approximately PY 6.

In addition to a change in the timing of construction, the amended project includes the use of a reduced mining fleet in the initial years of the project, with fewer haul trucks, until the open cut pit benches are in place to shield earthworks in the pit. As a result of the reduced mining fleet, it will take longer to move waste rock. This is the primary reason for the extended construction timeframe of the southern amenity bund.

Some amendments to the pipeline development have also been made, as follows:

- Pipeline route - The pipeline route has been amended for a section of the corridor west of Bathurst, primarily in consideration of land access. Two options for the amended pipeline route have been included and assessed in the amended project; the northern option and the southern option. As shown in Figure 3, the pipeline alignment changes approximately 3 km west of pumping station facility No. 4. The new alignment continues for around 3 km, where it then splits into two options before re-joining the original route. The northern option is approximately 11 km long from the point at which the two options split from the single alignment. The southern option is approximately 6 km long from the point at which it diverges from the original alignment. The amended section of the pipeline route is therefore around 14 km long if the northern option is adopted, and approximately 9 km if the southern option is constructed.

- Pipeline corridor/disturbance footprint - the pipeline corridor has been differentiated from the pipeline disturbance footprint, with small changes made to both the pipeline corridor and the disturbance footprint in consideration of biodiversity impacts. While the alignment of pipeline sections outside the realigned northern and southern options has not changed, there have been minor variations in the width of the corridor to provide flexibility in the detailed design and subsequent construction phases of the project. See also the definition of pipeline corridor in Section 1.6.
- Pumping station facilities - pumping station facility No.3 has been relocated from the vicinity of Energy Australia's Mount Piper Power Station (MPPS), to approximately 4.3 km to the west and adjacent to Pipers Flat Road.

No amendments have been made to other key aspects of the project as presented in the EIS, such as the proposed mining method, operating hours, annual ore extraction rate of up to 8.5 Mtpa, annual ore processing rate up to 7 Mtpa, employee numbers (construction and operations), workforce logistics (including accommodation) and rehabilitation methods and outcomes.

The amended mine development project layout, compared to that assessed in the EIS, is shown in Figure 2, while the revised section of the pipeline development route is shown in Figure 3.

1.3 REPORT PURPOSE

This report has been prepared to assess the potential social impacts and opportunities of the amended project. This report is referred to as the SIA Amended Project Report (Amended SIA). The assessment considers and outlines the differences in impacts compared to the original project as presented in the EIS. In this way, it serves as an update to the *McPhillamys Gold Project Social Impact Assessment* (EIS SIA) (Hansen Bailey, 2019) (EIS Appendix T).

Further, this report assesses the potential social impacts and opportunities associated with both the mine development and the pipeline development, that is, it provides an assessment of the entire project application area. References to 'the project' throughout this report are referring to both the mine development and the pipeline development.

It is considered that this report should be read in conjunction with the EIS SIA (Hansen Bailey, 2019) (EIS Appendix T), which remains the primary reference document.

1.4 SUBMISSIONS ON THE EIS

No government submissions received in response to the SIA provided in the EIS. A number of issues relevant to the SIA were raised in submissions received from organisations and the public. These issues have also been considered in this revised assessment. Detailed

responses to all submissions received are provided in the Submissions Report prepared for the project (EMM, 2020b). The Submissions Report has been prepared in conjunction with the Amendment Report (EMM, 2020a).

A summary of the key issues relevant to this assessment is provided below. Of the objections received:

- 22% (4) of organisations and 4% (10) of unique community submissions raised concerns about potential adverse social impacts associated with the project, including impacts on the local community, schools and sporting clubs.
- 33% (6) of organisations and 39% (92) of unique community submissions raised concerns about the potential for the project to adversely impact the lifestyles and quality of life of neighbouring residents and the local community. This included concerns relating to potential amenity impacts associated with the construction and operation of the project (namely noise, vibration, blasting, lighting, air quality, health and traffic).
- 17% (3) of organisations and 26% (60) of unique community submissions raised concerns about the potential for the project to impact future generations. This included concerns related to the:
  - Future land use potential of the mine project area at the completion of mining and rehabilitation; and
  - Long-term impacts on surrounding landholders and the local community (including concerns relating to the TSF, open cut void and the potential for 'long lasting residue' long after the mine has closed).
- 7% (16) of unique community submissions raised concerns about the lack of compensation for neighbouring landholders with potential to be adversely impacted by the project. Concerns relating to compensation were raised with respect to compensation if a pollution event or loss of water supplies occurred, as well as the development of individual property landscape management plans to address noise and visual amenity impacts.
- 56% (10) of organisations and 43% (101) of unique community submissions raised concerns about the potential for noise generated by the project to adversely impact sensitive receptors (including residences and livestock). This included concerns related to noise generated during the construction and operations of both the mine and pipeline developments.
- 78% (14) of organisations and 45% (106) of unique community submissions raised concerns about the project's potential impacts on other groundwater users. This included concerns relating to:
  - Potential impacts on groundwater quality;
  - Potential impacts on groundwater availability (due to potential drawdown associated with proposed mining activities); and

  - Adequacy and applicability of proposed management measures (including 'make good' principles).
- 83% (15) of organisations and 79% (183) of unique community submissions raised concerns about the project's potential impacts on other surface water users. This included concerns relating to:
  - Potential impacts on surface water quality (including contamination of the Belubula River as a result of surface water runoff, seepage and reduced flows); and
  - Potential impacts on surface water availability including flow reductions (namely reductions in flow in the Belubula River and subsequent flow-on effects to downstream users and/or the Lachlan and Murray Darling basins.

1.5 REPORT OUTLINE AND REFERENCE TO THE EIS REPORT

Consistent with the EIS SIA (Hansen Bailey, 2019), the assessment of social impacts of the amendments to the project presented in this report has been conducted in general accordance with the NSW *Social Impact Assessment Guidelines for State Significant Development* (SIA Guideline) (NSW DPE, 2020).

The project setting and profile of the SIA Study Area, including the population and demography of communities, settlement patterns, land use, community values and aspirations was documented within the EIS SIA (Hansen Bailey, 2019) and is not repeated herein. Workforce arrangements including workforce size, recruitment, accommodation, transportation and logistics were described in detail in the EIS SIA (Hansen Bailey, 2019) and are not repeated in this report. The findings of SIA consultation and broader EIS consultation were also presented in the EIS SIA (Hansen Bailey, 2019).

This report is structured as follows:

- Section 1 Introduction (this section) - Describes the scope and purpose of this report, provides a description of the amended project and presents key project terminology.
- Section 2. Methodology: Provides a summary of the SIA methodology adopted for the consideration of potential impacts and opportunities associated with the amended project.
- Section 3 Impact Assessment - Mine Development: Presents the outcomes of the impact and opportunities assessment of the mine development as amended and relative to the EIS.
- Section 4 Management - Mine Development: Presents the recommended actions to manage impacts and enhance opportunities of the mine development as amended.
- Section 5 Impact Significance Assessment - Mine Development: Presents the outcomes of the impact significance assessment for the mine development as amended.

- Section 6 Impact Assessment - Pipeline Development: Presents the outcomes of the impact and opportunities assessment for the pipeline development, including proposed measures to manage adverse impacts and enhance opportunities.
- Section 7 Conclusion - Presents the conclusions of the Amended SIA for the amended project.
- Section 8 References.
- Appendix A - Curriculum Vitae of SIA Specialists.
- Appendix B - Outcomes of Significance Assessment.

1.6 TERMINOLOGY

1.6.1 Project Terminology

The following terms are used throughout this report to describe the project:

- The project – the project in its entirety; encompassing the mine development and pipeline development. In this report, the term 'the amended project' refers to the project for which approval is now sought. Where the original project design as presented in the EIS is being discussed, this will be clarified;
- Project application area – the area in its entirety to which the development application (State Significant Development 18_9505) relates; comprising the mine project area and the pipeline corridor as illustrated in Figure 1. In this report, the term 'the project application area' refers to the amended area that relates to the development for which approval is now sought. Where the original project application area, as presented in the EIS, is being discussed, this will be clarified;
- Mine project area – refers to the mine development project area as illustrated in Figure 2;
- Pipeline corridor – an approximate 20 m wide, 90 km long pipeline alignment to which the development application (SSD 9505) relates; from Centennial Coal Company Limited (Centennial) Angus Place Colliery and Springvale Coal Services Operation (SCS Operation); and Energy Australia's MPPS near Lithgow to the mine project area, as illustrated in Figure 1. Direct disturbance is not proposed across the entire 20 m corridor for construction of the pipeline; the anticipated disturbance footprint has been delineated based on the nature of the vegetation or existing disturbance the pipeline travels through;
- Mine development – construction and operation of the mine and associated mine infrastructure within the project area; and
- Pipeline development – construction and operation of the pipeline and associated infrastructure to transfer water to the mine development within the pipeline corridor.

1.6.2 Technical Report Terminology

The SIA Amended Project Report refers to a number of different technical reports prepared for either the EIS (EMM, 2019a) or the Amendment Report (EMM, 2020a). These reports and their respective acronyms are detailed in Table 1 and Table 2. In order to improve the clarity of the SIA Amendment Project Report only the report acronyms, and not the full citations are referred to in the discussion of potential impacts and opportunities. A full citation list is provided in Section 8.

Table 1
EIS Technical Report References

EIS Technical Report	Author	Acronym	EIS Appendix Reference
Air Quality and Greenhouse Gas Assessment	EMM (2019c)	EIS AQA	Appendix M
Cultural Heritage Assessment for the Mine Development- McPhillamys Gold Project	Landskape (2019)	EIS CHA	Appendix P
Groundwater Assessment, for McPhillamys Gold Project.	EMM (2019d)	EIS GWA	Appendix K
Noise, Vibration and Blasting Impact Assessment (NVIA) for McPhillamys Gold Project Mine Development	Muller Acoustic Consulting Pty Ltd (Muller Acoustic) (2019a)	EIS NVIA	Appendix L
Pipeline Development Cultural Heritage Assessment	Ozark (2019)	EIS Pipeline Development CHA	Appendix Z
SIA for the McPhillamys Gold Project	Hansen Bailey (2019)	EIS SIA	Appendix T
Surface Water Assessment for McPhillamys Gold Project	HEC (2019)	EIS SWA	Appendix J
Tailings Risk Assessment for McPhillamys Gold Project	Risk Mentor (2019)	TSF Risk Assessment	Appendix F
Visual Impact Assessment (VIA) for the McPhillamys Gold Project - Mine Development	Visual Planning and Assessment (VPA) (2019)	EIS VIA	Appendix S
EIS Traffic Impact Assessment	Constructive Solutions (2019)	EIS TIA	Appendix Q
Pipeline Development NVIA	Muller Acoustic (2019b)	EIS NVIA (PD)	Appendix AA
Pipeline Development Traffic Impact Assessment Report (TIA) for McPhillamys Gold Project	Ason (2019)	EIS TIA (PD)	Appendix BB

Table 2
Amended Project Technical Report References

Amended Project Technical Report	Author	Acronym	Amendment Report Appendix Reference
Addendum Aboriginal Cultural Heritage & Historic Heritage Assessment Report - McPhillamys Gold Project Mine Access Road and Pipeline Options, August	Ozark (2020)	Addendum CHA (PD)	Appendix P
Addendum Groundwater Assessment – McPhillamys Gold Project	EMM (2020c)	Addendum GWA	Appendix H
Addendum to the Aboriginal and Historical Cultural Heritage Assessment - Mine Development, 3 August	Landskape. (2020).	Addendum CHA (MD)	Appendix O
Amended Air Quality and Greenhouse Gas Assessment	EMM (2020d)	Amended AQA	Appendix L
Amended NVIA for the Mine Development	Muller Acoustic (2020)	Amended NVIA (MD)	Appendix J
Amended NVIA for the Pipeline Development	Muller Acoustic (2020b)	Amended NVIA (PD)	Appendix L
Amended VIA for the McPhillamys Gold Project - Mine Development	VPA (2020)	Amended VIA	Appendix R
Independent Expert Technical Review of the McPhillamys Gold Project Tailings Storage Facility Design, Operation and Closure 27 July	Williams D,J (2020)	TSF Expert Review	Appendix D
McPhillamys Gold Project - Potential Impact on European Honey Bees and Local Honey Production 3 April	EnRiskS (2020b)	N/A	Appendix E of Submissions Report
McPhillamys Gold Project: Human Health Impact Assessment 23 July	EnRiskS (2020a)	HHIA	Appendix F of Submissions Report
Revised Surface Water Assessment McPhillamys Gold Project	HEC (2020)	Revised SWA	Appendix G
SIA Amended Project Report for the McPhillamys Gold Project	Hansen Bailey (2020)	Amended SIA	Appendix S
McPhillamys Gold Project Addendum Economic Impact Assessment	Gillespie Economics (2020)	Addendum EcIA	Appendix U

2 METHODOLOGY

2.1 INTRODUCTION

The methodology adopted for the consideration of social impacts and opportunities associated with the amended project is the same as the methodology described in the EIS SIA (Hansen Bailey, 2019) (EIS Appendix T). However, no additional consultation has been undertaken to inform the assessment of social impacts and opportunities associated with the amended project.

This section provides a description of the:

- SIA Study Area;
- Approach to impact and opportunities scoping;
- Approach to predicting analyzing and assessing social impacts and opportunities; and
- Approach to determining the significance of identified impacts and opportunities.

2.2 SIA STUDY AREA

The SIA Study Area for the assessment of social impacts associated with the amended project is consistent with the SIA Study Area adopted for the EIS SIA. The SIA Study Area is defined by the project's social area of influence. The SIA Study Area for the mine development incorporates the 'Primary Assessment Area' (PAA), the 'Secondary Assessment Area' (SAA) and the 'Regional Assessment Area' (RAA). These components are defined in Table 3. The SIA Study Area for the pipeline development is defined in Table 4. Figure 4 shows the local context for the mine development and Figure 5 shows the SIA PAA.

Table 3
SIA Study Area Definition – Mine Development

SIA Study Area Component	Description
PAA	Defined as the area within an approximate 2 km radius of the mine project area inclusive of the Kings Plains locality (Figure 5). The PAA can be divided into two discrete geographic catchments: • The Kings Plains locality – broadly defined as the geographic area that extends from Lynfern homestead on the Mid Western Highway near Dungeon Road, east to Kellys Road and includes the settlement of Kings Plains on Walkom Road; and • Guyong Road and surrounds – consisting of residences located to the west and north of the mine project area along Guyong Road, Vittoria Road and the Mitchell Highway, and within a two kilometre radius of the mine project area. An estimated 88 private residences (exclusive of Regis owned residences) are located within the PAA, the majority to the south of the mine project area along

SIA Study Area Component	Description
	the Mid Western Highway and to the west along Guyong Road. The estimated population of the PAA is 230 people[1].
SAA	Defined as the Blayney LGA (Figure 4). The main communities of interest within the Blayney LGA are Blayney and Millthorpe. Outside of the PAA, the primary area of influence of the project is likely to be the town of Blayney.
RAA	Defined as the combined LGAs of Bathurst, Blayney, Cabonne, Cowra and Orange.

Table 4
SIA Study Area Definition – Pipeline Development

SIA Study Area Component	Description
PAA	The PAA for the pipeline development is the area of land directly impacted by the pipeline corridor and includes land within the Bathurst and Lithgow LGAs and 2 km within the Blayney LGA. The pipeline development will directly impact 17 private landholders if the northern amended pipeline option is constructed and 17 private landholders if the southern pipeline option is constructed, plus landholders associated with Angus Place Colliery, Centennial Coal and Energy Australia. Lithgow City Council and the BRC and five crown entities (Forestry NSW, Roads and Maritime Services, Department of Fisheries, Department of Industry (Crown Land) and Railcorp).
SAA	Defined principally as the Bathurst and Lithgow LGAs (Figure 1). The main community of interest within the Bathurst LGA is the urban centre of Bathurst. The main communities of interest within the Lithgow LGA are Lithgow City, and the small localities of Blayney and Millthorpe, and the smaller townships of Portland and Wallerawang.

The primary focus of the SIA is the PAA and SAA for the mine development and the PAA for the pipeline development as these areas are most likely to be impacted by the project.

[1] ABS 2017b – 2016 ABS Meshblock counts (10056010000, 10149310000, 10149300000, 10115610000, 10116070000, 10116130000) have been used to calculate the estimated population of the PAA. The combined area of these Meshblocks is larger than the PAA and includes a total of 109 dwellings and 285 people. This indicates an average occupancy rate of 2.6 persons per dwelling. There are 88 dwellings (exclusive of Regis owned residences) in the PAA. Applying the rate of 2.6 persons per dwelling the population of the PAA is estimated at approximately 230 people.

2.3 IMPACT AND OPPORTUNITIES SCOPING

The changes to the EIS project description by the amended project have been reviewed to understand the potential implications for the SAA and PAA with respect to social impacts and opportunities. The following proposed changes are considered to have social implications for the SIA Study Area:

- Realignment of the site access road;
- Revision of the mine schedule and the subsequent construction sequence of the WRE. The changes have:
  - Achieved a reduction in predicted noise levels at nearby residences;
  - Extended the construction timeframe of the southern amenity bund; and
  - Relocated night-time waste emplacement operations from the southern (as per the EIS) to the northern portion of the WRE thereby minimizing night-time direct lighting impacts.
- Optimisation of the pit design allowing for a reduction in the height of the pit amenity bund;
- Changes to the design of the TSF;
- Changes in the disturbance footprint of the mine development;
- Changes to the mine site water management arrangements;
- Extension of the operational life of the mine development from 10 years to 11 years. This is primarily due to the adoption of a more consistent mining schedule and a smoother waste production profile, which has resulted in less material being moved in the early years rather than the initial high volumes of waste rock movements proposed in the EIS. The smaller volume of waste rock scheduled to be moved in the early years of the amended project is primarily due to a reduced fleet now proposed to operate in the initial stages of the project to reduce noise levels; and
- Realignment of the pipeline corridor and relocation of pumping station facility No.3.

Changes to workforce arrangements (including accommodation) as presented in the EIS are not proposed as part of the amended project. The potential social impacts and opportunities associated with the project workforce and described in the EIS SIA (EIS Appendix T) remain valid for the amended project.

Table 5 summarises the key changes proposed by the amended project and the social impacts and opportunities considered in the SIA Amended Project Report.

Table 5
Impact and Opportunities Scoping – Amended Project

Project Changes	Social Aspects considered	SIA Study Area
Realignment of site access road	• Potential changes in residential amenity, road safety and local accessibility.	PAA and SAA
Revision of the mine and WRE schedule	• Potential change in residential amenity due to cumulative changes in the biophysical environment (air quality, visual amenity, noise and vibration, biodiversity values). • Potential changes in property values. • Potential changes in resident health and wellbeing. • Effects on agricultural livelihoods e.g. commercial bee keeping operations and downstream agricultural operations. • Changes to the predicted duration of potential impacts defined in the EIS SIA. • Community access to and use of ecosystem services (ES). • Mine dependency on ES. • Impacts to community (PAA and SAA) including rural way of life and rural character.	PAA and SAA
Optimisation of the pit design allowing for a reduction in the pit amenity bund	• Potential change in residential amenity due to cumulative changes in the biophysical environment (air quality, visual amenity, noise and vibration, biodiversity values). • Potential changes in property values. • Potential changes in resident health and wellbeing.	PAA
TSF design changes	• Health and safety, public risk. • Community access to and use of ES. • Effects on agricultural livelihoods.	SAA and PAA
Changes to the disturbance footprint	• Aboriginal cultural heritage and connection to country. • Community heritage values.	SAA and PAA
Extension of mine life	• Changes in predicted duration of potential social impacts. • Economic benefits.	SAA and PAA
Changes in mine site water management arrangements	• Mine dependency on ES. • Community use and access to ES.	SAA and PAA
Changes in pipeline corridor alignment and relocation of pumping station facility No. 3.	• Potential change in residential amenity and accessibility. • Aboriginal cultural heritage impacts.	SAA

2.4 IMPACT AND OPPORTUNITIES ASSESSMENT

The methodology for the analysis and assessment of potential social impacts and opportunities associated with the amended project is consistent with the methodology described in the EIS SIA. For completeness, the relevant components of the methodology are repeated below.

2.4.1 Impact Prediction

The potential social impacts were predicted and assessed for the full project lifecycle, based on the combined analysis of:

- The findings of baseline profiling;
- Findings of EIS and SIA consultation;
- The experiences of other stakeholder groups residing in proximity to existing mining operations;
- EIS findings on changes to environmental values; and
- The likelihood of material changes to social conditions and trends as a result of the project.

The assessment of impacts and opportunities associated with the amended project also considered the issues raised in government, organisation and public submissions to the EIS.

The impact assessment includes consideration of cumulative social impacts and opportunities.

Other EIS specialist studies have examined potential impacts on environmental values which influence social values (including visual amenity, air quality, surface water, groundwater and noise impacts) from a scientific and standards-based perspective. The SIA has examined the social dimensions of these environmental impacts, including consideration of how potential impacts are predicted to be experienced from the perspective of affected and interested people.

The SIA presents separate impact assessments for the mine development (Section 3) and the pipeline development (Section 6), reflecting the significant differences in scale, proximity of nearby communities and propensity of each component to give rise to social impacts.

Scenario testing was used in the EIS SIA to predict the potential impacts of the project workforce and workforce accommodation arrangements. Scenario testing has not been used for the SIA Amended Project Report because, relative to the EIS, there are no changes proposed to the workforce or workforce accommodation arrangements.

2.4.2 Mitigation and Management

Actions to avoid, mitigate and manage or offset the negative social impacts of the project and enhance project opportunities were identified in the EIS SIA. The identification of strategies was informed through stakeholder inputs, Regis existing corporate management strategies, industry research and existing practice.

Since the lodgement of the EIS in 2019 Regis has continued to refine the mitigation and management strategies defined within the SIA. Further, the outcomes of some of the technical reports for the amended project have necessitated additional management measures. Any additional (new) and revised actions to avoid, mitigate or manage social impacts and opportunities are included herein.

2.4.3 Significance Assessment

Overview

Social impacts and opportunities were prioritised by assigning a level of significance. The significance of each social impact and opportunity was evaluated using the methodology described in the SIA Guidelines and (NSW DPE, 2020) summarised below.

The outcomes of the significance assessment (as presented in Appendix G of the EIS SIA) have been reviewed based on the amended project. Section 5 presents the outcomes of the significance assessment, specifically the social impacts or opportunities with an assessed mitigated/enhanced risk rating of Moderate or High. The full suite of impacts and opportunities is presented in Appendix B.

Significance Assessment Process

Social impact significance was assessed using the following process:

- Stage 1 – Description of the potential impact demonstrating whether the impact is negative or positive, direct or indirect, long-term or short-term, local or regional.
- Stage 2 – Evaluation of the risk posed by the social impact with reference to:
  - Stakeholder perceptions of the potential level of social risk posed by the negative social impact (informed through the findings of SIA consultation);
  - The likelihood of the potential negative social impact occurring; and
  - The consequence of the potential social impact or opportunity, that is minimal minor, moderate, major or catastrophic (or reasonable worst-case).

- Stage 3 – Quantification of the social risk [2] using a social risk matrix (likelihood and consequence), before and after mitigations are applied (unmitigated/mitigated risk).
- Stage 4 – Determination of a final significance rating (High, Medium or Low) based on consideration of the aspects described above i.e. the outcomes of the quantitative social risk analysis and the perceived social risk from the perspective of the stakeholder.

The evaluation approach outlined above was also used to evaluate the significance of the potential social opportunities of the project by adjusting the approach taken and replacing:

- Level of stakeholder concern with level of stakeholder interest; and
- Social risk with an assessment of likelihood and the scale of improvement or benefit.

Determining the significance of impacts and opportunities involved the combined consideration of technical knowledge and local stakeholder perspectives. This approach is consistent with the SIA Guideline (NSW DPE, 2020) and reflects the fact that a sole reliance on stakeholder perceptions may lead to biased results and the neglect of important impacts and opportunities. Stakeholders cannot always anticipate the scope and effects (positive and negative) of certain developments (Terrapon-Pfaff, Fink, Viebahn, & Jamea, 2017, p. 3).

As a result of the significance assessment described above, each impact and opportunity was assigned a level of significance - 'low', 'moderate' or 'high'.

In general, a 'high' social impact indicated that project-specific social management is required to be implemented, which if successfully implemented, would reduce the significance of the social impact.

During the third round of SIA consultation stakeholders were provided with an opportunity to review and comment on the outcomes of the significance assessment and the associated social impact and opportunities ratings.

[2] As defined in Vanclay et al (2015, p. vi) "*social risk is considered to be both risk (threats) to the success of the project, but also risk (social issues) created by the project, which in turn become threats to the project*."

3 IMPACT ASSESSMENT - MINE DEVELOPMENT

This section presents an assessment of the potential social impacts and opportunities of the amended mine development.

3.1 OVERVIEW

In the EIS SIA social impacts were identified and assessed for the project social area of influence at two geographical scales (mine development SAA and PAA) (Table 3). This approach was adopted to clearly distinguish the spatial distribution of social impacts and opportunities. The assessment showed that the majority of impacts and the most significant social impacts accrue to residents in closest proximity to the mine project area i.e. residents within the PAA. The potential significant opportunities of the project accrue largely to the broader Blayney LGA. These overall findings also apply to the amended mine development.

The assessment of potential social impacts and opportunities for the amended mine development focusses on the social aspects described in Table 5. For clarity, no new social impacts or opportunities were predicted as a result of the amended mine development.

The social impacts and opportunities predicted to change as a result of amendments to the pipeline development are discussed separately in Section 6.

3.2 MATERIAL IMPACTS

Table 6 and Table 7:

- List the social impact categories considered in the EIS SIA for the SAA (Table 6) and the PAA (Table 7);
- Identify, for each social impact category, whether any material change in impact or opportunity is anticipated with the amended project and provides a brief rationale; and
- Identify where the material changes are considered in the SIA Amended Project Report.

Table 6 and Table 7 are intended to assist the reader in comparing the impacts and opportunities of the EIS mine development with the amended mine development.

Table 6
Summary of Material Changes to Social Impacts and Opportunities - SAA

Social Impact Category (EIS SIA)	Are Material Changes Anticipated?	Rationale	SIA Amended Project Report Ref.
Access and connectivity (6.2.1)	Likely	Mine site entrance relocated.	Section 3.3.1
Public safety and security (6.2.2)	Likely	Mine site entrance relocated. Changes to TSF footprint and peer review of TSF design.	Section 3.3.2
Access to and use of ES (6.2.3)	Likely	Revised site water management arrangements. Updated surface water and groundwater assessments.	Section 3.3.3
Culture (6.2.4)	Likely	Changes to mine development disturbance footprint.	Section 3.3.4
Population change (6.2.5)	Unlikely	No change proposed to workforce size or employment arrangements.	No
Access to housing and accommodation (6.2.6)	Unlikely	No change proposed to workforce size or employment arrangements.	No
Community character and liveability (6.2.7)	Unlikely	Changes to the mine development schedule and construction schedule will result in changes to noise levels during the construction and operations phases. There will also be changes to short and medium term visual outcomes which may affect rural character in the SAA.	Section 3.3.5
Access to services and facilities (6.2.8)	Unlikely	No change proposed to workforce size, employment or procurement arrangements.	N/A
Labour market impacts (6.2.9)	Unlikely	No change proposed to workforce size, employment arrangements.	N/A
Economic impacts and opportunities (6.2.10)	Likely	Operational Life of mine extended by 12 months, however economic impacts/opportunities not considered material to SIA.	Section 3.3.6
Effects on agricultural livelihood (6.2.11)	Unlikely	Revised site water management arrangements. Updated surface water and groundwater assessments.	Section 3.3.7
Distributional and intergenerational equity (6.2.12)	Unlikely	No changes proposed.	N/A

Table 7
Summary of Material Changes to Social Impacts and Opportunities - PAA

Social Impact Category (EIS SIA)	Are Material Changes Anticipated?	Rationale	SIA Amended Project Report Ref.
Access and connectivity (6.3.2)	Likely	Impacts considered Mine site entrance relocated.	N/A
Amenity and surrounds (6.3.2)	Likely	Potential changes to noise, dust and visual impacts due to the revised mine development schedule and construction schedule.	Section 3.4.1
Access to and use of ES (6.3.3)	Likely	Potential changes to mine site water management and mine development disturbance footprint.	Section 3.4.2
Community (6.3.4)	Likely	Amended mine development may result in changes to residential amenity which may affect rural way of life	Section 3.4.3
Health and Wellbeing (6.3.5)	Likely	Human Health Impact Assessment (HHIA) completed post EIS submission which further qualifies potential project risks to human health and wellbeing.	Section 3.4.4
Personal and property rights (6.3.6)	Likely	Changes in noise, dust and visual outcomes associated with amended mine development may affect property values.	Section 3.4.5
Infrastructure and services (6.3.7)	Unlikely	No changes in demand for infrastructure and services	N/A
Cumulative (6.4)	Unlikely	No additional projects requiring consideration	N/A
Mine Closure (6.5)	Unlikely	No change in approach to mine closure	N/A

3.3 SECONDARY ASSESSMENT AREA

3.3.1 Access and Connectivity

Dungeon Road Closure

The mine development will require the closure of the portion of Dungeon Road that is located within the mine project area (Figure 2 and Figure 5). The social impacts associated with the closure of this road accrue primarily to the PAA. These impacts are discussed in Section 6.3.1 of the EIS SIA.

Since the submission of the EIS, Regis has agreed to sealing the portion of Dungeon Road located within Blayney LGA that will remain open to the public. This seeks to address the amenity concerns of the few residents located at the southern end of Dungeon Road.

The potential for the closure of Dungeon Road to impact access and connectivity in the SAA was assessed in the EIS SIA as a mitigated low (D2) risk of low significance.

Site Access Arrangements

The mine development will require the construction of a new access intersection on the Mid Western Highway. This will require some temporary changes to the local road network during construction. The EIS proposed a new access intersection off the Mid Western Highway adjacent to the eastern Walkom Road entry (Figure 2).

The amended project proposes a new location for the site access intersection off the Mid Western Highway. This intersection would be located approximately 1 km east of the original location assessed in the EIS. The change in intersection location responds to feedback from TfNSW and the community. A new alignment is subsequently proposed for the site access road to the mine administration and infrastructure area.

The average total daily vehicle movements generated by the project during peak construction will be approximately 432 movements including 10 heavy vehicle movements. It is noted that peak heavy vehicle movements of 20 movements per day will occur during months 2 and 3 of the project. The vast majority of vehicle movements to and from the mine project area during the construction phase will be light vehicles and minibuses.

In addition to the management actions identified in the EIS SIA (Section 6.2.1) to address the impacts of any changes in access and connectivity for the SAA, Regis proposes the following inclement weather mitigation measures for the revised site access and Dungeon Road intersection:

- Installation of Raised Reflective Pavement Markers (RRPMs);
- Operational restrictions limiting HV movements which cross the road centreline when visibility is less than the safe intersection sight distance. An infrared visibility sensor may be used to measure visibility at the intersection; and
- For Dungeon Road only, operational restrictions such as limiting all HV movements to daylight hours.

The proposed axillary turn lane treatments that exceed minimum requirements for the proposed revised site access will also mitigate the chance of rear end vehicular accidents as a result of vehicles waiting to turn into the mine project area in times of reduced visibility.

Blasting Activities and Impacts to the Mid Western Highway

The findings of the Amended NVIA (MD) indicate that blasting activities will not require the closure of the Mid Western Highway or local road networks in proximity to the mine project area. This is consistent with the outcomes of the EIS NVIA, hence no change to the already assessed social impact is anticipated with the amended project.

3.3.2 Public Safety and Security

Section 6.2.2 of the EIS SIA considered the social impacts and opportunities of the mine development for public safety and security in the SAA with reference to:

- Road safety; and
- Public risk.

The amended mine development does not involve any changes to the workforce size, workforce commute arrangements, construction or operations phase traffic volumes presented in the EIS (EMM, 2019a). Hence no new social impacts or material changes in already assessed social impacts related to the workforce are anticipated with the amended project.

The amended mine development does not propose any changes in the transportation or storage of hazardous goods e.g. cyanide. Hence no new social impacts or material changes in already assessed social impacts relative to public risk are anticipated. Despite this, and in response to community concern, Regis has identified additional measures to protect public safety and security. These measures are discussed in the following sections.

The amended mine development does include changes to site access arrangements which may have a material impact on road safety. These are discussed in the following section. During the RTS period, Regis has undertaken further review of the TSF design, operation and closure to address stakeholder concerns in relation to the potential for failure of the TSF. These issues are also discussed in the following sections.

Road Safety

During consultation undertaken to inform the EIS SIA a number of SIA consultation participants expressed concern in relation to the potential impact of the project on pedestrian and driver safety on local road networks. Concerns were raised in relation to the potential of the project to result in:

- Increased through traffic (light and heavy vehicles) in Blayney township;
- Increased traffic volumes on Guyong Road;
- Increased light and heavy vehicle movements on the Mid Western Highway; and
- Alignment of shift change during times when school bus services are operating on local roads in proximity to the mine project area e.g. Guyong Road.

The revised mine access intersection location addresses issues raised in submissions from the local community and TfNSW. Consultation has been carried out with TfNSW and Council and they have provided in principle support for the new location.

As stated in the EIS TIA, school buses operate along the Mid Western Highway during morning and afternoon (7:30am to 9:00am and 3:30pm to 4:45pm). The school buses stop to pick up and drop off passengers at informal locations along the Mid Western Highway including the property access opposite the revised site access. Regarding this property access, a westbound 3 m sealed shoulder is shown on the revised site access concept design in the Amendment Report (EMM, 2020a) before and after the property access to allow the school bus to pull over clear of traffic. When travelling eastbound the school bus will be able to pull over safely on the northern side of the Mid Western Highway by slowing down within the auxiliary turning lane and pulling over onto the old Mid Western Highway roadway, well clear of traffic.

The EIS SIA assessed the potential for project related traffic to disrupt school bus routes and present risks to passenger safety. The potential impact was assessed as having a mitigated low (D2) risk of low significance. The amended project will not change the outcomes of the EIS SIA with respect to school bus operation and user safety.

Section 6.2.2 of the EIS SIA proposes a range of measures to avoid and minimise the potential for road safety incidents associated with the mine development. In addition to these measures, Regis will also implement the inclement weather mitigation measures proposed for the revised site access and Dungeon Road intersection as described in Section 3.3.1.

Social and Economic Costs of a TSF Breach

The majority of participants in SIA consultation expressed concern in relation to the potential environmental, economic and social implications of a TSF wall breach. Section 6.2.2 of the EIS SIA described the scope of stakeholder concerns and the outcomes of the TSF Risk Assessment with reference to specific TSF design components.

The amended mine development proposes the same TSF design components as the EIS, hence the nature of the predicted social impact remains unchanged under amended mine development conditions. However, following submission of the EIS to DPIE an independent expert technical review was completed of the TSF design, operation and closure (the TSF Expert Review). The TSF Expert Review was undertaken by Dr David Williams of the University of Queensland. Williams (2020) concludes in relation to tailings dam stability that:

> " *the community can be reassured that the proposed TSF embankment will be a very effective and stable containment for the tailings, and is designed and constructed for the more demanding closure return intervals for flooding and earthquake loadings, at the outset. The TSF embankment is designed to have a margin of stability up to twice as high as typical TSF embankments under Australian conditions. In addition, the ultimate downstream slope of the TSF embankment will be revegetated early*." (Williams, 2020, p. 33)

3.3.3 Access to and Use of Ecosystem Services

Ecosystem services (ES) are the direct and indirect benefits provided to humans through ecosystems. The Millennium Ecosystem Assessment (Millennium Ecosystem Assessment, 2005) framework identifies ecosystem services within four categories:

- Provisioning ES, such as food and water;
- Regulating ES, such as flood and disease control;
- Supporting ES, such as nutrient cycling; and
- Cultural ES, such as spiritual, recreational and cultural benefits (Department of Environment, Water, Heritage and The Arts, 2010).

Section 6.2.3 of the EIS SIA described the impact of the mine development on access to and use of ES in the SAA with reference to:

- Mine dependency on ES; and
- Community access to, and use, of ES.

The amended mine development includes changes to the original mine site water management arrangements and construction water sourcing arrangements. These changes have implications for the dependency of the mine on ES and community access to, and use, of ES. The following sections discuss the impact of these changes on access to, and use, of ES.

Mine Dependency on Ecosystem Services

To a large extent, design measures have been put in place to avoid reliance by the mine development on local ES in order to minimise pressure on resources in the locality. As a result, the only ES for which mine development dependencies have been identified is groundwater.

Water will be required during the initial construction phase and prior to the commissioning of the pipeline. In the EIS (EMM, 2019a), construction water was proposed to be sourced predominately from rainfall and runoff captured in accordance with Regis' harvestable rights entitlement. The EIS (EMM, 2019a) proposed a range of actions in the event of a shortfall in water supply during construction. These actions included reducing haul road dust suppression water demand by the use of dust suppression agents, or by investigating alternative water supplies, such as establishing onsite production bores and trucking water to site. The EIS SIA assessed the potential for the mine development's dependency on water to reduce access to water for other users as a mitigated low (D2) risk of low significance.

Since the submission of the EIS (EMM, 2019a) Regis has completed further investigations to:

- Establish a clear pathway for securing a project construction water supply i.e. groundwater extraction; and
- Assess the potential impacts associated with the preferred approach to construction water supply.

Investigations have confirmed the potential for groundwater extraction to support the construction water supply. The investigations conducted post EIS submission comprised the drilling and hydraulic testing of two test bores and four monitoring bores. Analysis of testing data indicates a combined groundwater yield of 15 litres per second (L/sec) is sustainable from the two test bores over the nine-month construction period. A path forward has been identified for securing the remaining 5 L/sec with prospective drilling targets within the mine development area and on Regis owned land. The additional bores will provide enhanced flexibility in the pumping regime de-risking the water supply.

Post EIS submission Regis undertook further assessments that considered the potential impacts associated with abstracting 20 L/sec from the test bores. Potential impacts have been assessed. The predicted impacts of the construction water supply on groundwater receptors have been assessed with reference to the Aquifer Interference Policy (AIP) (NSW Office of Water, 2012) and DPI water resources plans fact sheet (DPI, 2018). The DPI water resources plans fact sheet documents the process and criteria applied to the assessment of applications under the WM Act. The findings of the assessment show there are no third-party bores with a predicted drawdown in excess of 1 m.

With respect to base flow reduction, the findings of the assessment predict a temporary reduction in baseflow to the Belubula River in the vicinity of Tributary A. The results are similar to the findings of the EIS assessment. Groundwater is currently predicted to contribute approximately 5% of overall surface flows in the Belubula River in this area. Therefore, the predicted reduction in baseflow is expected to have a minor influence on overall surface flows in Tributary A and the Belubula River upstream of the confluence with Tributary A (EMM, 2020c).

With respect to the operations phase, the mine development will require water for a number of activities including processing plant water supply and haul road dust suppression. Under the amended project conditions this water will be primarily provided through the water supply pipeline in the long-term, which will supply approximately 52% of average annual demand of the project. This is a 1% reduction compared to the predicted pipeline water supply in the EIS (EMM, 2019a). Consistent with the EIS (EMM, 2019a), under amended project conditions the remainder of the water will continue to be supplied predominantly via the capture of rainfall/runoff from operational areas, which will provide approximately 36% of the average annual demand.

In summary, in comparison with the EIS findings, the Amendment Report quantifies the use of production bores and the potential impact on groundwater resources during the construction phase. The EIS identified the possibility of impacts but did not assess the impact. This has now been completed.

The amended mine development results in a negligible change in the dependency of the mine on water resources during the operations phase.

The social impacts associated with the use of groundwater during the construction phase of the amended project is not considered significant given that no third party bores are predicted to experience a drawdown in excess of 1 m.

The impact of the amended mine development on the provision of water access for other users is therefore assessed as a mitigated low (D2) risk of low significance, consistent with the outcomes of the EIS SIA.

Community Access to and Use of ES

ES represent the intersection of the natural and human environment. During SIA consultation participants of the broader community identified a number of benefits they obtain from the surrounding ecosystem, relevant to the mine development. These benefits include:

- Access to water for agricultural purposes obtained via a combination of naturally occurring springs, surface water flows in the Belubula River and groundwater; and
- Enrichment, reflection, recreation and aesthetic experience generally associated with the rural environment and the Belubula River.

Table 8 summarises the ES accessed by the broader community of the SAA and relevant to the context of the mine development.

Table 8
Ecosystem Services in the SAA

ES Category	Service	Example	Drivers of Change associated with Project
1. Provisioning	Water supply for agricultural use	• Stock watering from the Belubula River • Agriculture is a key land use	• Mine site water management including water demand management • Change in land use (i.e. from agricultural land) within the mine development area
2. Culture	Aesthetic value	• Cultural value placed on landscapes and landmarks in the area	• Land disturbance, loss of vegetation and change in land use

ES Category	Service	Example	Drivers of Change associated with Project
	Recreation value	• Fishing in the Belubula River • Use of Vittoria State Forest (VSF)	• Mine site water management including water demand management

The potential impact of the project on community access to and use of ES was assessed as a moderate (C2) risk of moderate significance. The EIS SIA found that potential impacts of the project on cultural ES were more significant than the potential project impacts on provisioning ES, hence the moderate risk rating.

The amended project does not propose any change in land use or material change in disturbance footprint that would give rise to different or additional social impacts with respect to cultural ES beyond those already assessed in Section 6.2.3 of the EIS SIA.

However, the amended project does propose changes to mine site water management and groundwater extraction that may give rise to different social impact outcomes with respect to both provisioning and cultural ES, specifically water supply for agricultural use and recreation values. The amended project proposes the excision of 964 ha of catchment captured by the operational water management system, the same as proposed in the EIS.

Water Supply and Recreational Values

One of the key findings of the SIA consultation was the value residents of the Blayney LGA (including near neighbours) place on access to water, and in particular the Belubula River. The use of water from the Belubula River by landowners for agricultural operations (primarily stock watering) downstream of the mine project area is widespread. The Blayney Fishing Group expressed concern that the mine development may adversely impact fish stock in the Belubula River and Carcoar Dam, which in turn could impact recreational fishing focussed on the Belubula River. These issues are discussed in Section 6.2.3 of the EIS SIA.

In addition, during SIA consultation in 2019 the quality of water to be brought in via the pipeline and the potential for this water to contaminate existing surface water flows was identified by many residents, including downstream landowners, as a significant area of concern.

With respect to community access to ES, and based on the findings of the EIS technical reports (EIS SWA and EIS GWA) the EIS SIA found:

- The mine development would have minimal impact on the surface water flows in the Belubula River and consequently no significant impact on downstream water users; and
- Minimal risk of the pipeline water supply adversely impacting the quality of groundwater or surface water outside of the mine project area.

An Addendum GWA and a Revised SWA have been completed for the amended mine development. In relation to the Belubula River, the findings of the Addendum GWA and Revised SWA are generally consistent with the assessment completed as part of the EIS (EMM, 2019a), and indicate that:

- The impacts on surface water and groundwater as a result of the project are predicted to be minimal and impacts to downstream water users are predicted to be minor.
- Upstream of the Tributary A confluence, a 15% reduction in baseflow to surface water (i.e. the Belubula River) in the local area is predicted to occur during and after mining. However, under existing pre-mining conditions baseflow is predicted to contribute only around 5% to the overall surface water flows in this area.
- Downstream of Tributary A, there is no change in groundwater discharge or river leakage predicted to occur during and after mining.
- A temporary reduction in the inflow to Carcoar Dam (4%) will occur as a result of construction and operation of the mine development. Following mine-closure and rehabilitation, the reduction in flows will be much smaller (0.47% reduction). This level of change is expected to be within the current natural variability in catchment conditions.
- Groundwater levels will decline in a localised area surrounding the open cut mine. There are no third-party bores with a predicted drawdown in excess of 2 m (EMM, 2020c; HEC, 2020).

The findings of the Addendum GWA and Revised SWA show that the mine development will result in imperceptible changes in inflows to Carcoar Dam. The Revised SWA included updated modelling of Carcoar Dam inflows with additional Carcoar Dam release and storage data provided by DPIE Water. The revised existing modelled inflow to Carcoar Dam is 4,485 ML/year, or higher, 50% of the time (compared to 5,836 ML/year modelled in the EIS SWA). With the excision of the 964 ha of catchment captured by the operational water management system, the existing modelled inflow to Carcoar Dam that occurs 50% of the time reduces by 186 ML/year to 4,299 ML/year, or higher, (compared to a reduction of 242 ML/year to 5,594 ML/year modelled in the EIS SWA. This is a 4.1% reduction in median annual inflow to Carcoar Dam and represents the predicted reduction in total inflow to Carcoar Dam at the maximum mine project area extent. Consistent with the findings of the EIS, this level of change is expected to be imperceptible in comparison with the natural variability in catchment conditions.

Further, as outlined in the EIS, pipeline water quality is expected to have an average TDS of approximately 3,500 mg/L (EMM, 2019a). The operational surface water management system has been redesigned to ensure zero spills for all modelled climate scenarios (HEC, 2020). As such there is minimal risk that the water brought in via the pipeline will adversely impact the quality of groundwater or surface water outside the mine project area.

Regis has developed a comprehensive management framework to avoid any impacts on the Belubula River and its associated catchment values. This framework is summarised in Section 6.2.3 of the EIS SIA and documented in detail in the revised water studies (EMM, 2020c; HEC, 2020).

Notwithstanding this, recognising existing sensitivities around water access, and in order to provide greater certainty to downstream landowners, Regis has provided a proposal for downstream surface and groundwater monitoring to downstream landowners. This approach will enable downstream landowners to remain informed of any changes in downstream water quality and quantity as a result of the project. In 2019, Regis and EMM personnel spoke with many local landholders, and some expressed interest in Regis visiting their property to collect information related to the Belubula River. Following these discussions, EMM visited various landholder properties to survey areas of interest associated with the Belubula River, including springs, dams and bores. During these surveys, water samples were collected to assist with the surface water-groundwater interaction understanding and overall characterisation of the water environment in the Blayney area.

In summary, and with respect to community access to ES, the amended project is predicted to result in impacts that are not materially different to the impacts predicted and assessed in the EIS SIA. The potential impact of the project on community access to and use of ES is assessed as a mitigated moderate (C2) risk of moderate significance, consistent with the EIS SIA.

3.3.4 Culture

Section 6.2.4 of the EIS SIA described the predicted impacts of the project on Aboriginal cultural and social values including connection to country. Section 6.2.4 also described predicted impacts on historic heritage values. The impact of the project on rural values and rural way of life was described in Section 6.3.4 of the EIS SIA.

The amended mine development proposes changes to the disturbance footprint which may give rise to additional Aboriginal cultural heritage and historical heritage impacts.

Aboriginal Cultural Values

The mine project area is located within the area identified as the traditional country of the Wiradjuri People. The cultural values of the Wiradjuri People relevant to the mine project area are described in the EIS CHA.

The issues and concerns, values and aspirations of the Aboriginal people of the Central West Region (CW Region) are described in Section 5.3.1 of the EIS SIA.

The findings of the EIS CHA indicate that the mine development will result in the total disturbance of twenty-three Aboriginal cultural heritage sites and the indirect or inadvertent disturbance of a further ten Aboriginal cultural heritage sites, based on disturbance due to their proximity to proposed mine components (Landskape, 2019). The identified Aboriginal cultural heritage sites within the mine project area are comprised of small scatters or isolated finds of stone artefacts. The findings of surveys undertaken for the EIS CHA show that the types of Aboriginal cultural heritage sites within the mine project area that may be impacted by the mine development generally comprise part of a region-wide distribution of very small Aboriginal open occupation sites with disturbed stone artefacts of low scientific significance (Landskape, 2019). The findings of the EIS CHA indicate that the Aboriginal cultural heritage sites located within the mine project area are not of high scientific significance and do not have particularly high social or cultural value (Landskape, 2019). Given the low scientific significance of the identified Aboriginal cultural heritage sites, the cumulative effect that may result from the mine development was considered to be low, and mitigated by the ongoing program of archaeological recording/salvage recommended within the EIS CHA.

Despite these findings, SIA consultation with a local Wiradjuri Elder indicated concern for the cumulative loss of connection to country which is resulting from local and regional changes in land use and tenure.

The EIS SIA assessed the potential impact of the mine development on Aboriginal cultural and social values as a mitigated moderate (C2) risk of moderate significance.

The following additional reports have been completed to identify and assess the potential impacts of the amended mine development on Aboriginal cultural heritage and historic heritage:

- Addendum CHA (PD) for the amended mine access road and pipeline options; and
- Addendum CHA (MD) for the amended mine development.

No additional Aboriginal cultural heritage sites were identified within the disturbance footprint of the amended mine access road. The findings of the Addendum CHA (MD) indicate that:

- The amended mine development will result in the direct disturbance of six additional Aboriginal cultural heritage sites. These sites were previously assessed in the EIS as being potentially subject to harm (i.e. potential indirect disturbance).
- Two Aboriginal cultural heritage sites previously assessed as being subject to direct harm, are now located proximal to the proposed direct disturbance footprint for the project, and hence may be subject to indirect harm.
- A further three Aboriginal cultural heritage sites will now be avoided by the project. These sites were previously assessed in the EIS as being potentially subject to harm (i.e. potential indirect disturbance) (Landskape, 2020).

As presented in the EIS CHA (MD), the Aboriginal cultural heritage sites identified in the mine project area and their context are not assessed as being of high archaeological (i.e. scientific) significance. Notwithstanding, Regis acknowledges the mine project area has cultural significance to members of the Aboriginal community.

It is acknowledged in the EIS CHA (MD) that all archaeological sites provide connection to the past for the present Aboriginal community and for future generations. Aboriginal cultural heritage sites such as that identified within the mine project area can also provide information about past lifestyles and strengthen the links between Aboriginal people and the land.

Given the findings of the Addendum CHAs (PD and MD) the amended project is not predicted to result in any material change to risk rating or significance of the social impacts described in the EIS SIA with respect to Aboriginal cultural and social values. The potential impact of the amended mine development on Aboriginal people's connection to country, cultural heritage, beliefs and values is assessed as a mitigated moderate (C2) risk of moderate significance, consistent with the outcomes of the EIS SIA.

Regis is committed to involving the local Aboriginal community as integral participants in the management of Aboriginal cultural heritage values in the mine project area. Regis will continue to involve the registered Aboriginal stakeholders and any other relevant Aboriginal community groups or members in matters pertaining to the mine development. In particular, the recording, collection, curation, storage and replacement of Aboriginal objects must occur with the invited participation of local Aboriginal community representatives.

Historic Cultural Heritage

The social dimensions of any potential impacts of the mine development on historic cultural heritage is discussed in Section 6.2.4 of the EIS SIA. No concerns were raised during SIA consultation in relation to the impact of the project on historic cultural heritage located within the mine project area. The EIS SIA did not assess the potential risk of any impacts from the mine development on the historical cultural and social values of the SAA. This is because the issue was identified as of low significance and no historic heritage items were anticipated to be impacted by the mine development.

The EIS CHA identified one potential heritage item, Hallwood Farm Complex (Hallwood), within the mine project area. While not listed, Hallwood was identified as of potential state significance. A key benefit of the amended project has been the redesign of the water management system and TSF layout which has removed the Secondary WMF from the project and thereby has avoided the removal of Hallwood.

The potential impact of the amended mine development on historic cultural heritage was assessed in the Addendum CHAs (PD and MD). The Addendum CHAs identified three potentially locally-significant historical cultural heritage sites that will have different impacts to those detailed in the EIS CHA. While these three heritage sites were within the EIS

disturbance footprint, they were identified as indirectly impacted as they were not directly under mine components. These sites will now be directly impacted by the amended mine development. The Addendum CHA (MD) concludes that the amended mine development disturbance footprint is largely located in areas where significant items of highly important cultural heritage would be avoided.

Ozark (2020) recorded one historic heritage item during survey of the mine access road for the Addendum CHA (PD). Ozark (2020) found that the item did not meet the criteria for local, state or national significance. The item is located outside the corridor of the proposed access road and will not be impacted.

Based on the findings of the CHAs completed for the EIS and for the amended mine development, the amended mine development will not result in any additional historic cultural heritage impacts, beyond those already described in the EIS CHA. The potential impact of the mine development on the historical cultural heritage values of the PAA is assessed as a mitigated low (D1) risk of low significance.

3.3.5 Community, Character and Liveability

Section 6.2.7 of the EIS SIA described the potential impacts of the project on community, character and liveability of the SAA with reference to visual impacts, and the presence of a mine workforce.

A number of participants in SIA consultation expressed concern that the mine development may detract from the rural character of the Blayney LGA. Some residents of the Blayney LGA expressed concern that the proximity of the mine development to the Blayney township and the increased presence of a permanent mine workforce would lead to real and perceived changes in the character of the Blayney township. A small number of participants in SIA consultation expressed an expectation that the mine development would have a negative impact on the 'journey experience' for tourists arriving in Blayney via the Mid Western Highway.

The amended project proposes no changes to the EIS project description with respect to workforce characteristic and size. The amended mine development does involve changes to the mine schedule and subsequent construction sequence of the WRE which has implications for potential visual impacts. Further, the amended mine development proposes changes in the footprint of the TSF, TSF embankment design and construction timing all of which have potential implications for the rural character of the SAA.

Impacts to Rural Character of the LGA

Visual Impacts on Rural Character

Section 6.2.7 of the EIS SIA assessed the potential impact of the mine development on rural character of the Blayney LGA with reference to potential changes in visual quality. The EIS SIA (EIS Appendix T) considered the findings of the EIS VIA, which included consideration of the impact of the mine development on views into the site from the Mid Western Highway and from the key locations in Blayney e.g. Church Hill Rotary Lookout.

The EIS SIA considered whether the changes in visual character resulting from the mine development would:

- Have a negative impact on the journey experience for tourists arriving in Blayney via the Mid Western Highway. The potential impact of the mine development on journey experience was assessed as a mitigated low (D2) risk of low significance; and
- Lead to adverse changes in the public perception of the character of Blayney LGA and township reducing the attractiveness of the destination to tourists and potential future residents. The potential impact of the mine development on public perception of Blayney LGA was assessed as a mitigated low (D2) risk of low significance.

An Amended VIA has been prepared for the amended mine development. A summary of the key amendments to the mine development since the exhibition of the EIS in relation to visual assessment and visual impacts are summarised below and described in detail in the Addendum VIA:

- Site access – The revised location of the site access intersection and access road results in:
  - Relocation of localised lighting effects at the intersection with the Mid Western Highway; and
  - Direct lighting effects and impacts on residences located on north facing slopes adjacent the access road south of the highway in Kings Plains and to any residents located to the east of the access road. Lighting impacts will be associated with vehicle headlights moving along the mine access road. There may also be a requirement to include intersection lighting in the final intersection design.
- Mine and waste rock emplacement schedule – The revised schedule results in longer duration of high visual impacts to any existing view locations south and south-west of the mine development such as Kings Plains residents and the Mid Western Highway. The EIS design provided priority completion of the pit bund and southern amenity bund in order to minimise duration of high-level visual effects during construction. The revised schedule for the amended mine development has extended this impact from two to four years, to up to six years.

- Pit amenity bund – The revised pit amenity bund will not screen all views of infrastructure components to views from the south over the life of the mine. Minor views to components such as the ROM pad and stockpiling will be evident.
- Southern Amenity Bund – As described above, the rescheduling of WRE results in a delay in completion of the southern amenity bund. This results in high visual effects and visual impacts for longer duration than the previous EIS mine design. After PY6 visual effects and impacts are consistent with those described in the EIS, progressively lowering as rehabilitation is implemented and establishes across the southern face of the amenity bund.
- Soil stockpile areas – Additional soil stockpiling due to the WRE schedule changes will increase areas of high visual impact to views from the west, south-west and some locations south of the mine development. This will also result in removal of additional existing trees on the pit hill which facilitated visual screening of open cut operations and maintained the visual setting as much as possible. Some trees located below the rim of the pit are to be retained to shield the rim of the pit.
- TSF – The amendments to the design (changes to the embankment design, construction timing, the TSF footprint, and the TSF post closure landform) result in minimal changes to visual impacts as these components are generally screened by surrounding ridgelines, local plantation forest, the southern amenity bund and waste rock emplacement as they are constructed to screen views from the south and east.
- Lighting effects – Relative to the EIS, direct lighting effects will be lower on the southern amenity bund due to the revised mine schedule and restrictions to daylight operations on the south facing slope of the amenity bund. There may be direct lighting spill to views from the south above the lower pit amenity bund.
- Mitigation – Since the EIS exhibition, there has been considerable progression of negotiated agreements including visual mitigation plans and tree screen planting which will contribute to lowering visual impacts and improve community visual enhancement in the short term.

The findings of the Addendum VIA are consistent with the EIS VIA which indicated that:

- The WRE and open cut activities on McPhillamys Hill will be visible at increasing proximity from various locations on the Mid Western Highway when travelling east towards Blayney;
- The workings on McPhillamys Hill will be visible from the Mid Western Highway, but views will change as the ore is mined and the hill progressively becomes lower; and
- Whilst views will be available from the Mid Western Highway when travelling east, Sturgeon's Hill, west of the open cut hill, Bushranger Hill and spurs and ridges further north, will screen views until the view is adjacent to the site and to the immediate south of the mine project area.

The findings of the Addendum VIA have been considered in assessing the potential impacts of the amended project on rural character of the SAA. Relative to the EIS, the amended mine development will extend the construction time frame for the southern amenity bund. In the EIS, early construction and revegetation of the pit and southern amenity bunds shielded views into the pit and WRE from the Mid Western Highway. The amended mine development will extend the duration of time in which mining activity is visible from the Mid Western Highway.

The extension in the timeframe during which mining activities will be visible from the Mid Western Highway together with the revised mine development schedule increases the risk (from unlikely to possible) that the presence of the mine development will affect the journey experience for tourists arriving in Blayney via the Mid Western Highway. The risk has therefore been revised up from a mitigated low (D2) risk to mitigated moderate (C2) risk. The assessed impact significance remains low.

With respect to the impact of the mine development on public perception of the character of Blayney LGA and township, it is considered unlikely that the amended mine development will result in any material changes to the overall risk (low) and significance rating (high). This is because it is the presence of the mine and associated activity e.g. workforce arrangements that makes the larger contribution to the impact rather than the visual impact of the mine.

3.3.6 Economic Impacts and Opportunities

An Addendum EcIA has been completed for the amended project. The findings of the Addendum EcIA show the net social benefit of the amended project to NSW is estimated at $139M present value (at 7% discount rate) ($231M with employment benefits included) compared to $141M for the EIS project ($232M with employment benefits included). The net social benefit of the amended project to NSW is not materially different to the EIS project.

However, with recent significant increases in the forecast gold price, the net social benefits of the amended project are likely to be significantly greater than estimated. Adoption of conservative, contemporary gold price forecasts, results in the net social benefit of the amended project increase to $244M present value (at 7% discount rate) ($336M with employment benefits included).

The Addendum EcIA does not include revision of the local effects analysis (LEA) presented in the EIS or in the EIS EcIA. This is because the outcomes of scoping showed that the amended project will not materially change the LEA or supplementary LEA carried out for the EIS.

3.3.7 Effects on Agricultural Livelihood

Section 6.2.11 of the EIS SIA described the potential impacts of the mine development on agricultural livelihoods with reference to reduction in productivity in the agricultural sector and downstream livelihood impacts. The findings of the EIS SIA indicate that the mine development will:

- Have no direct impact on privately owned agricultural land within the SAA; and
- Not have a significant impact on downstream agricultural operations.

The EIS SIA considered the potential of the project to:

- Reduce productivity in the agricultural sector. This was assessed as a mitigated low (D2) risk of low significance.
- Result in livelihood impacts for downstream landholders due to changes in water quality and quantity in the Belubula River. This was assessed as a mitigated moderate (D3) risk of moderate significance.

Revised surface water and ground water assessments (EMM, 2020c; HEC, 2020) have been completed for the amended mine development. The findings of these assessments show that the impacts on surface water and groundwater as a result of the amended mine development are predicted to be minimal and impacts to downstream water users are predicted to be minor. This potential impact was previously discussed in Section 3.3.3, which includes a discussion of the relevant actions to avoid and mitigate any potential impacts.

Consistent with the findings of the EIS SIA, the amended mine development is not predicted to have any significant impact on agricultural operations downstream of the mine project area or on agricultural productivity in the Blayney LGA. The EIS risk ratings for the amended project therefore remain unchanged.

3.4 PRIMARY ASSESSMENT AREA

This section presents the outcomes of the social impact and opportunities assessment for the amended project. It discusses only those social impacts and opportunities for which material changes from the findings presented in the EIS SIA are considered likely (Table 7).

3.4.1 Amenity of the Surrounds

Section 6.3.2 of the EIS SIA describes the potential impact of the mine development on the aesthetic value and amenity of the locality surrounding the mine project area with reference to:

- Acoustic amenity;
- Blasting and vibration;
- Air Quality;
- Visual Amenity; and
- Biodiversity values.

The mine surrounds are described in Section 5.3 of the EIS SIA. The mine project area surrounds include approximately 90 rural and rural residential properties, as well as the Vittoria State Forest (VSF). The majority of these near neighbours anticipate tangible and adverse changes in amenity and specifically acoustic amenity, air quality, and visual amenity, as a result of the mine development. Near neighbours anticipate that the mine development will result in changes to existing amenity during both the day and the night, particularly during the construction phase when the southern amenity bund is being constructed. Residents of Kings Plains expect to experience a reduction in the use and enjoyment of both indoor and outdoor spaces due to amenity impacts.

Relevant findings of the EIS SIA with respect to residential amenity in the PAA were:

- Near neighbours would experience a reduction in rural amenity due to the impact of cumulative biophysical changes i.e. changes in noise levels and a reduction in visual quality. This impact was predicted to accrue predominantly to residents of Kings Plains and some near neighbours to the west and north of the mine development.
- The predicted mitigated impact of the mine development on rural amenity in the PAA was assessed as a high risk of high significance.

The findings of the EIS SIA (EIS Appendix T) with respect to lighting impacts on residential amenity in the PAA were:

- Residents of Kings Plains and some near neighbours west and north of the mine development may experience reduced enjoyment of outdoor spaces at night due to intrusive lighting and resulting impacts on dark skies.
- This impact was assessed as a mitigated high (C3) risk of high significance given the apparent value residents place on outdoor activities and dark skies.

In response to public submissions on the EIS and concerns raised by residents of the PAA, Regis has revised the mine schedule including the construction schedule for the WRE area to further minimise potential impacts on residential amenity in the PAA. Revisions to the mine schedule and construction schedule have resulted in improved noise and dust outcomes for near neighbours but have extended the potential duration of visual and lighting impacts. However, the scale of direct lighting impacts has diminished due to changes to the WRE schedule.

The following sections present the outcomes of the impact assessment for the amended project with respect to residential amenity.

Acoustic Amenity

The EIS SIA described the anticipated changes to acoustic amenity in the PAA during the construction phase and operations phase with reference to the findings of the EIS NVIA. An Amended NVIA (MD) has been prepared for the amended mine development.

The outcomes of the amended mine development for acoustic amenity in the PAA (as described in the Amended NVIA (MD) are significantly better than the predicted outcomes documented in the EIS (EMM, 2019a). The outcomes of the Amended NVIA (MD) are discussed below and relate to the following key project changes:

- Revision of the mine schedule and the subsequent construction sequence of the waste rock emplacement and in particular consideration of predicted noise levels in Kings Plains. This revision has achieved a reduction in predicted noise levels at nearby residences while extending the construction timeframe for the southern amenity bund; and
- Relocation of the mine development site access intersection approximately 1 km east of the original location assessed in the EIS.

<u>Construction/Site Establishment Phase</u>

For the purposes of modelling noise impacts, the project construction phase, during which construction activities will be undertaken during the day-time only, extends for the first six months from project commencement. The construction activities considered in the Amended NVIA (MD) include the:

- Development of the temporary site access via Dungeon Road;
- Clearing and grubbing the open cut mine area and ROM pad;
- Initial construction of the permanent site access from the Mid Western Highway;
- Construction of the water management facilities at the southern end of the mine project area; and
- Initial construction of the pit amenity bund.

Construction of other mine infrastructure such as the TSF, dams and water storage, processing, crushing and screening plant, administration, maintenance areas, haul roads, bunds and hard stands are included as part of the operational noise assessment.

The findings of the Amended NVIA (MD) for this initial site establishment phase of the mine development indicate that predicted day-time noise levels are expected to comply with noise management levels (NMLs) at all receivers throughout the construction phase of the amended mine development. Significantly, construction noise levels associated with the amended mine development are substantially lower than those presented in the EIS NVIA, particularly in the Kings Plains and Sturgeon Hill Noise Catchment Areas (NCAs). The reduction in these NCAs is attributable to the:

- Relocation of the site access intersection off the Mid Western Highway approximately one kilometre further to the east than that proposed in the EIS;
- Utilisation of smaller and quieter equipment in the southern end of the mine development project area; and
- The careful scheduling of activity for the amended mine development so that works on the main structures at the southern end of the mine development project area, closest to receivers (WMFs and the pit amenity bund), are undertaken generally in sequence to avoid a high concentration of activity (Muller Acoustic Consulting Pty Ltd, 2020).

In the EIS (EMM, 2019a), one receiver in Kings Plains (R17) (Amendment Report Figure 6.2.1) was predicted to experience noise levels up to 5 decibel (dB) above the NML. This receiver was located proximate to the original proposed location of the site access intersection off the Mid Western Highway, as described in the EIS (EMM, 2019a). The exceedance was directly attributable to the construction of this intersection and associated access road. As a result, the change to the intersection location 1 km east has avoided this impact on R17.

Operations Phase

From month 7 onwards, when works will commence to be undertaken 24 hours per day, the mine is deemed to move into the 'operations' phase for the purpose of applying more conservative noise criteria. However, it is noted that during this time 'construction' activities will be continuing, including the construction and commissioning of the processing plant, which will be completed during the second year of the project. Heavy earthworks activities to construct the TSF, haul roads, bunds, hard stands and water storage management facilities will continue to occur during the day-time period (7 days). The construction of the crushing and screening plant, administration, maintenance areas and other mine infrastructure will occur 24/7.

The findings of the EIS NVIA indicated that a number of residential receivers would experience noise levels on occasion above the relevant noise criteria (referred to as the Project Noise Trigger Levels (PNTL)) from PY 1 to PY 4 inclusive. Further the EIS NVIA predicted that exceedances of noise criteria would trigger voluntary mitigation rights during PY 1 and PY 2.

Predicted noise levels in the Amended NVIA (MD) are generally within 2dB of the PNTL at all receivers throughout the amended mine development, with the exception of one receiver in Kings Plains which is expected to experience noise levels up to 3dB over the PNTL during the evening period for a brief period in the first half of PY1 during the development of the pit amenity bund. The predicted noise levels are lower than those presented in the EIS NVIA. The reduction in predicted noise levels at receivers in Kings Plains is attributable to the revised mine development schedule and WRE design, selection of quieter mobile mining fleet and optimisation of that equipment (Muller Acoustic Consulting Pty Ltd, 2020).

Additionally, in consultation with the NSW Environmental Protection Authority (EPA), a revised low frequency noise assessment was undertaken incorporating a more detailed methodology to determine the likelihood of low frequency noise emissions from the amended mine development. The resulting assessment concluded that the penalties applied in the EIS NVIA are not required in the Amended NVIA (MD) as the occurrence of low frequency noise is unlikely. This is due to the detailed assessment methodology and the result of the design changes in the amended mine development such as quieter equipment, reduced equipment quantities and revised waste schedule (Muller Acoustic Consulting Pty Ltd, 2020).

In summary, operational noise levels from the amended mine development are expected to (generally, within +2dB of the PNTLs) satisfy the PNTLs at all receivers for all operating periods throughout the mine development life, with the exception of one receiver for a brief period in PY 1, when activity is occurring at the southern end of the mine development project area.

Where predicted noise levels exceed the PNTLs by up to 2 dB, the residual impact is Negligible in accordance with *Noise Policy for Industry* (NPI) (NSW EPA, 2017) methodology. Hence, the residual noise impacts at those receivers would be considered negligible, being of a minor magnitude that can be managed accordingly in conjunction with the appropriate noise monitoring system and management controls described in the Amended NVIA (MD).

The Amended NVIA (MD) assessed the potential impacts of the mine development on vacant privately owned land and residences surrounding the mine development with reference to the requirements of the *Voluntary Land Acquisition and Mitigation Policy* (VLAMP) (NSW Government, 2018). Results of the assessment as per VLAMP definitions shows that during PY 1, one (1) receiver (R28a) is expected to experience Marginal Impacts (3 to 5dB over PNTL) for a short duration during the night-time period of PY 1. All VLAMP impacts from the end of PY 1 are determined to be Negligible. In comparison, the EIS NVIA identified potential

Marginal Impacts (3 - 5dB over PNTL) in the Kings Plains, Walkom Road and Sturgeon Hill NCAs. The reduction in received noise levels and potential impacts at receivers in these NCAs is attributable to the revised mine and waste schedule and WRE design, selection of quieter mobile mining fleet and optimisation of that equipment (Muller Acoustic Consulting Pty Ltd, 2020).

The results of the modelling presented in the Amended NVIA (MD) indicate that the changes associated with amended mine development have notably reduced noise emissions from the mine development compared to those presented in the EIS NVIA and considered in the EIS SIA.

The design of the project will incorporate a range of mitigation and management measures, including (but not limited to) selection of equipment to meet the sound power levels specified in the Amended NVIA (MD), detailed design and scheduling of construction and operations activities and the sequential construction of WMFs to avoid noise intensive activities.

The following mitigation and management measures are proposed (and were also proposed in the EIS SIA) to reduce amenity impacts associated with construction and operations phase noise:

- Development of property-specific management plans in agreement with individual landowners within the Kings Plains locality. These management plans will incorporate tailored strategies e.g. installation of air-conditioning or double glazing, landscaping and screening, to reduce the impact of noise at the residence. Additional strategies for consideration include temporary relocation of residents to alternative accommodation during the construction phase and early operations when noise impacts and resulting disturbance are likely to be greatest.

- Undertake attended noise monitoring at regular intervals in Kings Plains and along Guyong Road to confirm compliance with noise criteria.
- Proactive noise management at the mine development.

In addition to the measures identified above, during the operations phase Regis has committed to:

- Provide suitable mitigation measures at the receptor where prolonged exceedances of noise criteria are identified through attended noise monitoring; and
- Implement and communicate to near neighbours, a complaints and grievances system including policy and procedure to ensure that all near neighbours have access to a mechanism for reporting noise issues and a transparent process for the investigation and resolution of complaints.

To supplement the mitigation measures, Regis also commits to the installation and maintenance of a real-time noise monitoring network over the life of the amended mine development. The real-time network will likely feature Noise Monitoring Terminal (NMT) locations in the Kings Plains area and at other noise catchments in the vicinity of the mine development. In combination with data from the meteorological monitoring station and project-specific trigger conditions, the real-time monitoring network will be used to inform responsive management practices to prevent adverse impacts at sensitive receptors.

Regis is committed to implementing negotiated agreements with identified landholders in Kings Plains. This includes 13 of the 14 landholders identified in the EIS with predicted noise levels exceeding the project specific noise criteria, such that they would have been entitled to the implementation of voluntary mitigation measures upon request if the EIS project design was adopted (noting that the EIS listed 15 'noise-sensitive receivers'; however two of these (R23 and R24) are owned by the same landowner). The one receptor where an agreement isn't being progressed is a property in Kings Plains that has now been purchased by Regis (R27).

Two more negotiated agreements are also being progressed with landholders identified since submission of the EIS; a landholder in Kings Plains where the property owner has development consent to build a residence (R28a) and is predicted to experience noise levels up to 3dB above the relevant noise criteria for a brief period in PY 1; and a property in proximity to the mine site access intersection (R15).

Notably, these negotiated agreements will also include a clause that states landowners may request, in writing, that Regis acquires their interest in their land at any time within five years from the date that development consent is granted (provided that it remains in force).
Five additional landholders (R14, R16, R18, R20 and R36) (Amendment Report Figure 6.21) are also being offered negotiated agreements in Kings Plains in consideration of visual impacts (which will exclude the option to purchase).

This takes the number of negotiated agreements being progressed to 20.

Blasting and Vibration

Blasting practices including anticipated blast frequency under the amended project, remain unchanged from the EIS (EMM, 2019a). During operations, blasting may be undertaken up to once a day. No exceedances of vibration and air blast criteria are predicted to occur at any private residences, or at any item of local heritage significance in the vicinity of the mine project area.

Despite regulatory compliance, blasting activity is predicted to adversely impact residential amenity of the PAA. The EIS SIA predicts that blasting activities will impact the residential amenity of the Kings Plains locality, and to a lesser extent, areas to the north and west of the mine project area. The anticipated nature and scale of these predicted impacts will not change

with the amended mine development. During the initial construction phase blasting activities are likely to be highly disruptive to residents' way of life. More than likely, over time, nearby residents will desensitise to the effects of blasting.

A number of Kings Plains neighbours also raised concern that valued stock, particularly horses are likely to experience blasting as alarming with potential impacts to stock health, but also human wellbeing if horses are being handled or ridden at the time of a blast. The EIS NVIA indicates that blast effects resulting from the mine development are predicted to be well below the regulatory criteria and considerably lower than other sources of overpressure that horses or livestock are likely to be already subjected to such as lightning strikes (Muller Acoustic Consulting Pty Ltd, 2020).

Blasting will be carried out between the hours of 8:00 am to 4:00 pm, as recommended by the AQA, Monday to Saturday. Blasting will generally not be carried out on Sundays and public holidays.

Mitigation and management measures proposed by Regis to reduce the impact of blasting activities on nearby residences, and in doing so minimise potential impacts to amenity are described in Section 6.3.2 of the EIS SIA. In addition to these mitigation and management measures, and as described previously, Regis is progressing 20 negotiated agreements with nearby landholders. Fifteen of these negotiated agreements will include a clause that states landowners may request, in writing, that Regis acquires their interest in their land at any time within five years from the date that development consent is granted (provided that it remains in force).

The inclusion of this clause in the 15 negotiated agreements primarily seeks to respond to the anxiety expressed by landowners in relation to the uncertainty about how future impacts may be experienced, particularly impacts to property values and impacts to way of life and the use and enjoyment of their private property.

Air Quality

The findings of SIA consultation indicate that many near neighbours, including neighbours to the south and west of the mine project area have a highly emotive response to potential changes in air quality. These residents view a change in air quality due to the mine development as a detraction from the quality of the rural amenity of the area, a potential threat to human health and wellbeing, and a general annoyance. This is regardless of compliance with air quality criteria and the established existing impacts of drought conditions on air quality in the locality.

The Amended AQA assesses the potential air quality impacts and greenhouse gas (GHG) emissions of the amended mine development. The assessment considers and outlines the differences in impacts compared to the original project as presented in the EIS (EMM, 2019a).

The results of the Amended AQA and the implications for amenity of the PAA are summarised below.

The results of the dispersion modelling indicate that the amended mine development will not result in any exceedances of the applicable cumulative impact assessment criteria at any of the surrounding private residences. Relative to the model predictions for the original project design, the results from the amended mine development modelling highlight the following key points:

- The results for PY 1, PY 2 and PY 4 for the amended mine development are lower than the corresponding years in the original project;
- While no modelling for PY 6 was conducted in EIS AQIA (EIS Appendix M), the results are highest for PY 6 for the amended mine development (this corresponds with the peak material movement for the mine operation). These maximum predicted concentrations for PY 6 are comparable with the peak year impacts for the original design (typically PY 2 or 4); and
- The predicted concentrations and deposition rates for the PY 8 amended mine development are higher than those from EIS AQIA (EIS Appendix M). This is due primarily to the increased rate of waste rock movements in PY 8 of the revised mining schedule, whereas the original project PY 8 only involved ROM ore haulage (EMM, 2020d).

The results of the Amended AQIA demonstrate that the changes associated with amended mine development have notably improved the model predictions relative to those presented in the EIS (EMM, 2019a). These changes include the refinements to the open cut pit development, revision to the waste rock emplacement schedule to provide greater sheltering to southern receptors, increased haul truck capacity reducing annual truck movements and the relocation of open cut pit exit ramps (EMM, 2020d).

The design of the project will incorporate a range of dust mitigation and management measures. A best practice dust control measures review was undertaken for the project, and this identified that the proposed mitigation and management measures will be in accordance with accepted industry best practice for dust control. The actions to mitigate and or manage the impacts of dust on residential amenity in the PAA are summarised in Section 6.3.2 of the EIS SIA.

To supplement the mitigation measures, Regis commits to the installation and maintenance of a real-time particulate matter monitoring network (PM_{10}) during the life of the project. The real-time network will feature real-time monitoring locations in the Kings Plains area at the southwest, central south and southeast of the project area. In combination with data from the existing meteorological monitoring station and project-specific trigger conditions, the real-time

monitoring network will be used to inform responsive management practices to prevent adverse impacts at sensitive receptors.

The assessment of air quality impacts at nearby properties for the amended mine development found that there are no privately owned properties that will be impacted by exceedances of air quality criteria. This includes cumulative conditions for any of the modelled scenarios. Therefore, there is no requirement for the implementation of actions in accordance with the provisions of the VLAMP. This outcome is consistent with the findings of the EIS AQA.

Visual Amenity

Visual amenity in the PAA is described in Section 5.5 and Section 6.3.2 of the EIS SIA and in the EIS VIA. The EIS SIA acknowledges that the mine project development will result in changes to the existing landscape within and surrounding the mine project area. These changes will occur initially through the commencement of construction and will change in extent and reduce in magnitude for many near neighbours as mining and rehabilitation activities progress. The mine development will permanently alter the landform and topography within the mine project area and following mine closure will leave new and permanent topographical features. The amended mine development will result in similar changes, however revision of the mine schedule and the subsequent construction sequence of the WRE for the amended project means visual impacts will occur earlier and with potentially greater magnitude than assessed for the EIS.

A summary of the key amendments to the mine development since the exhibition of the EIS in relation to visual assessment and visual impacts has previously been summarised in Section 3.3.5. The Amended VIA provides an assessment of the visual impact of the amended mine development on different catchments within the PAA including Kings Plains to the south, Dungeon Road to the south, Guyong Road to the north-west and the VSF and Pounds Lane to the east. The findings of the Amended VIA are discussed in the following sections.

The revisions to the mine design plan and mine development schedule do not change visual impact levels for those with views to the Project, which range from high generally for residences in Kings Plains to low or nil to residences north and north-east of the Project (Visual Planning and Assessment, 2020). However, the duration of the high visual impacts for viewpoints to the south, south-east and some to the south-west of the project have extended from between two to four years to up to six years. After Year 6 visual effects and impacts are consistent with those of the EIS Project, progressively lowering as rehabilitation is implemented and establishes across the southern face of the amenity bund and pit amenity bund.

Relative to the outcomes of the EIS VIA, the findings of the Amended VIA highlight the following additional key points:

- From the west, there is variation in the landform and its visible progress, however visual impacts are consistent with the EIS but extend the development of the WRE for longer.
- Views from other view locations to the north and east have had no discernible changes to the visual effects and visual impacts.
- The revised final landform will have low visual impact and over time will have very low visual impact after woodlands and cultural plantings mature.
- The revised pit amenity bund will not screen all views of infrastructure components to views from the south over the life of the mine. Minor views to components such as the ROM pad and stockpiling will be evident.
- The more extensive soil stripping and stockpiling areas on south-west face of Ingledoon Hill (the open cut) will result in broader areas of high visual effect.

Five landholders (R14, R16, R18, R20 and R36) (Amendment Report Figure 6.21) are being offered negotiated agreements in Kings Plains in consideration of visual impacts (which will exclude the option to purchase). These five negotiated agreements are in addition to the other 15 negotiated agreements outlined for noise impacts.

In addition to the above, meetings have also taken place with residents outside of the Walkom Road/Kings Plains locality and along Guyong Road, offering visual mitigation tree planting where direct views of the site would be mitigated by tree plantings to improve visual amenity.

<u>Direct and Diffuse Lighting Impacts</u>

During SIA consultation near neighbours also indicated a concern that night lighting could not only detract from the 'valued dark skies' but directly impact private residences, further diminishing amenity. Relative to the outcomes of the EIS VIA the findings of the Amended VIA in relation to direct lighting indicate that:

- Direct lighting effects will be lower on the southern amenity bund due to revised mine schedule and restrictions to daylight operations on the south facing slope of amenity bund. There may be direct lighting spill to views from the south above the lower pit amenity bund; and
- Direct lighting experienced from the south-west to the north-west such as when viewed from Guyong Road will be consistent with those described in the EIS.

Mitigation and management measures proposed by Regis to reduce the visual impact of the project and the diminished residential amenity will include:

- Visual treatments incorporated within the mine design, for example:
  - Maintaining existing vegetation (specifically canopy trees) and a vehicle and work free area on the open-cut hill on the lower external faces;
- Implementing micro-topographic design to achieve more natural land form outcomes in relation to the waste rock emplacement area;
- Planned and progressive rehabilitation of disturbed areas i.e. the WRE; and
- Development of property specific-management plans with near neighbours who are predicted to experience a high visual impact.

Since the EIS exhibition, implementation of some off-site visual mitigation items such as residential mitigation plans and tree screen planting will contribute to lowering visual impacts and improve community visual enhancement in the short term.

According to VPA (2019), light pollution and sky glow are currently limited to that created by Blayney township and Bathurst township. Kings Plains and the residences around the mine project area generate insignificant light pollution resulting in dark sky night conditions and higher sensitivity to any changes (Visual Planning and Assessment, 2019). Both the findings of the EIS VIA and the Amended VIA indicate that the visual impacts of diffuse lighting associated with the mine development will be significant compared to the low existing diffuse lighting levels (Visual Planning and Assessment, 2020; 2019). Diffuse lighting effects will be more widespread than direct lighting impacts due to the dome of the sky glow effect from the mine operations at night. Atmospheric conditions, such as dust and local seasonal fog will intermittently exacerbate this impact. Local natural and constructed topographic features i.e. ridgelines, hills and southern amenity bund may shield some of the light emitted from the sources along the line of sight of the observer. Accordingly, diffuse lighting impacts will be experienced in varying degrees. It will be dependent upon location, shielding topographic features and distance from the mine project area (Visual Planning and Assessment, 2019).

Diffuse lighting will be consistent with EIS mine plan, with more intense horizon skyglow from the south above the pit amenity bund being closer to the light sources with the infrastructure area (Visual Planning and Assessment, 2020).

Relative to the EIS SIA, the outcome of the assessment of lighting impacts on residential amenity with the amended mine development has not changed the risk and significance ratings described in the EIS SIA. The potential for lighting associated with the amended mine development to reduce resident enjoyment of outdoor spaces at night is assessed as a mitigated high (C3) risk of high significance.

To manage the visual impacts of diffuse and direct lighting, Regis will:

- Ensure all external lighting associated with the mine development complies with *AS 4282 – Control of the Obtrusive Effects of Outdoor Lighting*;
- Seek to minimise light spill through a range of methods including positioning and aiming of lights and at lighting controls e.g. use of shielded fittings, restricting night lighting to the minimum required for operational and safety requirements; and
- Develop property specific-management plans with near neighbours who have the potential to experience a high impact from diffuse lighting.

Cognitive and Dynamic Landscape Impacts

The EIS VIA includes a dynamic landscape assessment which focusses on the perceptual and aesthetic characteristics of a landscape, including visual, sound, smell, touch/feel, preferences, associations, and memories. It reflects people's perceptions as they move through the landscape.

No further updates to the EIS VIA dynamic landscape assessment have been completed for the amended mine development. This is because no material changes were predicted with the amended project that would affect the outcomes of the dynamic landscape assessment presented in the EIS VIA.

The findings of the EIS VIA suggest that dynamic impacts will reduce as perceptual effects relating to operations, including visual effects are reduced.

Biodiversity Values

During SIA consultation some near neighbours identified a number of biodiversity values within and outside the mine project area which they consider make a significant contribution to amenity and resident's perception of the quality of the surrounds. These values primarily related to the presence and diversity of fauna particularly bird life which are in turn attributed to the presence of water and natural vegetation communities within and adjoining the mine project area. Some near neighbours expect that the mine development will lead to a reduction in the number and diversity of bird life primarily as a result of vegetation clearance and changes in existing surface water conditions.

The EIS SIA assessed the potential social impacts associated with the removal of 132 ha of native vegetation. Impacts on biodiversity have changed for the mine development due to a revision of the mine disturbance footprint. Changes to the mine disturbance footprint have resulted in no change for some plant community types (PCTs), decreased impacts for some PCTs and small increases for others. Overall, the amended project will reduce the impact on PCTs by approximately 2 ha, reducing from 132 ha for the EIS mine disturbance footprint to 130 ha in the amended project mine disturbance footprint. Of this area of native vegetation impacted, the amended project will increase the impacts on White Box Yellow Box Blakely's

Red Gum Woodland and Derived Native Grasslands as listed under the *NSW Biodiversity Conservation Act 2016* (BC Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) by approximately 2 ha. The amended mine development will decrease Squirrel Glider impacts by approximately 2 ha and increase Koala impacts by approximately 3 ha.

The minor change in the mine development disturbance footprint and associated changes in areas of PCTs impacted is considered to result in negligible change in the social impact significance relative to that assessed in the EIS SIA.

Mitigation and management measures proposed by Regis to reduce impacts to biodiversity values are described in detail in the *Biodiversity Assessment Report* (EMM, 2019b) and include the potential establishment of a biodiversity stewardships site. Regis has purchased land for the purpose of biodiversity offsets.

Summary of Predicted Impacts to Rural Amenity

Consistent with the findings of the EIS SIA with respect to rural amenity of the PAA, there is evidence in the form of noise modelling data, outcomes of the visual assessment including lighting assessment and outcomes of the biodiversity assessment, to support the conclusion that the amended mine development will reduce rural amenity currently afforded residents of the Kings Plains settlement, and to a lesser extent the residents of the Kings Plains locality and near neighbours to the west and north of the mine project area.

Relative to the EIS SIA, the individual contribution of each biophysical aspect i.e. noise, dust biodiversity values and visual quality to overall rural amenity changes in the PAA is different. In simplistic terms:

- Modelled noise impacts for the EIS are more significant than for the amended mine development in terms of predicted exceedances, number of private properties affected and mitigation and management requirements e.g. VLAMP requirements. This is due to the EIS mine development schedule which focused on early and rapid construction of the pit amenity bund and the southern amenity bund in order to manage visual amenity impacts on near neighbors. In contrast, revision of the mine schedule and the subsequent construction sequence of the WRE for the amended mine development achieved a reduction in predicted noise levels at nearby residences while extending the construction timeframe for the southern amenity bund. Under the amended project haul trucks will now exit the pit in the north and dump waste rock in the southern part of the WREA only during day-time hours and in the northern WREA at night-time. This has the effect of significantly reducing the night-time noise for nearby residents in Kings Plains.

- Modelled air quality impacts for the EIS are more significant than for the amended mine development in PY 1 to PY 4 due to the early construction of the pit amenity bund and southern amenity bund. Similar to noise, revision of the mine schedule and the subsequent construction sequence of the WRE for the amended mine development achieved a reduction in predicted air quality impacts at nearby residences while extending the construction timeframe for the southern amenity bund.
- During PY 1 to PY 4 the visual impacts presented in the EIS are similar to the visual impacts of the amended mine development for the same period. However visual impacts will be experienced by some near neighbours for a significantly longer duration (up to PY 6) as a result of the amended mine development, relative to the EIS. This is due to the timeframe for the construction of the southern amenity bund. Further, with the amended mine development a number of near neighbors may now experience views to the ROM pad during the initial years of the project (up to PY 4).
- In the EIS direct lighting impacts occurred due to night-time activity at the southern WREA. There were limited lighting impacts associated with ROM pad. The amended mine development no longer involves night-time activity in the southern WREA, however the ROM Pad will be visible to some near neighbours up to PY 4.

In the EIS SIA noise and dust were key drivers of the predicted reduction in rural amenity in the PAA. Visual amenity changes also contributed to a reduction in rural amenity.

With the amended mine development, the predicted changes in visual amenity and potential lighting impacts contribute significantly to the anticipated changes in residential amenity in the PAA. Noise remains a contributor to predicted reductions in rural amenity, however, anticipated noise levels in the EIS SIA have either been reduced (in the case of day-time) or removed (in the case of night-time).

Consistent with the findings of the EIS SIA, the amended project will result in:

- A reduction in rural amenity for near neighbours due to the impact of cumulative biophysical changes i.e. changes in noise levels, a reduction in visual quality and the impact of diffuse lighting. This impact is predicted to accrue predominantly to residents of Kings Plains and some near neighbours to the west and north of the mine development. It is notable that that noise levels at several residences in Kings Plains settlement and Kings Plains locality will be significantly improved with the amended project.
- The risk of the mine development adversely impacting rural amenity in the PAA with mitigation is assessed as high (B3) of high significance.

Impacts to residential amenity in the PAA and the resulting implications for residents' way of life particularly use and enjoyment of private property remains one of the most significant social impacts of the McPhillamys Gold Project. This is because, whilst noise and dust

modelling outcomes for the amended project indicate broad compliance, a change in residential amenity will still occur driven primarily by the sudden and significant change in visual amenity. Whilst individually a change in noise levels, dust and visual may be tolerable for nearby residents, collectively they constitute a significant change to current residential amenity.

3.4.2 Access to and Use of Ecosystem Services

Section 6.3.3 of the EIS SIA described the potential social impacts of the project with respect to the access to and use of ES. During SIA consultation in 2019 near neighbours identified a number of benefits they obtain from the surrounding ecosystem. These benefits included:

- Spiritual enrichment, reflection, recreation and aesthetic experience generally associated with the rural vistas, the peace and tranquility and the biodiversity values;
- Access to water for domestic and agricultural purposes – obtained via a combination of naturally occurring springs, surface water flows in the Belubula River or groundwater;
- Livestock production due to presence of quality agricultural land; and
- Honey production due to the presence of specific flora on the site.

Table 9 summarises the ES present in the PAA and relevant to the context of the mine development.

Table 9
Ecosystem Services in the Primary Assessment Area

ES Category	Service	Example	Drivers of Change Associated with the Mine Development (EIS and Amended Project)
Provisioning	Water supply: domestic and agricultural Food: agricultural operations Food: apiarian activities	Stock watering from the Belubula River Agriculture is a key land use Use of vegetation within mine project area by bees for pollination purposes	• Mine site water management including water demand management • Reduction in area of agricultural land due to change in land use from rural to mining • Vegetation clearance
Cultural	Aesthetic value	Cultural value placed on landscapes and landmarks in the area	• Disturbance of land and creation of alternative topographic features • Disturbance to habitats and species • Noise and dust emissions
	Spiritual values	Contemporary spiritual values associated with sense of place and 'awe' at the landscape	
	Recreation value	Use of the VSF	

ES Category	Service	Example	Drivers of Change Associated with the Mine Development (EIS and Amended Project)
	Non-use value: Existence value	Species and habitat of high conservation value or concern	• Mine site water management including water demand management

The following conclusions were drawn in the EIS SIA with respect to the potential of the mine development to impact access to and use of ES:

- The potential of the mine development to have an economic impact on existing commercial apiarian businesses proximate to the site was assessed as a mitigated moderate (D3) risk of moderate significance.
- The potential of the mine development to result in changes in groundwater accessibility with resulting impacts on agricultural livelihood was assessed as a mitigated low (D2) risk of moderate significance, reflecting stakeholder concerns.
- The potential of the mine development to reduce surface water or groundwater resources at private properties proximate to the mine development was assessed as a mitigated moderate (D3) risk of moderate significance.
- The potential of the mine development to impact the cultural ES accessed by residents was assessed as a mitigated high (C3) risk of high significance. This reflects the significant value contributed by the existing natural environment within and outside the mine development to surrounding amenity and quality of life.
- The potential of the mine development to impact sense of place due to adverse changes in valued attributes of the local area i.e. the landscape and the natural environment, and community was assessed as a mitigated high (B3) risk of high significance.

The impact of the amended mine development on the EIS aspects described above and relative to the EIS is presented in the following sections.

Impacts on Provisioning ES - Water

Near neighbours do not have access to town water and are therefore reliant on a combination of groundwater, surface water and rainfall for amenity use and livelihood (cattle grazing). The Belubula River, associated tributaries, naturally occurring springs and groundwater provide both residential and stock water for the majority of near neighbours.

An Amended GWA and a Revised SWA has been completed for the amended mine development. The findings of these assessments indicate that the amended mine development would result in negligible material changes in the surface water and groundwater impacts predicted in the EIS (EMM, 2019a). Consequently, the amended mine development is unlikely to result in any material change in the outcomes presented in the EIS SIA (and

described above) with respect to the provision of water for community use including agricultural use.

As discussed in Section 6.2.3 of the EIS SIA, Regis has developed a comprehensive management framework to avoid any significant impacts on the Belubula River and its associated catchment values.

Impacts on Provisioning ES – Food

During consultation local bee industry representatives raised concern about potential industry impacts should the local bee population be impacted by the mine development. Bee industry representatives raised concern in relation to:

- Loss of pollination habitat located on the mine development project area due to vegetation clearance activities;
- Contamination of bee habitat by site dust i.e. dust blown from the mine directly onto the plants the bees visit; and
- Contamination of bee water sources with site dust.

The mine project area contains high altitude Yellow Box trees which flower later in the year than low altitude Yellow Box. These trees on the mine project area are understood to provide pollen for the bees managed by Goldfields Honey, a local honey manufacturer located at the Beekeepers Inn on the Mitchell Highway. The owners of the Goldfields Honey business indicated during SIA consultation that the presence of high altitude Yellow Box in proximity to the VSF where the beehives are located, means Goldfields Honey is able to produce a particular style of commercial honey throughout the year.

The findings of the EIS *Biodiversity Assessment Report* (EMM, 2019b) for the mine development states that the mine development will result in a reduction of just 1.68% in the extent of Box Gum Woodland within a 5 km radius of the mine project area. Given the foraging range for bees is a few kms the project will not result in a significant loss in foraging habitat for bees. A significant amount of Box Gum woodland in the northern part of the mine project area has been avoided by the design of the TSF. Relative to the EIS, negligible changes are predicted to the area of Box Gum Woodland impacted by the amended project.

Following EIS submission Regis commissioned EnRiskS (2020b) to complete a review of the potential impact of the mine development on bees with a specific focus on ecotoxicity. The findings of EnRiskS (2020b) indicate that dust from the amended mine development and water from the TSF will not adversely impact the bee industry.

Key findings of the assessment include:

- Concentrations of metals in soil due to deposition of dust are estimated to be below soil quality guidelines that are protective for soil organisms that live in or on the soil for their entire lifecycles;
- Concentrations of metals in water due to deposition of dust are estimated to be below water quality guidelines that are protective for aquatic organisms that live in the affected water for their entire lifecycles;
- Concentrations of metals that may get into nectar or pollen in plants around the mine development project site are all estimated to be below concentrations that might indicate effects on the survival or health of the bees;
- Concentrations of metals or cyanide that may be present in water in the TSF are all estimated to be below concentrations that might indicate effects on the survival or health of the bees; and
- Concentrations of metals that could be present in honey are within or below the general levels reported for honey worldwide ((EnRiskS, 2020b, p. 56).

The risk rating and significance ranking associated with the social impact of the project on commercial apiarian businesses has been reviewed in light of the findings of EnRiskS (EnRiskS, 2020b). Relative to the EIS SIA, the risk rating has been revised down (D3/Moderate to D2/Minor) however the significance ranking remains moderate highlighting the importance of the industry to the local area and the strength of concern raised by industry stakeholders.

Impacts to Cultural ES

A number of residents in Kings Plains strongly believe that the surrounding natural ecosystem adds value to their health and wellbeing and contributes significantly to the aesthetic value of the surrounds, their recreational experiences, and their own sense of place. This value added by the natural environment can be referred to as Cultural ES.

In considering the assessment of and study of cultural ES, Daniels et al. (2012) highlights that: "*The capacity of a given ecosystem to contribute to a given service for a given stakeholder group may fluctuate, and social demands are also dynamic"*. This makes managing predicted impacts to Cultural ES access difficult. In the context of Kings Plains this means any change in the community structure and resident population could impact the scope of cultural ES considered to be impacted and therefore requiring management.

Cultural ES is discussed in detail in Section 6.2.3 of the EIS SIA.

Some residents of Kings Plains expect that project induced changes to the natural environment within the mine project area will degrade the cultural services they derive from the surrounding ecosystem. These near neighbours indicated any adverse changes in the

beauty or aesthetic value of the locality particularly the configuration of open space and agricultural land would impact:

- Resident recreational enjoyment of the outdoors; and
- The cultural significance of the landscape for residents, which in turn contributes to the identity of the Kings Plains locality.

Some near neighbours also assign spiritual values to the surrounding ecosystem and expect that the project will adversely impact these values.

Given the nature and scale of the amenity changes anticipated across the PAA during the mine development and the scope of the cultural services current residents derive from the surrounding ecosystem, the project will give rise to changes in the ecosystem that in turn will impact access to and use of Cultural ES for some near neighbours. This has potential to result in impacts to health and wellbeing (as identified by some residents). These impacts are likely to be most significant for residents of Kings Plains, given proximity to the mine project area.

Relative to the EIS SIA, the amended mine development is unlikely to result in any new or material changes to social impacts. For this reason:

- The impact of the amended mine development on access to and use of cultural ES by residents of the PAA is assessed as a mitigated high (C3) risk of high significance.
- The impact of the amended mine development on sense of place in the PAA is assessed as a mitigated high (B3) risk of high significance consistent with the findings of the EIS SIA.

The EIS SIA (Section 6.2.3) presents actions to avoid and reduce the impact of the mine development on the ecosystem elements from which near neighbours derive cultural ES. These actions include:

- Managing impacts to amenity i.e. noise and dust (as discussed previously);
- Reducing views into the mine project area and where visibility exists, improving the visual quality by undertaking progressive rehabilitation;
- Avoiding and minimising impacts to the Belubula River, groundwater resources and naturally occurring springs;
- Supporting the participation of near neighbours and the broader community in aspects of rehabilitation, and mine closure planning; and
- Supporting and motivating public support for the protection of ecosystem aspects e.g. possible involvement of Blayney High School (BHS) in environmental monitoring activities.

3.4.3 Community

Section 6.3.4 of the EIS SIA assessed the potential impacts of the mine development on the community of the PAA with reference to:

- Community cohesion i.e. project induced population change; and
- Rural way of life - Rural way of life in the PAA is described in Section 5.5 of the EIS SIA. Rural way of life is characterised by the presence of rural vistas, livestock (cattle) grazing, outdoor activities including equine activities and close social connections between residents. Family life in the PAA is strongly oriented to the outdoors either for recreation or business purposes e.g. agricultural operations. During SIA consultation a number of residents of the PAA indicated that they felt the project threatened existing rural values including the strong rural way of life.

The relevant findings of the EIS SIA in relation to community were:

- Community cohesion - The potential for the mine development to result in the fragmentation of Kings Plains community was assessed as a mitigated high (B3) risk of high significance.
- Rural way of life - The potential for the mine development to impact the existing rural way of life in the PAA was assessed as a mitigated high (B3) risk of high significance.

The amended project will have no additional or new impacts on community cohesion or rural way of life beyond those already assessed in the EIS SIA and described above.

With respect to community cohesion no new property acquisitions have occurred by Regis since the EIS was lodged. At the time of EIS submission, Regis owned 19 dwellings across 18 properties including two properties under option. Since the submission of the EIS one of these options has been purchased and an additional property in Kings Plains has been purchased by Regis. The amended project will not necessitate any additional purchase of private property.

The EIS SIA (Section 6.3.4) described the potential future population changes in the PAA due to the mine development. The EIS SIA (Section 6.3.4) noted that further loss of residents may occur in the Kings Plains locality:

- As a result of the departure of residents from Regis owned properties within the mine project area;
- As remaining residents experience the amenity changes resulting from the cumulative biophysical impacts of the mine development i.e. the combination of mine noise levels, air quality impacts and visual amenity impacts;

- Some residents may choose to leave Kings Plains prior to the commencement of construction rather than live through the initial construction phase of the project when the noise impacts are anticipated to be greatest. Residents with existing and significant health issues may choose to relocate to avoid perceived exacerbation of health issues; and
- The potential future of residents in the Kings Plains locality may lead to changes in the social structure of the community. This is particularly relevant if departing residents were long-term residents with local knowledge and strong connection to the area.

EIS commitments made by Regis to minimise the outmigration of population from the Kings Plains locality included to:

- Engage in and maintain transparent, evidence-based and ongoing dialogue with concerned property owners and other community members, based on the results of the EIS;
- Develop property-specific management plans in agreement with individual landowners within the Kings Plains locality. These management plans will incorporate tailored strategies e.g. installation of air-conditioning or double glazing, landscaping and screening to reduce amenity impacts of the project at private residences;
- Demonstrate to the surrounding community, an ability to develop the mine and comply with all necessary regulatory requirements; and
- Seek to make Regis owned housing, where located outside of the mine disturbance footprint, available for rent to existing residents of the Blayney LGA and the incoming workforce.

Regis is committed to implementing negotiated agreements with identified landholders in Kings Plains. This includes 13 of the 14 landholders identified in the EIS with predicted noise levels exceeding the project specific noise criteria, such that they would have been entitled to the implementation of voluntary mitigation measures upon request if the EIS project design was adopted (noting that the EIS listed 15 ‘noise-sensitive receivers’; however two of these (R23 and R24) are owned by the same landowner). The one receptor where an agreement isn’t being progressed is a property in Kings Plains that has now been purchased by Regis (R27).

Two more negotiated agreements are also being progressed with landholders identified since submission of the EIS; a landholder in Kings Plains where the property owner has development consent to build a residence (R28a) and is predicted to experience noise levels up to 3dB above the relevant noise criteria for a brief period in PY 1; and a property in proximity to the mine site access intersection (R15).

Notably, these negotiated agreements will also include a clause that states landowners may request, in writing, that Regis acquires their interest in their land at any time within five years from the date that development consent is granted (provided that it remains in force).

Five additional landholders (R14, R16, R18, R20 and R36) (Amendment Report Figure 6.21) are also being offered negotiated agreements in Kings Plains in consideration of visual impacts (which will exclude the option to purchase).

This takes the number of negotiated agreements being progressed to 20.

The improved noise and dust outcomes from the amended mine development together with the findings of the HHIA (EnRiskS, 2020a) may reduce some of the perceived uncertainty amongst residents regarding potential project impacts and influence residents to remain in Kings Plains permanently.

3.4.4 Health and Wellbeing

The EIS SIA (Section 6.3.5) considered the following impacts and opportunities with respect to health and wellbeing:

- Physical health;
- Mental Health; and
- Sleep disturbance.

The outcomes of the EIS SIA with respect to potential impacts on health and wellbeing include:

- Physical health – The potential for dust emissions from the mine development to affect residential health was assessed as a mitigated low (D2) risk of low significance.
- Mental health – The potential for project uncertainty to exacerbate existing stress and anxiety and adversely affect the overall health and wellbeing of residents of the PAA was assessed as a high risk (C3) of high significance. The significance rating reflects residents existing stress and anxiety levels which were frequently raised and spoken about during SIA consultation.
- Sleep disturbance:
  - Construction phase (initial 6 months) - The potential for the mine development to reduce the health and wellbeing of residents due to sleep disturbance was assessed as a low mitigated risk (E1) of low significance.
  - Operations Phase (PY 1 – PY 3) – The potential for the mine development to reduce the health and wellbeing of residents due to sleep disturbance was assessed as a mitigated high (C3) risk of high significance. The risk rating is associated with the timing for the construction of the southern amenity bund and pit amenity bund which

in the EIS was scheduled to be undertaken principally across the first three years of the project.

- Operations phase (Beyond PY 3) - The potential for the mine development to reduce the health and wellbeing of residents due to sleep disturbance was assessed as a moderate mitigated risk (C2) of moderate significance.

The following key issues relevant to health were raised in the EIS submissions:

- Concerns about the potential for the project to adversely affect human health. This included concerns that the EIS did not contain a standalone human health assessment prepared by a suitably qualified professional.
  - The potential for dust generated by the project to adversely affect human health. This included concerns related to the:
    - Potential for the project to exacerbate existing respiratory health issues for neighbouring residents; and
      - Lack of baseline investigations of potential dust-related health impacts (including inhalation and ingestion).
- Concerns regarding the potential for lighting impacts associated with the project to adversely impact people's health. This included concerns that light pollution from the project will cause sleep disturbance resulting in a number of health problems.
- Concerns about the potential for the project to adversely affect people's mental health and contribute to stress.
- Concerns about the potential disturbance of naturally occurring asbestos within the mine project area. This included concerns related to:
  - Exposure of workers to naturally occurring asbestos during ongoing operations; and
  - The absence of asbestos management measures from the EIS.

Following submission of the EIS Regis commissioned a HHIA to address existing resident fears and perceived uncertainty in relation to the health impacts of the project. The HHIA also addressed relevant concerns raised in EIS submissions. The objective of the HHIA was to provide an assessment of potential impacts to human health in relation to the mine development, specifically in relation to impacts related to air quality, noise and vibration, hazardous incidents and water quality. The HHIA considers the impacts associated with the amended mine development.

Table 10 presents the outcomes of the HHIA for the Amended Project.

Table 10
Outcomes of the HHIA for the Amended Project

Biophysical Aspect	Outcomes of Health Risk Assessment
Noise impacts	Based on the predicted noise levels and the proposed mitigation and management measures, including additional monitoring and management as detailed in the NVIA and NVIA - Pipeline, the potential for adverse health impacts within the off-site community associated with noise generated during construction and operations is considered to be negligible.
Water impacts	Based on the assessments undertaken, the potential for adverse health impacts within the off-site community associated with impacts to surface water and groundwater (in relation to quantity and quality of water) as a result of the project, including the pipeline, is considered to be negligible
Air impacts	Based on the available data and information in relation to emissions of dust, natural occurring asbestos (NOA), metals and metalloids that may be present on the dust, nitrogen dioxide and hydrogen cyanide from the project, potential impacts on the health of the community have been assessed. The impact assessment has concluded there are no health risk issues of concern relevant to the project.
Hazardous materials	Based on the assessments undertaken there are no impacts in the off-site community. This includes the transport, storage and use of a range of dangerous goods, including explosives, cyanide and LPG. Where there are no impacts, there are no risks to community health.
Lighting	Based on the assessments undertaken, it is expected that lighting would be visible in various areas surrounding the site, however the potential for lighting to directly intrude into residential homes and adversely affect sleep and hence health is considered negligible.
Stress and anxiety	The potential for the project to result in increased levels of stress and anxiety in the community has been identified by the community and recognised as an area of key concern in the SIA.

Source: EnRiskS (2020a)

With respect to stress and anxiety, increased levels of stress and anxiety, both short-term acute events and chronic events/impacts are well recognised to affect health and wellbeing. According to EnRiskS (2020a, p. 58) *individuals experience a wide range of complex factors and issues influence health and wellbeing, specifically mental health. In addition, individuals respond to changes in stress and anxiety in different ways and hence it is not possible to quantify how the project would affect stress and anxiety levels in the community.* The EIS SIA acknowledges the project's potential to adversely impact resident stress and anxiety and the high significance of this impact. The additional assessment presented in the HHIA specifically addresses impacts on community health in relation to impacts to air quality (a key concern identified by the community) as well as other impacts such as noise and water, will further assist in addressing concerns of the community, which would assist in managing stress and anxiety.

Regis is currently progressing 15 negotiated agreements with respect to the potential noise impacts. These negotiated agreements will also include a clause that states landowners may request, in writing, that Regis acquires their interest in their land at any time within five years from the date that development consent is granted (provided that it remains in force).

The inclusion of this clause in the 15 negotiated agreements primarily seeks to respond to the anxiety expressed by landowners in relation to the uncertainty about how future impacts may be experienced, particularly impacts to property values and impacts to way of life and the use and enjoyment of their private property.

It is noted that five additional landholders are also being offered negotiated agreements in Kings Plains in consideration of visual impacts (which will exclude the option to purchase).

The revised outcomes of the SIA for the amended mine development with respect to potential impacts on property and property values are:

- Physical health – The potential for dust emissions from the mine development to affect residential health is assessed as a mitigated low (D2) risk of low significance, consistent with the EIS SIA.
- Mental health – The potential for project uncertainty to exacerbate existing stress and anxiety and adversely affect the overall health and wellbeing of residents of the PAA was assessed as a high risk (C3) of high significance. The significance rating reflects the fact that despite the information presented in the HHIA residents will likely continue to experience stress and anxiety until the project is determined, and if approved construction commences. This risk outcome is consistent with the findings of the EIS SIA.
- Sleep disturbance:
  - Construction phase (initial 6 months) - The potential for the mine development to reduce the health and wellbeing of residents due to sleep disturbance was assessed as a low mitigated risk (E1) of low significance.
  - Operations phase (6 months onwards) - The potential for the mine development to reduce the health and wellbeing of residents due to sleep disturbance was assessed as a low mitigated risk (D2) of low significance given the outcomes of the HHIA (EnRiskS, 2020a). The risk rating reflects the outcomes of the HHIA and the significant improvements in noise outcomes associated with revision of the mine schedule and construction of the southern amenity bund.

3.4.5 Personal and Property Rights

Property and Property Values

The EIS SIA considered the following impacts and opportunities with respect to personal and property rights:

- Damage to private property; and
- Property values.

The outcomes of the EIS SIA with respect to potential impacts on property and property values were:

- Damage to private property – The potential for blasting to result in damage to private property was assessed as a low risk (D2) of overall low significance.
- Property values – The potential for the mine development to result in a reduction in the value of private property proximate to the mine development was assessed as a high risk (B3) of high significance. The high significance reflects in part the level of concern expressed by residents in relation to property values.

The amended project will not change the risk and significant ratings presented in the EIS SIA with respect to personal and property rights as described below.

A qualitative assessment of potential vibration impacts was completed as part of the Amended NVIA (MD). This assessment concluded that no exceedances of vibration and airblast criteria are predicted to occur at any private residence, or at any item of local heritage significance in the vicinity of the mine project area. The nearest infrastructure to blasting is the Mid Western Highway, where vibration levels are calculated to be below 5mm/s (Muller Acoustic Consulting Pty Ltd, 2020). No significant vibration effects from blasting are therefore predicted on infrastructure, which are typically less sensitive to vibration than residential receptors.

There are no changes to the amended project that would give rise to changes in the likelihood and magnitude of property values impacts predicted in the EIS SIA. As discussed in the EIS SIA the key action Regis can take to minimise long-term impacts on neighbouring property values is to demonstrate to the public that noise and dust emissions can be confined to the mine project area with negligible impacts on neighbouring properties. Establishing good neighbour relations and demonstrating through action that Regis is a good corporate citizen will be integral to minimising the impact of the project on property values.

4 MANAGEMENT – MINE DEVELOPMENT

4.1 INTRODUCTION

Section 7 of the EIS SIA described the approach to the management, monitoring and reporting of social impacts for the project. Relevant information is replicated in the following sections an updated where relevant, to reflect the amended mine development and the current phase of the project approvals process i.e. Response to Submissions.

4.2 ACTIONS TO AVOID AND MITIGATE

4.2.1 Project Design

Iterative project planning informed by a range technical reports allowed a number of social impacts to be avoided and others to be minimised throughout the life of the mine development. Project changes presented in the amended mine development have further reduced the likely consequence of a number of social impacts presented in the EIS SIA e.g. amenity impacts due to changes in noise levels. Importantly the amended mine development has not exacerbated previously predicted social impacts or generated any new social impacts.

The following specific actions have been taken in the design of the amended mine development to further avoid, mitigate or manage potential social impacts identified in the EIS SIA:

- A new site access intersection off the Mid Western Highway, approximately 1 km east of the original location assessed in the EIS, in response to feedback from TfNSW and the community. A new alignment is subsequently proposed for the site access road to the mine administration and infrastructure area.
- Revision of the mine schedule and the subsequent construction sequence of the WRE, in particular consideration of predicted noise levels in Kings Plains. This achieved a reduction in predicted noise levels at nearby residences while extending the construction timeframe for the southern amenity bund.
- Optimisation of the open cut pit design and improved location of exit ramps for haul trucks resulting in noise and air quality benefits.
- Redesign of the mine development's surface water management, including resizing of the WMFs to achieve a nil discharge design (modelling of the operational water management system indicates that operational WMFs will not spill for all modelled climate scenarios.

4.2.2 Key Management Tools

Section 7.2.2 of the EIS SIA described the key tools to manage the potential social impacts of the mine development and enhance opportunities. These tools are replicated in Table 11 which has been updated to include Negotiated Agreements.

Table 11
Summary of Key Management Actions

Actions	Description
Voluntary Planning Agreement (VPA)	Regis has commenced negotiations with Blayney Shire Council (BSC) in relation to the development of a VPA for the project. The core components of the VPA are likely to include: • A one-off financial payment to BSC on the granting of the development consent; and • Annual financial payments to BSC for the life of project from the commencement of construction.
Negotiated Agreements	Regis is progressing 20 negotiated agreements with nearby landholders. Fifteen of these negotiated agreements will also include a clause that states landowners may request, in writing, that Regis acquires their interest in their land at any time within five years from the date that development consent is granted (provided that it remains in force). Five additional landholders are also being offered negotiated agreements in Kings Plains in consideration of visual impacts (which will exclude the option to purchase).
Corporate Volunteer Strategy	Regis will develop a Corporate Volunteer Strategy to encourage the workforce to participate in community organisations and activities. The strategy will position volunteering as an asset that is supportive of the vision and aspirations of the Blayney LGA community and supported by Regis.
Stakeholder Engagement Plan (SEP)	Regis will prepare a SEP for the construction phase and the operations phase of the project. The SEP will provide the framework for ensuring all relevant stakeholders, and in particular residents of the PAA remain informed of key project activities and the project schedule.
Project Community Consultative Committee (CCC)	The Project CCC will continue to operate for the life of the project. The Project CCC's key role will be to foster dialogue between Regis, the community and key stakeholders regarding the project. The CCC will aim to provide community members with a voice, and will give Regis a structured process for addressing community interests and concerns.
Local Content Plan (LCP)	Regis will prepare a LCP for the construction and operations phases of the project. The LCP will be developed to align with the Australian Government's Australian Industry Participation Plan and to encourage local business participation. Regis is maintaining a register of local businesses interested in project procurement opportunities. The LCP will include an assessment of local contractor capabilities and a detailed analysis of existing local enterprise and the skills / education base of local residents. Wherever possible, project supply and workforce requirements will be matched with existing capabilities in the local community. The LCP will also identify strategies to build local capacity where it is lacking through workforce recruitment and training models focused on local and regional communities. To support the LCP, Regis will participate in industry events to

Actions	Description
	engage industry stakeholders and local businesses and facilitate capacity building.
Recruitment and Training Strategy	Regis will prepare a Recruitment and Training Strategy (RTS) for the project. The RTS will consider a range of employment options to encourage a higher rate of local labour force participation. The strategy will target disadvantaged groups through initiatives such as part-time and/or flexible employment and mature aged placement programs. These initiatives will provide an opportunity to increase labour force participation rates and, combined with employment training and economic investment initiatives, will lead to an increase in the local skill capacity and potentially increase the number of local hires over time as underground mining progresses. Regis is committed to maximising the creation of employment opportunities for young people in the Blayney LGA. This will include engagement with BHS and key training providers such as TAFE NSW in the aim of further defining and improving available training resources and capacity in the provision of apprenticeships, training programs and skill development opportunities.
Construction Workforce Accommodation Strategy	A detailed CWAS will be developed following project determination. The strategy will be prepared in consultation with BSC, Orange360, key accommodation providers and where necessary proponents of existing or new major projects in the Blayney LGA. The strategy will: • Demonstrate how the construction phase workforce will be accommodated across the Local Area; • Demonstrate how workforce accommodation requirements will be managed during periods of high demand e.g. during key regional events such as Bathurst 1000; • Document the approach to informing accommodation providers of predicted project workforce accommodation demands including anticipated timing; • Enable the coordinated placement of the workforce in tourism accommodation throughout the Local Area; and • Keep key stakeholders informed of predicted project accommodation demands across the construction phase.
Indigenous Participation Plan (IPP)	Regis will prepare an IPP for the project in consultation with the Orange Local Aboriginal Land Council (OLALC), the Bathurst Local Aboriginal Land Council and other relevant stakeholders. The IPP will map details of existing Indigenous businesses and identify regional 'pockets' of potential Indigenous labour supply (e.g. those areas with high levels of Indigenous unemployment). The IPP will aim to identify particular job positions and supply work packages that will be targeted for Indigenous inclusion, and appropriate training and development programs will be outlined to support this objective.
Social Impact Management Plan (SIMP)	A SIMP will be prepared for the project following project determination. The SIMP will document the predicted impacts and opportunities of the project and provide a detailed framework for the management, monitoring and reporting of social impacts. The SIMP will be prepared in consultation with the BSC, Project CCC and other interested and relevant stakeholders.
Complaints and Grievances	Regis will develop a Complaints and Grievance Procedure for the project. The procedure will ensure stakeholder issues, complaints and grievances are identified, addressed, recorded and reported such that the project can demonstrate how Regis is responding to stakeholder concerns.

Actions	Description
Mine Closure SIA and Management Plan	Regis will commence the preparation of a Mine Closure SIA and Management Plan at least five years prior to the potential Mine Closure and update the plan three years prior to mine closure. The Mine Closure SIA will be prepared in accordance with the strategy defined in the EIS SIA and any new leading practice in mine closure.

4.3 MANAGEMENT FRAMEWORKS

Section 7.3 of the EIS SIA presented the following three management frameworks:

- Stakeholder Engagement Framework;
- Near Neighbours Impact Management Framework; and
- Workforce Accommodation and Workforce Management Framework

These frameworks are replicated in the following sections and have been updated to reflect the progress of the approvals process and relevant components of the amended mine development.

4.3.1 Stakeholder Engagement Framework

The Stakeholder Engagement Framework seeks to address stakeholder concerns in relation to the quality and availability of relevant project information. It is a critical measure for managing stress and anxiety in the community, particularly within the PAA in relation to the project. Table 12 provides a framework to guide project engagement strategies.

As a result of the amended mine development some minor edits have been made to the Stakeholder Engagement Framework presented in the EIS SIA.

Table 12
Stakeholder Engagement Framework

Objectives	• Provide transparent, consistent and inclusive stakeholder engagement which seeks to ensure all near neighbours have access to up-to-date and adequate information about the project, its activities, workforce and schedule to support impact management and monitoring. • Ensure stakeholders have direct access to project representatives who can answer their questions about the project and its' potential impacts. • Ensure stakeholder issues, complaints and grievances are identified, addressed, recorded and reported such that the project can demonstrate how Regis is responding to stakeholder concerns. • Build relationships which support communication, information sharing and feedback to assist decision making with regard to construction and operations phase impacts. • Facilitate opportunities for interaction between Regis employees and local residents to contribute positively to community cohesion and development. • Ensure stakeholders are aware of the Project CCC, and the CCC meetings and minutes. • Ensure the BSC, short-term accommodation providers and all relevant government and non-government service providers are provided with adequate information to enable informed decisions about accommodation and service provision to support project delivery.
Key Government Policies	*NSW Community Consultative Committee Guidelines for State Significant Projects.* *NSW Voluntary Land Acquisition and Mitigation Policy (VLAMP) for State Significant Mining, Petroleum and Extractive Industry Developments.*

Actions	Stakeholders	Timing	Performance Measures
Pre-Construction Engagement Program			
• Prepare a Construction Phase Stakeholder Engagement Plan (CP SEP) for the project prior to the commencement of the construction phase. The CP SEP will document the key actions to be taken to keep residents of the PAA and the broader community including the BSC and government and non-government stakeholders informed of the timing and progress of the construction activities. • Appoint a single point of contact in Regis for stakeholder engagement. • Commence engagement with key stakeholders in relation to the development of the CWAS. • Commence engagement with relevant stakeholders in relation to the preparation of the project SIMP. • Engage with relevant key stakeholders to progress the development and implementation of the management strategies defined in the SIA. • Provide advance warning to residents of the PAA of the closure of Dungeon Road. • Inform residents of the PAA of the blast notification process.	Residents of the PAA. Broader Blayney community. Key stakeholders and interest groups.	During project approvals process	SIMP prepared. Actions to manage social impacts refined. Structural engineering surveys completed. Regis website is up to date. Project CCC minutes are available on the website.

Actions	Stakeholders	Timing	Performance Measures
• Engage with residents of the PAA to complete structural engineering surveys of residential buildings located within the Blast Management Zone, or on the request of residents. • Maintain the project website as the key platform for communication of consistent project messaging. • Ensure Project CCC meetings continue as scheduled and meeting minutes are made available on the project website immediately following meetings. • Establish a complaints management process to facilitate resolution of community complaints relating to project activities or personnel. • Maintain and publish the project's complaints register online, including information about the nature of the complaint and responsive actions. • Report to the Project CCC and through the Annual Review regarding community complaints. • Complete negotiated agreement discussions and implement relevant commitments			Complaints and Grievances Procedure established. Reporting of complaints and grievances records.
Construction Communication and Engagement Program			
• Maintain the project website as the key platform for communication of consistent project messaging. • Ensure Project CCC minutes are made available immediately on the project website following meetings. • Maintain transparent, evidence-based and ongoing dialogue with concerned property owners and other community members, based on the results of the EIS. • Use appropriate media to disseminate current project information and demonstrate how community feedback has been considered in project execution. • Provide blasting notifications in advance to provide predictability and increase residents' level of comfort with blasting events. • Provide advance notification to residents of the PAA as to the timing of the transition of construction activities from day-time only to 24 hour/7 day a week construction. • Maintain the project's complaints register online, including information about the nature of the complaint and responsive actions.	All near neighbours. Broader Blayney community.	Following project approval and during the CP.	CCC meeting minutes made available on Regis' project website. Liaison with property owners as agreed. Evidence of engagement with near neighbours, broader Blayney community and key stakeholders. Formal notification to PAA residents of key site activities. Reporting of complaints and grievances records.
Operations Communication and Engagement Program			
• Prepare and implement an Operations Phase SEP (OP SEP) for the project. • Provide regular updates to the Project CCC on the implementation of the SIMP.	Near neighbours.	OP.	SIMP.

Actions	Stakeholders	Timing	Performance Measures
• Provide regular updates to the local community through Regis' website and local media. • Maintain regular liaison with all near neighbours. • Provide blasting notifications in advance to provide predictability and increase residents' level of comfort with blasting events. Noting that as the project progresses the blasting schedule will be regular and consistent and only exceptions will need to be advised. • Timely and regular provision of impact monitoring results (including air quality, noise, vibration and groundwater), with sufficient supporting information to enable community members' interpretation of how monitoring data relates to the project's compliance requirements, through the CCC and Regis' website. • Maintain and publish the project's complaints register online, including information about the nature of the complaint and responsive actions.			Project CCC minutes made available on Regis project website. Reporting of complaints and grievances records.

Notes:

CP – Construction Phase

OP – Operations Phase

LOM – Life of Mine

4.3.2 Near Neighbours Impact Management Framework

The Near Neighbours Impact Management Framework (Table 13) seeks to address the predicted social impacts of the project on residents of the PAA, and in particular residents of the Kings Plains locality.

The Near Neighbours Impact Management Framework presented in the EIS SIA has been updated to reflect the additional inclement weather traffic commitments described in Section 3.3.1 and the relevant components of landowner negotiated agreements (Section 3.4.1).

Table 13
Near Neighbours Impact Management Framework

Objectives	• Develop good neighbour relations based on regular, transparent and responsive engagement. • Minimise impacts to the quality of residents' existing rural way of life through monitoring, engagement and adaptive management. • Minimise potential for changes to the structure and social connections within the Kings Plains community. • Support residents of the Kings Plains locality to make decisions about their future based on the predicted social impacts. • Alleviate anxiety regarding impacts on property values, water resources and future planning through continued engagement and the timely release of information and results.
Key Government Policies	*NSW Community Consultative Committee Guidelines for State Significant Projects.* *NSW Voluntary Land Acquisition and Mitigation Policy (VLAMP) for State Significant Mining, Petroleum and Extractive Industry Developments*.

Actions	Timing	Performance Measures
Regular, Transparent and Responsive Engagement		
Throughout Project Approvals: • Ensure the amended project changes are communicated to residents of the PAA. • Ensure all residents of the PAA are made aware of the McPhillamys Gold Project Amendment Report and Submissions Report and where these reports can be accessed. • Continue to engage with those near neighbours who are predicted to experience significant amenity impacts to identify suitable at private property treatments.	2020.	Liaison with property owners as agreed. Evidence of engagement with residents of the Kings Plains locality and broader PAA. Interested residents of the PAA understand the extent to which they will potentially be impacted by the project.
Prior to the commencement of construction: • Prepare a near neighbours Construction Phase SEP (CP SEP). The near neighbours CP SEP will document the key actions to be taken to keep residents of the PAA informed of the timing and progress of the construction activities including, but not limited to: – Closure of Dungeon Road; – Change in construction hours from day-time only activities to 24 hour/7 day activities; – Blasting activities; – Results of environmental monitoring; and	In parallel with PA process.	Near neighbours CP SEP prepared and communicated to all residents of the PAA. Complaints and grievances management procedure established.

Actions	Timing	Performance Measures
– Commencement of the site intersection construction and implications for local connectivity. • Establish a complaints and grievances management procedure to facilitate resolution of community complaints relating to project activities or personnel.		
During Construction Phase: • Timely and regular provision of environmental monitoring results (including air quality, noise, vibration and groundwater), with sufficient supporting information to enable community members' interpretation of how monitoring data relates to the project's compliance requirements, through the CCC and Regis' website. • Maintain regular liaison with nearby property owners. • Complaints and grievances management procedure	CP.	Environmental monitoring results made available on the Regis website. Timely response to complaints and grievances.
Prior to the commencement of operations: • Prepare a near neighbours Operations Phase SEP (OP SEP). The near neighbours OP SEP will document the key actions to be taken to keep residents of the PAA informed of the progress of operations including, but not limited to: – Key project staff (given changeover from construction to operations); – Any changes in operations hours; – Proposed maintenance and shutdown periods; – Status of project workforce size; – Regis sponsored community events; – Results of environmental monitoring undertaken; – Progress of Regis exploration activities in other areas of the Blayney LGA; and – Progress of rehabilitation activities.	Prior to the commencement of OP.	Near neighbours OP SEP prepared and communicated to all residents of the PAA.
Following the commencement of operations: • Implementation and regular review and evaluation of the near neighbours OP SEP. • Maintain regular liaison with nearby property owners.	OP.	OP SEP implemented. Regular review and evaluation of OP SEP completed.
Stronger Rural Communities		
Minimise potential outmigration of existing residents of the PAA and in particular the Kings Plains locality and settlement by: • Engaging in and maintaining transparent, evidence-based and ongoing dialogue with concerned property owners and other community members, based on the results of the EIS, to address perceptions of uncertainty. • Developing property-specific management plans in agreement (negotiated agreements) with individual landholders within the Kings Plains locality. These management plans will incorporate tailored strategies e.g. installation of air-conditioning or double	CP and OP.	Workforce participation in local community organisations and increased volunteerism.

Actions	Timing	Performance Measures
glazing, landscaping and screening, to reduce amenity impacts of the project at private residences and will seek to address resident concerns in relation to impacts. • Demonstrating to the surrounding community, an ability to develop the mine and comply with all necessary regulatory requirements. • Establish agricultural lease arrangements with suitable landholders for Regis owned land located outside of the mine disturbance boundary.		Number of workforce residing in Kings Plains and Regis owned properties.
Encourage operations phase project employees to reside in Regis owned properties e.g. by providing attractive rental rates or offering accommodation as part of employment contract.	OP.	A portion of the project operations phase workforce resides in the PAA.
In cases of property acquisition, offer landholders a first buy-back opportunity at the cessation of mining activity.	During PA process.	Property acquisition contracts include first buy-back condition.
Support the sustainability of the Kings Plains RFB by: • Encouraging the operations phase workforce to join the Kings Plains RFB • Support the Kings Plains RFB to be adequately resourced (human resources) and equipped for fire-fighting • Develop a corporate volunteer strategy to demonstrate Regis commitment to encouraging its employees to participate in volunteering activities within the Blayney LGA.	OP.	The workforce is represented on the Kings Plains RFB.
Ensure suitable access is maintained to Vittoria Road or Mid Western Highway for Regis tenants on land located outside the mine disturbance area.	Prior to commencement of CP.	Regis owned residences located outside the mine disturbance area have suitable connectivity to the Mid Western Highway or Vittoria Road.
Advocate on behalf of near neighbours for funding through the project VPA to be directed at managing or offsetting social impacts in the PAA.	During the PA process and ongoing.	Discussions held with BSC regarding VPA spend in PAA.
Conduct a detailed oral history of the Kings Plains locality in consultation with past and present members of the Kings Plains community.	Following project determination.	History of Kings Plains recorded.
Conduct further analysis of the dimensions of sense of place in the Kings Plains locality to understand the adaptive capacity of the Kings Plains community and opportunities for collaboration to support adaption to the presence of the mine. Collaborative	During the PA process.	Collaborative opportunities identified for Kings Plains residents.

Actions	Timing	Performance Measures
opportunities may present in the rehabilitation and mine closure planning and implementation process, or in the biodiversity stewardship program.		
Implement a communications strategy that informs near neighbours of the future anticipated changes to the environment within the mine project area. The purpose of this is to reduce the sudden impact of the landscape changes resulting from the commencement of project construction. Potential tools to be utilised include 3D Animations and visual montages.	During the PA process.	Evidence of further engagement.
Support Resident Health and Wellbeing		
To reduce uncertainty in relation to the potential health impacts of the project, Regis will: • Engage in and maintain transparent, evidence-based and ongoing dialogue with concerned property owners and other community members, based on the results of the EIS, to address perceptions of uncertainty. • Operate a comprehensive air quality management system that uses a combination of predictive meteorological forecasting and real-time air quality monitoring data to guide the day to day planning of mining operations and the implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this consent. • As required on a requested case by case basis, provide to households in the PAA first flush systems (or equivalent suitable system) on existing rainwater tanks. • Offer air conditioning and/or double glazing on a case by case basis and on request to residents in the Kings Plains locality. • Continue to implement a public education campaign in relation to the transport, use and management of cyanide on site. • Clearly communicate to all residents of the PAA their rights in relation to property acquisition and compensation. • Ensure residents of the PAA have access to environmental monitoring results by making the results available on the project website. • Demonstrate compliance with relevant conditions of consent and report performance to the community through the Project CCC.	Ongoing through PA process.	Property mitigation agreements and solutions agreed with land owners.
To address resident stress and anxiety in relation to the potential amenity impacts Regis will: • Engage in and maintain transparent, evidence-based and ongoing dialogue with concerned property owners and other community members, based on the results of the EIS, to address perceptions of uncertainty. • Continue to engage with all near neighbours who are predicted to experience significant amenity impacts in relation to the identification of suitable at private property treatments, documented through a property management plan. • Install noise monitoring systems to the south and west of the site to deliver real-time monitoring data. In the case of exceedances, construction and operations will automatically stop work and develop measures to work within compliance. • Provide blasting notifications in advance to provide predictability and increase residents' level of comfort with blasting events.	Ongoing during PA process.	Property management plans agreed with relevant residents of the PAA.

Actions	Timing	Performance Measures
To address resident stress and anxiety in relation to uncertainty around water impacts outside of the mine project area, Regis will: • Communicate to residents of the PAA the process for raising and investigating concerns in relation to off-site groundwater impacts and the related compensation arrangements. This will include the application of make good arrangements such as the provision of compensatory water supply measures. • Ensure the results of the ongoing groundwater monitoring program are accessible to all bore holders in the PAA. • On request from landholders within the PAA, Regis will install and monitor groundwater bores on private property.	Prior to commencement of the CP and ongoing.	Results of groundwater monitoring provided to all bore holders in the PAA. Groundwater monitoring bores installed on request from landowners.
To address residents stress and anxiety in relation to the impacts of blasting on private property, Regis will undertake pre blast engineering surveys of private properties within the blast management zone and on request from landowners located outside the zone but within a reasonable distance.	Prior to commencement of the CP.	Pre blast engineering surveys completed for all relevant landowners.
Minimise Impacts to Rural Way of Life		
Regis will minimise project related traffic impacts on local road networks in the PAA through: • Encouraging the construction and operations phase workforce that do not live adjacent to Vittoria Road and Guyong Road or where an alternative route to the project area would take significantly longer, to use an alternate route to the project area. • Conducting logistics scheduling in a manner that ensures project related vehicle movements on the road network during both construction and operation are planned to occur outside school drop off and pick up periods. • Providing mini bus transport between Blayney and the mine project area for the construction workforce, encouraging public and road safety. • Identifying and implementing a program to encourage the operations phase workforce residing in Blayney, Orange and Bathurst to car pool for commuting to the mine project area. • Requiring all contractors and subcontractors based in Orange LGA and Cabonne LGA to use the alternate route to the project area. Buses used to transport workers will also use this route. • Installation of truck advanced warning signage 300 m in advance of the intersection to the mine project area in both directions along the Mid Western Highway. • Installation of Raised Reflective Pavement Markers (RRPMs) on the Mid Western Highway; • Operational restrictions limiting HV movements which cross the road centreline when visibility is less than the safe intersection sight distance. An infrared visibility sensor may be used to measure visibility at the intersection. • For Dungeon Road only, operational restrictions such as limiting all HV movements to daylight hours.	CP.	TMP.

Actions	Timing	Performance Measures
To minimise the visual impacts of the project for residents of the PAA, Regis will: • Implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the Project including ensuring that all external lighting associated with the Project complies with *Australian Standard AS4282 (INT) 1997 – Control of Obstructive Effects of Outdoor Lighting*, or its latest version. • In consultation with residents, develop visual impact management plans for all private property within the PAA likely to have significant direct views of the mining operations from the residence and/or its associated facilities.	CP.	Property-specific management plans established
To minimise project related noise and blasting impacts on the PAA Regis will implement the following actions: • Blasting will be carried out between the hours of 8:00 am to 4:00 pm, as recommended by the AQA, Monday to Saturday. Blasting will generally not be carried out on Sundays and public holidays. • Undertake attended noise monitoring at regular intervals in Kings Plains and along Guyong Road to confirm compliance with relevant noise criteria. • Undertake test blasts and monitor all blasts and maintain a blast log to provide a traceable system of documentation in case of incident or complaint. • In consultation with residents, develop property–specific plans for managing noise impacts e.g. installation of air conditioning or double glazing on request to significantly impacted residents. • Install noise monitoring systems south and west of the mine project area to deliver real-time monitoring data. In the case of exceedances, construction and operations will be reviewed and measures implemented to work within compliance. • Develop property specific management plans for landowners with stock and landowners engaged in equine activities who have potential to be affected by blasting activities.	CP and OP.	Blast Management Plan prepared Property-specific management plans established on request Management arrangements in place with relevant residents to minimise impacts to equine stock.

Notes:

PA – Project Approval

CP – Construction Phase

OP – Operations Phase

LOP – Life of Mine

4.3.3 Workforce Accommodation and Management

The Workforce Accommodation and Management Framework seeks to address the predicted impacts of the construction phase workforce on housing and short-term accommodation supply in the Blayney LGA. The framework is integral to ensuring workforce accommodation demands during the construction phase do not adversely impact the non-mining sector. Table 14 provides a framework for workforce accommodation management.

No changes have been made to the Workforce Accommodation and Management Framework presented in the EIS SIA as a result of the amended mine development.

Table 14
Workforce Accommodation and Management Framework

Objectives	• Project workforce arrangements avoid placing upward pressure on housing prices, rental costs and housing demand in the communities of the Blayney LGA • Project workforce accommodation arrangements avoid reducing access to tourism accommodation for visitors to the Blayney LGA and broader Local Area. • Regis houses in the PAA are occupied by local tenants or the project workforce during the construction phase and operations phase. • Project workforce accommodation arrangements benefit local accommodation providers. • Cumulative housing impacts are proactively managed in partnership with relevant stakeholders
Key Government Policies	*Blayney Shire Council Settlement Strategy (revised)* *Blayney Local Environment Plan* *Blayney Shire Community Strategic Plan 2018-2028* *Central West and Orana Regional Plan 2036*

Actions	Stakeholders	Timing	Performance Measures
Workforce Accommodation Planning			
• Strong focus on employing residents of the Local Area during all phases of the project. • Encourage construction contractors and suppliers to hire locally where possible.	Residents of the Local Area. Construction contractors.	CP and OP.	Where possible at least 50% of the mine development CP workforce are Local Hires (LHs). At least 80% of the OP workforce are LHs.
Prepare a detailed CWAS for the project that: • Demonstrates how the construction phase workforce will be accommodated across the Local Area; • Demonstrates how accommodation demand will be managed during periods of high demand e.g. during key regional events; • Documents the approach to informing regional accommodation provides of project workforce accommodation demands including anticipated timing; • Enables the coordinated placement of the workface in tourism accommodation throughout the Blayney LGA and other communities of the Local Area; • Keeps key stakeholders informed of predicted project accommodation demands across the CP; and	Key stakeholders including Housing Plus and BSC. Local housing support services. Broader Blayney community and short-term accommodation	2019 – CP.	CWAS prepared and implementation.

Actions	Stakeholders	Timing	Performance Measures
• Contains a monitoring framework incorporating 'triggers' in decisions about additional accommodation options.	providers in Blayney LGA.		
• Accommodation coordinator role allocated to act as a single point of contact for real estate agencies and short-term accommodation providers throughout the Blayney LGA (i.e. through an individual advocate or through Orange360) and to coordinate workforce access to accommodation throughout construction.	Short-term accommodation providers and real estate agents in Blayney LGA.	Prior to commencement of CP.	Accommodation coordinator role allocated.
• Investigate the feasibility of establishing an accommodation database that can be used by all accommodation providers within Blayney LGA and neighbouring centres to regularly upload accommodation availability data to inform workforce accommodation planning.	Orange360.	During PA.	Facilitation of a central point for booking accommodation.
• Proactive engagement with the BSC prior to the commencement of the Construction Phase and throughout the operations phase to enable the BSC to make informed decisions regarding land and housing available to meet project and non-project related demands.	BSC.	Prior to commencement of CP.	Meetings with Housing Plus.
• Monitor local and regional housing market activity in the period prior to construction to inform the CWAS.	Housing Plus. BSC. Real estate agents in Blayney LGA.	During PA.	Monitoring reports and housing market data.
Housing and Accommodation Affordability and Accessibility for the Non-Mining Sector			
• Undertake further engagement with Housing Plus and other relevant housing support services to identify suitable actions to offset potential impacts (i.e. displacement) on low to medium income households in the Blayney LGA.	Housing Plus.	During PA.	Evidence of discussion with Housing Plus and identified actions to manage impacts.
• Seek to reduce construction activities and associated workforce requirements during peak regional events e.g. Bathurst 1000 to reduce project demands on short-term accommodation in Blayney LGA and release rooms for the non-mining sector.	Non-mining sector. Short-term accommodation providers.	During CP.	Number of workers remaining in short-term accommodation in Blayney LGA during regional events.

Actions	Stakeholders	Timing	Performance Measures
• Identify suitable contingency accommodation measures for the construction phase if required to minimise potential for displacement of lower socio-economic households from private rental accommodation.	Housing Plus. Lower socio-economic households.	During PA.	Contingency plans in place for workforce accommodation.
Operations Phase Workforce Accommodation Planning			
• Provide practical assistance to workers who are relocating to Blayney LGA to take up a permanent position on the project. • Offer workers who are relocating permanently to Blayney LGA or living in the Blayney LGA financial incentives as part of their total remuneration. Incentives may include rent subsidy for a period of time.	Project workforce.	OP.	Local hire numbers.
• Commitment that senior mine management will reside permanently in the Blayney LGA.	Senior mine management.	OP.	Number of senior mine management staff residing in Blayney LGA
• Encourage potential workforce to locate to the Blayney LGA by promoting the attractiveness of Blayney LGA and availability of services and facilities e.g. incorporate a town and regional tour into the employee recruitment process connecting with key services such as schools, health and childcare.	Potential workforce.	Prior to commencement of OP.	Number of new residents residing in Blayney. Completion and distribution of number of welcome packs and the appointment of a position.
• Ensure BSC is informed of the size of the workforce for each stage of the project, project timing and the anticipated number of non-local hires (NLHs) to enable BSC to proactively plan for the release of residential land and the supply of new housing in Blayney LGA.	BSC.	Ongoing through to the OP.	Evidence of meetings held with BSC.
Management of Cumulative Impacts to Housing and Short-Term Accommodation During Construction Phase			
• Establish joint meetings with Newcrest Mining Limited (Newcrest) and Infigen Energy regarding management and monitoring of the cumulative impacts of the additional construction phase workforces on housing affordability and availability in Blayney LGA. • Consult with BSC and Newcrest regarding cumulative impacts to housing availability and affordability, where a major expansion progresses at Cadia Valley Operations (CVO). • Proactively engage with the BSC both prior to the commencement of the construction phase and throughout the construction and operations phases to enable the BSC to make informed decisions regarding land and housing availability to meet cumulative accommodation demands.	CVO. BSC. CC	2019 ongoing.	Number of meetings with CVO. Recorded engagement with CVO and other Major Projects in the area. Engagement with BSC and CC.

Actions	Stakeholders	Timing	Performance Measures
• Monitor the housing market activity to determine the efficiency and success of strategies in limiting the impact of the project on the housing market to allow for adaptive management.	Housing Plus. BSC. Real estate agents in Blayney LGA.	During PA and ongoing.	Monitoring reports and housing market data.

Notes: PA – Project Approval; CP – Construction Phase; OP – Operations Phase; LOP – Life of Mine

4.4 MONITORING, REPORTING AND REVIEW

The monitoring and evaluation of social impact management activities is important in understanding how programs are performing against expected outcomes and how successful these programs are at mitigating or managing identified impacts. Section 7.4 of the EIS SIA described the approach to the monitoring, reporting and review of social impacts and opportunities associated with the mine development. No changes are proposed in the amended mine development that affect the approach to monitoring, reporting and review described in the EIS SIA and presented in the following sections.

4.4.1 Monitoring

A detailed monitoring program will be described in the project SIMP to be prepared following project determination. Table 15 lists the primary tools proposed for monitoring the effectiveness of the management measures defined within Section 4.3.

Table 15
Social Impact Monitoring Tools

Monitoring Tool	Type	Frequency	Purpose
Employment records	Quantitative	Six monthly	Monitor employment diversity (gender, Indigenous status), local residency, journey to work etc.
Complaints and grievances	Quantitative and qualitative	Quarterly	Monitor community complaints, issues and suggestions regarding the project, including any follow-up conversations conducted by Regis.
Procurement records	Quantitative	Six monthly	Monitor project spend on goods and services with local and regional business, including sub-contractors.
Housing market data	Quantitative	Quarterly during PY 1 and six monthly thereafter	Monitor changes in house prices and rentals, vacancy rates, motels and temporary accommodate.
Social statistics for the PAA and SAA	Quantitative and qualitative	Annual	Monitor population change
Social statistics and engagement with service providers	Quantitative and Qualitative	Six monthly until PY 3	Monitor changes in service provider statistics (hospital admission rates, GP attendance, school enrolments, emergency response and reported crime).
Attendance records	Quantitative	Annual	Monitor workforce and community participation in education and training programs, induction programs, local sports events, local business forums and business events.

Monitoring Tool	Type	Frequency	Purpose
Workforce survey	Qualitative	Annual	Record workforce perceptions about general wellbeing, family functioning and community issues.
Survey of residents of Blayney LGA	Quantitative and Qualitative	Biannual	Record community perceptions about company reputation, workforce integration into the community, access to local services, and specific project impacts.
Local business survey	Qualitative and Quantitative	Biannual	Record perceptions about access to the supply chain, tender opportunities, and business engagement and support programs.
Indigenous community focus groups	Qualitative	Annual	Record perceptions about engagement of Indigenous community in employment and business opportunities related to the project. Seek feedback regarding emerging concerns or opportunities of cultural and/or historic significance.
Kings Plains residents focus group	Qualitative	Annual	Record perceptions of performance, issues of concern and perceived liveability.
Project CCC meeting minutes	Qualitative	Quarterly	Review issues raised and feedback received on initiatives progressed.
Annual report from the Project CCC Chairperson	Qualitative	Annual	Review of activities conducted by the Project CCC.

4.4.2 Reporting and Review

Communicating the results of monitoring activities is important in providing information on social impact management activities to the community and stakeholders. Monitoring will provide Regis with important data on whether the objectives of program activities are being met and if management performance goals are being achieved. This enables impact management activities to be adapted to improve overall impact management performance.

Regis will report against the monitoring mechanisms defined in Table 15 as part of the Annual Review for the project. Every three years the identified monitoring mechanisms will be reviewed for effectiveness as a part of the SIMP review process.

4.4.3 Project Community Consultative Committee

The CCC plays a critical role in the monitoring, reporting and review process. As set out in the NSW Government's *Community Consultative Committee Guideline for State Significant Projects* (NSW Government, 2019) Regis will regularly provide the Project CCC with timely, accurate and comprehensive reports on the project's operations and performance on its

environmental management and community relations. Regis will also publish the minutes of all Project CCC meetings on the project website. In accordance with the CCC Guideline, Regis will provide the Project CCC with copies of:

- The project's consent and other relevant documents including management plans;
- Results of environmental monitoring;
- Annual review or compliance reports;
- Audit reports;
- Reports on community concerns or complaints and the proponent's responses to these matters; and
- Any other information specified by the DPIE.

The Project CCC will be provided with the outcomes of the social impact monitoring. The Project CCC will be provided with an opportunity to comment on the first draft of the SIMP (including the monitoring, reporting and review framework) when it is prepared post project determination. Future versions of the SIMP will be provided to the Project CCC at the same time they are submitted to the DPIE and BSC.

5 IMPACT SIGNIFICANCE ASSESSMENT – MINE DEVELOPMENT

5.1 OVERVIEW

This section presents the outcomes of an assessment of social impact and opportunity significance for the amended mine development. The assessment of impact significance is based on the methodology described in the SIA Guidelines and summarised in Section 2.4.3 which includes a combination of social risk assessment (Table 16) and spatial and temporal analysis of the social impact.

The Social Risk Matrix (Table 16) has been used to quantify each social impact and opportunity.

Table 16
Risk Rating Matrix

			Consequence Level				
			1	2	3	4	5
			Minimal	Minor	Moderate	Major	Catastrophic
Likelihood Level	A	Almost Certain	A1	A2	A3	A4	A5
	B	Likely	B1	B2	B3	B4	B5
	C	Possible	C1	C2	C3	C4	C5
	D	Unlikely	D1	D2	D3	D4	D5
	E	Rare	E1	E2	E3	E4	E5
Social Risk Rating							
	Low		Moderate		High		Significant

Source: DPE, 2017.

An initial evaluation of social risk, using Table 16 was undertaken prior to consideration of management and mitigation measures. The outcomes of the risk assessment informed the need, or otherwise for the development of the project specific strategies described in Section 3. An evaluation of the residual risk was then completed and a final impact significance ranking of 'low', 'moderate' or 'high' was determined.

5.2 IMPACT SIGNIFICANCE ASSESSMENT

The outcomes of the impact significance assessment are presented in Table 17, Table 18, Table 19 and Table 20.

Table 17 and Table 18 summarise the:

- Predicted social impacts for the PAA (Table 17) and the SAA (Table 18) resulting from the project proceeding;
- Stakeholders potentially affected;
- Predicted duration of the impact;
- Predicted project phase in which the impact will occur;
- Level of stakeholder concern identified during consultation in relation to the predicted impact;
- Evaluation of residual risk (Mitigated Risk), in consideration of project-specific social management strategies; and
- Final significance rating.

Table 19 presents the outcomes of the significance evaluation of potential project opportunities and summarises the:

- Predicted social opportunities for the SAA;
- Stakeholders potentially affected;
- Predicted duration of the impact;
- Predicted project phase in which the opportunity will be realised;
- Evaluation of enhanced opportunity in consideration of project-specific social enhancement strategies; and
- Final significance rating.

Table 20 presents the cumulative social impact significance assessment.

Only social impacts and opportunities with a social risk rating of moderate or high for either the original mine development or the amended mine development are included in these tables. Appendix B contains the outcomes of the risk and significance assessment for the full suite of social impacts and opportunities.

Table 17
PAA Mine Development Significance Assessment – Social Impacts

EIS SIA Ref	Social Impact	Stakeholder	Temporal	Project Phase	Stakeholder Concern	Mitigated Risk	Significance	Change from EIS
6.3.3	Impact to sense of place due to adverse changes in valued attributes of the local area (i.e. the landscape and the natural environment, and community)	Residents of Kings Plains locality and people with historical connection to the land and locality	Long-term. Impact most significant in the initial construction phase when landscape changes are most significant.	Life of Mine	H	B3	H	No Change
6.3.2	Rural amenity of near neighbours is reduced due to the impact of cumulative biophysical changes i.e. noise levels and a reduction in visual quality	Residents of Kings Plains locality and some near neighbours to the west and north of the mine project area	Long-term. Impact greatest in first four-six years when the southern amenity bund is under construction	Life of Mine	H	B3	H	No Change
6.3.2	Residents experience reduced enjoyment of outdoor spaces at night due to intrusive lighting and resulting impacts on dark skies.	Residents of Kings Plains locality and some near neighbours to the west and north of the mine project area	Long-term	Life of Mine	H	C3	H	No Change
6.3.6	Perceived reduction in the value of private property due to proximity of the mine development and anticipated amenity impacts property	All residents of the PAA	Long-term	Life of Mine	H	C4	H	No Change

EIS SIA Ref	Social Impact	Stakeholder	Temporal	Project Phase	Stakeholder Concern	Mitigated Risk	Significance	Change from EIS
6.3.3	Mine development impacts the cultural ecosystem services accessed by residents	Residents of the Kings Plains locality and some neighbours to north and west of the mine project area	Long-term	Life of Mine	H	C3	H	No Change
6.3.3	Mine development impacts the provisioning ecosystem services (water supply) accessed by residents	Residents of the Kings Plains locality, some neighbours to north and west of the mine project area and a commercial apiarist	Long-term	Life of Mine	H	D3	H	Risk reduced (EIS: B4/H)
6.3.4	Fragmentation of Kings Plains community and potential changes to social cohesion	Residents of Kings Plains	Medium-term. Impact likely to be most significant during PY 1 – PY 3 when cumulative amenity impacts are predicted to be greatest	Construction Phase and initial years of Operations Phase	H	B3	H	No Change
6.3.4	The mine development impacts the existing rural way of life	Residents of the Kings Plains locality and some residents of located to the north and west of the mine project area	Long-term	Life of Mine	H	B3	H	No Change
6.3.5	Resident health and wellbeing is affected by the stress and anxiety associated with project uncertainty	Residents of Kings Plains locality and some residents in the broader PAA	Medium-term	Construction Phase and initial years of Operations Phase	H	C3	H	No Change

EIS SIA Ref	Social Impact	Stakeholder	Temporal	Project Phase	Stakeholder Concern	Mitigated Risk	Significance	Change from EIS
6.3.5	Resident health and wellbeing is affected by sleep disturbance resulting from the noise and vibration impacts of the mine development and from lighting.	Residents of the Kings Plains locality	Medium-term. During construction of southern amenity bund	Operations Phase	H	D2	L	Risk reduced (EIS: C3/H)
6.3.5	Resident health and wellbeing is affected by sleep disturbance resulting from the noise and vibration impacts of the mine development and from lighting	Residents of the Kings Plains locality	Long-term. Beyond PY 3	Operations Phase	H	D2	L	Risk reduced (EIS: C2/M)
6.3.3	Changes in groundwater accessibility impact agricultural livelihoods	Residents of the PAA	Long-term	Life of Mine	H	D2	M	No Change
6.3.3	Mine development has an economic impact on existing commercial apiarian businesses	Existing apiarian businesses	Medium-term	Construction and Operations	H	D2	M	Risk reduced (EIS: D3/M)
6.3.3	Mine development reduces access to surface water or ground water resources at private properties	All residents of the PAA	Long-term	Life of Mine	H	D3	M	No Change

Note: H – High; M – Moderate; L – Low.

Table 18
SAA Mine Development Significant Assessment – Social Impacts

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	Mitigated Risk	Significance	Change from EIS
6.2.10	Local business expectations in relation to project opportunities are not met resulting in a financial burden for some local businesses and potential loss of services for Blayney community	Local business owners and operators, and their families	Ongoing risk throughout construction and initial phases of operation	Construction Phase and Operations Phase	H	C3	H	No Change
6.2.7	Influx of construction workforce leads to changes in structure and cohesion of the communities of Blayney and Millthorpe townships	Residents of Blayney and Millthorpe	Medium-term (18 months) and temporary	Construction Phase	H	C3	H	No Change
6.2.5	Increased demand for short-term accommodation by the construction workforce presents challenges for competing local industry and businesses	Residents of Blayney LGA, business operators, service and facility providers and BSC	Medium-term (18 months)	Construction Phase	H	C3	H	No Change
6.2.5	Construction Phase workforce accommodation demands reduce accessibility to private housing for existing and future residents	Existing and future residents of Blayney	Medium-term	Construction Phase	M	B3	H	No Change
6.2.5	Low-income households are displaced from private rental accommodation in Blayney	Low-income households and vulnerable groups (e.g.	Medium-term (18 months)	Construction Phase	M	C3	H	No Change

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	Mitigated Risk	Significance	Change from EIS
	due to workforce accommodation demands	elderly and Indigenous households)						
6.2.9	Construction phase labour demands results in labour draw from the non-mining sector impacting economic output and business viability	Non-mining sector in Blayney LGA	Medium-term	Construction Phase	H	A3	H	No Change
6.2.9	Construction phase labour demands significantly constrain the labour market of Blayney LGA	Blayney LGA	Medium-term	Construction Phase	H	B3	H	No Change
6.2.10	The project reinforces the Blayney LGA's specialisation in mining potentially increasing economic vulnerabilities	Blayney LGA	Long-term	Life of Mine	L	C3	H	No Change
6.2.8	Increased demand for health and emergency services by the construction workforce reduces access to these services for existing residents	Existing residents of Blayney LGA, and health and emergency service providers	Medium-term	Construction Phase	M	C3	H	No Change
6.2.3/ 6.2.11	Downstream landowners experience livelihood impacts due to project impacts on the quantity and	Downstream landowners along the Belubula River	Long-term	Life of Mine	H	D3	M	No Change

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	Mitigated Risk	Significance	Change from EIS
	quality of water in the Belubula River							
6.2.3	The mine development reduces existing accessibility to ecosystem services for residents of the Blayney LGA	Residents of Blayney LGA	Long-term	Life of Mine	H	C2	M	No Change
6.2.4	The mine development results in further loss of cultural heritage and connection to country for Aboriginal people, and further impacts to the beliefs and values of the Wiradjuri People	Wiradjuri People and OLALC	Intergenerational	Life of Mine	H	C2	M	No Change
6.2.10	The project generates inflationary pressures contributing to changing lifestyle affordability	Non-mining sector of Blayney LGA, low-to medium income households of Blayney LGA and vulnerable households (e.g. elderly)	Long-term with impact likely to be most significant during Construction Phase	Life of Mine	M	C2	M	No change
6.2.5	Increased demand for local and regional housing support services due to displacement of low-income households	Housing Plus and other housing support services and low-income households	Medium-term (18 months)	Construction Phase	M	C2	M	No change
6.2.10	Reduced employment and economic output in other sectors of the economy (e.g.	Businesses and residents employed in	Medium-term	Construction Phase	H	C3	M	No Change

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	Mitigated Risk	Significance	Change from EIS
	trades and services) as a result of the project	non-mining sectors of the economy						
6.2.12	Different sectors of the Blayney LGA experience a greater social and economic burden as a result of the project	Vulnerable groups and ow income households	Medium-term	Life of Mine	M	B3	M	No Change
6.2.2	Increased mine traffic on the local and regional road network reduces safety for road users	Local road users	Long-term	Life of Mine	H	C2	M	No Change
6.2.2	The potential for significant economic and social costs to society due to a cyanide contamination event	Residents of Blayney LGA and neighbouring Cabonne LGA	Intergenerational	Life of Mine	H	D3	M	No Change
6.2.7	Reduction in the "journey experience" for tourists arriving in Blayney via the Mid Western Highway.	Visitors to Blayney	Medium-term. Impact greatest during construction of southern amenity bund.	Construction and operations	H	C2	L	Mitigated risk increased from low to moderate

Note:

H – High
M – Moderate
L - Low

Table 19
SAA Mine Development Significance Assessment – Social Opportunities

EIS SIA Ref	Social Opportunity	Stakeholders	Temporal	Project Phase	Enhanced Opportunity	Significance	Change from EIS
6.2.5	Growth in the land and housing development market in Blayney	Existing and new residents of Blayney township, BSC, business operators and service providers	Long-term	Operations Phase	A3	H	No Change
6.2.8	Stronger local investment supports improvements and/or expansion in services and facilities in Blayney LGA	Residents of Blayney LGA and visitors to the CW Region	Long-term	Life of Mine	A3	H	No Change
6.2.10	Increased local spend supports long-term sustainability of existing local businesses and creates opportunities for expansion or establishment of new businesses	Local business owners and residents of Blayney LGA	Long-term	Life of Mine	B3	H	No Change
6.2.10	Significant economic benefits from the project accrue to the Blayney LGA	BSC, residents, businesses and service providers in Blayney LGA	Long-term	Life of Mine	A3	H	No Change
6.2.9	The creation of direct and indirect jobs in Blayney LGA	Residents of Blayney LGA and business operators	Long-term	Life of Mine	A4	H	No Change
6.2.7	Project induced resident population growth in Blayney township and Blayney LGA supports stronger community cohesion and enhanced liveability	Existing residents of Blayney LGA, BSC, Service and facility providers and local businesses.	Long-term	Operations Phase	B3	M	No Change
6.2.9	Opportunity to increase labour and skills capacity in the Local Area	LGAs of the Local Area	Long-term	Life of Mine	C3	M	No Change
6.2.9	Indigenous people in the Local Area are employed on the project	Indigenous population	Long-term	Life of Mine	B3	M	No Change

EIS SIA Ref	Social Opportunity	Stakeholders	Temporal	Project Phase	Enhanced Opportunity	Significance	Change from EIS
6.2.9	Enhanced education and training opportunities available at Blayney High School	High school students at Blayney High School and local business operators	Long-term	Life of Mine	B3	M	No Change
6.2.10	Economic benefit to the CW Region.	Residents, business operators, service providers and Councils in the CW Region	Long-term	Life of Mine	A4	M	No Change

Note:

H – High
M – Moderate
L - Low

Table 20
Cumulative Mine Development Significance Assessment – Social Impacts

SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	Mitigated Risk	Significance	Change from EIS
6.4.2	Reduced accessibility to short-term accommodation due to cumulative impacts of other projects in the Blayney LGA	Low-income households, vulnerable groups (e.g. elderly, single parent households and Indigenous households)	Medium-term	Construction Phase	H	C3	H	No Change
6.4.2	Sustained reliance on a single industry for economic growth and infrastructure provision	BSC and the broader Blayney community	Long-term	Life of Mine	M	A3	H	No Change
6.4.2	Temporary shortage of short-term accommodation impacts accessibility to accommodation for the non-mining sector	Visitors to the Blayney LGA, non-mining sector business, low-income households and vulnerable groups (e.g. elderly, single parent households and Indigenous households)	Medium-term	Construction Phase	H	A3	H	No Change
6.4.2	Short-term cumulative shortage of private rental accommodation for the non-mining sector	New and existing residents of Blayney LGA, low-income households and vulnerable groups (e.g. elderly, single parent households and Indigenous households)	Medium-term	Construction Phase	H	A3	H	No Change
6.4.2	Temporary increase in demand for health and emergency services increases demands for service providers and reduces access to services for existing residents	Blayney LGA health and emergency service providers, and Blayney LGA	Medium-term	Construction Phase	M	B3	H	No Change

SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	Mitigated Risk	Significance	Change from EIS
6.4.2	Cumulative increase in temporary workforce in Blayney leads to temporary changes in community cohesion	Residents of Blayney LGA	Medium-term	Construction Phase	L	C3	H	No Change
6.4.2	Short-term labour draw from the non-mining sector impacts the operation of non-mining sector businesses	Blayney LGA businesses	Medium-term	Construction Phase	H	C3	H	No Change

Note:

H – High
M – Moderate
L - Low

6 IMPACT ASSESSMENT - PIPELINE DEVELOPMENT

This section presents an assessment of the potential social impacts and opportunities of the amended pipeline development. The focus of the assessment is the impacts and opportunities that were assessed in the EIS SIA and that are predicted to experience a material change as a result of the amended project (pipeline development only). For clarity, no new social impacts or opportunities were predicted as a result of the amended pipeline development.

6.1 INTRODUCTION

6.1.1 Amended Pipeline Development

The following amendments to the EIS pipeline development have been made:

- Pipeline route - The pipeline route has been amended for a section of the corridor west of Bathurst, primarily in consideration of land access. Two options for the amended pipeline route have been included and assessed in the amended project; the northern option and the southern option. As shown in Figure 3, the pipeline alignment changes approximately 3 km west of pumping station facility No. 4. The amended section of the pipeline route is approximately 14 km long if the northern option is adopted, and approximately 9 km if the southern option is constructed.
- Pipeline corridor/disturbance footprint - the pipeline corridor has been differentiated from the pipeline disturbance footprint, with small changes made to both the pipeline corridor and the disturbance footprint in consideration of biodiversity impacts. While the alignment of pipeline sections outside the realigned northern and southern options has not changed, there have been minor variations in the width of the corridor to provide flexibility in the detailed design and subsequent construction phases of the project. See also the definition of pipeline corridor in Section 1.6.
- Pumping station facilities - pumping station facility No.3 has been relocated from the vicinity of Energy Australia's MPPS, to approximately 4.3 km to the west and adjacent to Pipers Flat Road.

6.1.2 Material Impacts

Section 6 presents the social impacts and opportunities of the pipeline development that are different to those assessed in the EIS SIA. Table 21 lists:

- The social impact categories considered in the EIS SIA for the pipeline development;
- Whether a material change is likely with the amended pipeline development and the rationale; and
- Where in the SIA Amended Project Report the material change is considered.

Table 21 is intended to assist the reader in comparing the impacts and opportunities of the EIS pipeline development project with the amended pipeline development.

Table 21
Summary of Material Changes to Social Impacts and Opportunities

Social Impact Category (EIS SIA)	Are Material Changes Anticipated?	Rationale	SIA Amended Project Report Ref.
Employment opportunities (10.2.1)	Unlikely	No change proposed to workforce size, employment or procurement arrangements	Na
Short-term accommodation demand (10.2.2)	Unlikely	No change proposed to workforce size, employment or procurement arrangements	Na
Access and amenity (10.2.3)	Likely	Changes proposed to location of one pump station and to the pipeline corridor alignment which may impact different land uses.	Section 6.2.1 and Section 6.2.2
Water access (10.2.4)	Unlikely	No changes proposed.	Na
Impacts to private property (10.2.5)	Unlikely	No significant changes proposed.	Na
Biosecurity (10.2.6)	Unlikely	No changes are proposed.	Na
Public health and safety (10.2.7)	Unlikely	No changes are proposed	Na
Aboriginal cultural heritage (10.2.8)	Likely	Additional cultural heritage finds along new pipeline corridor alignment.	Section 6.2.3
Economic growth (10.2.9)	Unlikely	No change proposed to pipeline development schedule or workforce that would affect economic opportunities described in the EIS SIA.	Na
Beneficial reuse (10.2.10)	Unlikely	No change proposed.	Na

Social Impact Category (EIS SIA)	Are Material Changes Anticipated?	Rationale	SIA Amended Project Report Ref.
Cumulative Impacts (10.2.11)	Unlikely	No changes proposed.	Na

6.2 SOCIAL IMPACTS AND OPPORTUNITIES

6.2.1 Access

The construction phase of the amended pipeline development may give rise to temporary delays to access across local road networks. The impact of these delays will be similar to the impact assessed in Section 10 of the EIS SIA and described in the EIS TIA (PD). The EIS TIA (PD) includes draft traffic management plans (TMPS). These TMPs will be progressively refined and implemented for the construction of the pipeline development.

The potential of the amended pipeline development construction phase to result in temporary access delays across local roads for nearby residents is assessed as a mitigated low (C1) risk of low significance. This assessment is consistent with the findings of the EIS SIA.

6.2.2 Amenity

The potential impact of the pipeline development on rural amenity was assessed in the EIS SIA with reference to the findings of the EIS NVIA (PD). In the EIS SIA the potential impact of the pipeline development on rural amenity was assessed as a mitigated low risk (C1) of low significance.

The potential noise impacts of the amended pipeline development are assessed in the Amended NVIA (PD). The findings of the Amended NVIA (PD) are consistent with the findings of the EIS NVIA (PD) with respect to rural amenity. The findings of the Amended NVIA (PD) indicate that:

- There may be temporary impacts to amenity during the construction of the amended pipeline development due to temporary and short-term noise and vibration.
- Operational noise emissions from the pump stations are anticipated to be negligible at adjacent receivers to each site, although this assumes some form of container or enclosure is adopted for each pump station.

The Amended NVIA (PD) identifies a hierarchical strategy to minimise noise impacts during construction of the pipeline development.

A formal complaints and grievances procedure will be developed for the construction phase of the pipeline development. This procedure will be aligned with that prepared for the mine development. Regis will communicate the procedure to all directly affected pipeline corridor property owners and near neighbours.

As the project pipeline will be largely underground once it is operational, amenity or access impacts to landowners or the public from the pipeline itself are not expected.

Relative to the EIS SIA, the potential impact of the pipeline development on rural amenity was assessed as a similar risk: mitigated low risk (C1) of low significance.

6.2.3 Aboriginal Cultural Heritage and Social Values

This area of assessment concerns the importance of the pipeline corridor features to the Aboriginal community in terms of their social, aesthetic and historic values. Aspects of social value include assessment of sites, items, and landscapes that are traditionally significant or that have contemporary importance to the Aboriginal community. This importance involves both traditional links with specific areas, as well as an overall concern by Aboriginal people for their sites generally and the continued protection of these.

Aesthetic values are closely linked with social values. Historic places do not always have physical evidence of their historical importance (such as structures, planted vegetation or landscape modifications). They may have 'shared' historic values with other (non-Aboriginal) communities.

The EIS SIA considered the potential impact of the pipeline development on aboriginal cultural heritage, historic heritage, and social values with reference to the findings of the EIS Pipeline Development CHA. The EIS Pipeline Development CHA found that there has been a moderate to high level of previous disturbance to most of the pipeline corridor and there is evidence that the study area for the EIS Pipeline Development CHA has been subject to a variety of land use disturbances. This includes the widespread clearance of native vegetation, extensive ploughing practices, long-term grazing, ground disturbance due to soil erosion, and coal mining (including open cut and underground).

Ozark (2019) identified six new sites within the pipeline corridor during the EIS cultural heritage survey. A further site was previously recorded. The six new sites and the one previously recorded site are representative of sites recorded in the region (Ozark, 2019). Although the sites recorded during this assessment were not considered of high archaeological significance, their presence alone, in albeit a much-modified landscape, remains a memory of the past in a landscape that is fast changing (or has changed).

The potential impact of the pipeline development on Aboriginal cultural and social values was assessed in the EIS SIA as a mitigated low (C2) risk of moderate significance.

An Addendum CHA (PD) has been prepared for the pipeline options. Additional surveys were undertaken of parts of the northern and southern route options for the amended pipeline development as part of the Addendum CHA (PD). These surveys resulted in one Aboriginal site (AHIMS # IF-01) being recorded with one isolated artefact – a quartz flake located in a disturbed context.

OzArk (2020) provides the following summary of potential impacts to Aboriginal cultural heritage associated with the addendum pipeline development depending on whether the northern or southern pipeline option is chosen for the development:

- If the southern pipeline option is chosen, then the AHIMS # IF-01 is located inside the disturbance footprint and will be impacted (Table 8-3).
- If the northern pipeline option is chosen, then AHIMS # IF-01 will not be impacted.

OzArk (2020) also undertook a re-assessment of potential impacts along the entire pipeline corridor following the changes to the remainder of the pipeline corridor width in sections. OzArk (2020) confirms that there are no changes to the impacts as outlined in the original pipeline assessment (Ozark, 2019, p. 80).

None of the Aboriginal sites recorded along the original and amended pipeline corridor have significant aesthetic value as the integrity of the sensory landscape has been altered in historic and modern times (Ozark, 2019). None of the Aboriginal sites recorded have an apparent direct relationship to known historical Aboriginal sites (such as missions or massacre sites). It is possible that the area saw some of the earliest contact between Aboriginal people and non-Aboriginal settlers, however, none of the recorded Aboriginal sites display evidence that they constitute 'contact' or 'post-contact' Aboriginal sites. To that end, all recorded sites are assessed as having low archaeological significance (OzArk, 2020; 2019). The development adds to the cumulative impact on the region's Aboriginal cultural heritage as up to eight sites located on the pipeline corridor may be directly impacted. However, the heritage impact value of this loss is low as the sites consist of isolated finds and a low-density artefact scatter (OzArk, 2020; 2019).

The Pipeline Development CHA and the Addendum CHA (PD) will be provided to the Registered Aboriginal Parties (RAPs) for comment.

Impacts to Aboriginal heritage will be managed through an Aboriginal Cultural Heritage Management Plan (ACHMP) which is to be agreed to by Regis, the RAPs and the DPIE. The ACHMP will also include an unanticipated finds protocol, unanticipated skeletal remains protocol and the process for the long-term management of any artefacts. Further, subject to the agreement of the RAPs the artefacts will be removed from harm and relocated in the landscape close to where they originated; but outside of the area of disturbance.

With respect to Aboriginal cultural and social values, there is no significant material difference between the potential impacts of the pipeline development and the amended pipeline development (either pipeline option). The potential impact of the amended pipeline development on Aboriginal cultural and social values is therefore assessed as a mitigated low (C2) risk of moderate significance consistent with the outcomes of the EIS SIA.

6.3 MANAGEMENT, MONITORING AND REPORTING

Table 22 provides a summary of the key tools to manage the potential social impacts of the project and enhance benefits. Other tools including a TMP will also be prepared for the project and will assist in the management of social impacts.

Table 22
Summary of Key Management Tools

Tools	Description
Route and Site Selection	The land required for the pipeline corridor is located largely on freehold tenure, the majority of which is rural grazing land. A detailed site and route selection process has been undertaken during the planning of the project to mitigate the social and environmental impacts; this is described further in the EIS (EMM, 2019). The focus of the pipeline corridor selection process has been the minimisation of social and environmental effects. The alignment of the pipeline corridor was selected to align with existing easements (where possible) to minimise the disruption to land uses in this area. Prior to the finalisation of alignments in this area, discussions were held with landowners and changes made to the alignment where possible based on their preferences, for example to reduce impacts to existing irrigation infrastructure. Within Forestry NSW land existing tracks and laydown areas will be used where practical. Construction within Forestry NSW land will be subject to traffic management controls. The four pumping station facilities have been specifically located to minimise impacts on adjacent or nearby residential properties.
Pipeline Development Consultation	A consultation program has been ongoing throughout the planning stages of the pipeline development. This has included meetings with directly affected landowners and government representatives. Consultation is planned to continue during the project approvals process and during construction. This will keep the public and landowners informed of the project as it develops and to provide an avenue for complaints or issues to be raised.

Tools	Description
Landholder Communication Plan	A Landholder Communication Plan will be developed for each property directly impacted by the pipeline development. This will ensure adequate notification of the construction phase is provided to all directly affected landowner. The Landholder Communication Plan will ensure landowners are provided with adequate time to move stock and to crop paddocks (where necessary) prior to the commencement of the pipeline development. Landholder Communication Plans will be developed with each directly affected landholder, in parallel with the project approvals process.
Property Management Plans (PMPs) and Rehabilitation Management Plan (RMPs)	Tailored PMPs and a RMP will be prepared for each property directly impacted by the project. The content of the PMP and RMP will be agreed with each landowner prior to commencement of the pipeline development and in parallel with the project approvals process.
Local Content Plan (LCP)	Regis will prepare a LCP for the construction and operations phases of the project. The LCP will include an assessment of local contractor capabilities and a detailed analysis of existing local enterprise and the skills / education base of local residents. Wherever possible, project supply and workforce requirements will be matched with existing capabilities in the local community.
Pipeline Decommissioning Management Plan	The Pipeline Decommissioning Management Plan will be prepared to provide a framework for Regis to: • Undertake the decommissioning and/or abandonment of the pipeline corridor assets in a manner that meets stakeholder expectations; • Leave a landform which is safe, stable and non-polluting and compatible with the intended post-closure land use and enable effective transfer to third parties; and • Provide for the retention and beneficial reuse of infrastructure constructed by Regis to third parties, where there is an appropriate agreement in place and regulatory authorities are satisfied.
Complaints and Grievances Procedure	A formal complaints and grievances procedure will be developed for the construction phase of the pipeline development. This procedure will be aligned with that prepared for the mine development.
Construction Workforce Accommodation Strategy (CWAS)	A detailed CWAS will be developed following project determination. The strategy will be prepared in consultation with BSC, Orange360, key accommodation providers and where necessary proponents of existing or new major projects in the Local Area. The strategy will: • Demonstrate how the construction phase workforce will be accommodated across the Local Area; • Demonstrate how workforce accommodation requirements will be managed during periods of high demand e.g. during key regional events such as Bathurst 1000; • Document the approach to informing accommodation providers of predicted project workforce accommodation demands including anticipated timing; • Enable the coordinated placement of the workforce in tourism accommodation throughout the Local Area; and • Keep key stakeholders informed of predicted project accommodation demands across the construction phase.

6.4 PIPELINE DEVELOPMENT SIGNIFICANCE ASSESSMENT

Table 23 presents an evaluation of the significance of the social impacts and benefits identified in the EIS SIA and in Section 6.2 of this report. The assessment of impact significance is based on the methodology described in Section 5.2. Relative to the EIS SIA for the pipeline development, no new social impacts / opportunities were identified and no material changes to forecast impacts were identified.

Table 23
Evaluation of Potential Social Impacts - Pipeline Development

SIA Section Ref	Social Impact	Affected Stakeholder	Duration	Stakeholder Concern	Summary of Management Measures	Mitigated Risk	Significance	Change from EIS SIA
6.2.3	Impacts to Aboriginal cultural and social values	Wiradjuri people and RAPs	LOP	Moderate	• ACHMP • Ongoing engagement with RAPs in relation to ACHMP	C2	M	No change
6.1.2	Increase in demand for short-term accommodation reduces access for the non-mining sector	Other visitors to the CW Region (business and tourist)	CP (PY 1)	Low	• Where possible avoid construction activities during key regional events e.g. Bathurst 1000 and ensure workers do not remain in regional short-term accommodation during this period • Regis to encourage NLH workforce for pipeline development to reside in Bathurst and Lithgow LGAs	C1	L	No Change
6.2.1	Temporary access delays across local roads during pipeline construction	Road users	Short-term. Temporary during CP	Low	• TMP	C1	L	No Change
6.2.1	Amenity impacts associated with noise and dust generated during construction	Nearby residents	Short-term. Temporary during CP	Low	• Complaints and Grievances Procedure	C1	L	No Change

SIA Section Ref	Social Impact	Affected Stakeholder	Duration	Stakeholder Concern	Summary of Management Measures	Mitigated Risk	Significance	Change from EIS SIA
6.1.2	Landowner expectations in relation to access to pipeline water are not realised	Pipeline landowners	LOP	Low	• Maintain open communication regarding the future use and ownership of the pipeline • Prior to the cessation of the mine development and associated need for the pipeline, develop a future use strategy for the pipeline infrastructure	D2	L	No Change
6.2	Impact to agricultural operations	Pipeline landowners	CP (PY 1)	Medium	• Individual Property Management Plan • Landholder Communication Plan • Easement compensation • Inclusion of site wash-down procedures in the PMPs	D2	L	No Change
6.2	Interruptions to daily property activities	Pipeline landowners	LOP	Low	• Individual Property Management Plan • Landholder Communication Plan. • Easement compensation	D2	L	No Change
6.2	Pipeline rehabilitation activities lead to land degradation over time with impacts to agricultural operations	Pipeline landowners	LOP	Medium	• Individual Property Management Plan • Rehabilitation Management Plan • Easement compensation • Inclusion of site wash-down procedures in the PMPs	D1	L	No Change

SIA Section Ref	Social Impact	Affected Stakeholder	Duration	Stakeholder Concern	Summary of Management Measures	Mitigated Risk	Significance	Change from EIS SIA
6.1.2	Potential for biosecurity risks with impacts to existing agricultural operations	Pipeline landowners	Long-term if not managed correctly	Medium	• Individual Property Management Plan • Rehabilitation Management Plan • Compliance with Forestry Corporation NSW biosecurity controls • Inclusion of site wash-down procedures in the PMPs	D2	L	No Change
6.1.2	Impacts to public health and safety	Pipeline landowners and near neighbours	LOP	Low	• Adherence to Regis and the contractor's Health and Safety Management System • Health and Safety Plans • Emergency Planning Procedures for construction • TMP(s)	D2	L	No Change
6.1.2	Cumulative impact of additional easements on private property	Pipeline landowners	LOP	Medium	• Individual PMP • Where possible align pipeline corridor within established property boundaries and roads	D2	L	No Change

Notes:
LOP – Life of Pipeline
CP – Construction Phase
OP – Operations Phase

Table 24
Evaluation of Potential Social Benefits - Pipeline Development

SIA Section Ref	Social Opportunity	Affected Stakeholders	Temporal	Enhancement Measures	With Enhancement	Significance	Change from EIS SIA
6.2.3	Economic benefit to the Local Area (including Lithgow) through increased employment and procurement opportunities	Host LGAs for the pipeline	CP.	• Local Employment Policy • Local Content Plan	B2	H	No Change
6.1.2	Potential retention and beneficial reuse options for the pipeline infrastructure	Pipeline landowners and host LGA for the pipeline	Dependent on land access agreements with private landowners and the operational life of the pipeline	• Preparation of pipeline decommissioning plan • Engagement with key stakeholders to determine future ownership and use options for the pipeline infrastructure	D3	M	No Change

Notes:
LOP – Life of Pipeline
CP – Construction Phase
OP – Operations Phase

7 CONCLUSION

LFB Resources NL, a 100% wholly owned subsidiary of Regis, is seeking SSD consent for the construction and operation of the project, a greenfield open cut gold mine (mine development) and associated water supply pipeline (pipeline development) in the CW Region of NSW. The project will have a peak construction workforce of 710 full-time equivalent (FTE) workers, inclusive of 120 FTE workers associated with the pipeline development. The project will have an average annual operations workforce of 260 FTE workers.

An SIA (the EIS SIA) was undertaken in 2019 for the project. In response to issues raised in submissions received in response to the EIS, as well as a result of further detailed mine planning and design, Regis has made a number of refinements to the project. Accordingly, an Amendment Report has been prepared by EMM Consulting Pty Ltd (EMM 2020a) to outline the changes to the project that have been made since the public exhibition of the EIS and to assess the potential impacts of the amended project, compared to those that were presented in the EIS. The SIA Amendment Report (this report) forms part of the Amendment Report and presents an assessment of the social impacts of the amended project.

The SIA of the amended project was undertaken to identify any potential changes to social impacts and opportunities from those presented in the EIS SIA. The key project changes associated with the amended project that have implications for social impacts relate primarily to the mine development component and include:

- Realignment of the site access road;
- Revisions of the mine and WRE schedule;
- Optimization of the pit design allowing for a reduction in the pit amenity bund;
- Changes in the project disturbance footprint; and
- Extension of mining activity into PY 11 (however no change in the mine life of 15 years).

The mine project area is located in a rural setting, immediately north of the small settlement of Kings Plains in the Blayney LGA. The nearest major town to the mine project area is Blayney, located 8 km to the west of the mine project area. The mine project area is located less than a one-hour commute from the regional centres of Orange and Bathurst.

The PAA is primarily a rural area with strong rural character and residents who highly value their rural way of life. The estimated population of the PAA is 230 people[3]. The small settlement of Kings Plains is separated from the mine project area by the Mid Western Highway which connects Bathurst and Blayney. The Kings Plains settlement has an ERP of approximately 45 people and 19 residences[4].

The Blayney LGA has a long history of gold mining dating back to the 1800s. Gold fields were gazetted to the east of the mine project area, Kings Plains Goldfields, in the late 1850s. There is one gold mine- CVO, operating in the Blayney LGA. This is a significantly large gold mining operation and employs a sizeable workforce that is sourced primarily from the LGAs of Orange, Cabonne and Blayney. In 2017 the mining industry contributed 43% of the $1.652 B of output generated by the Blayney LGA economy (REMPLAN, 2019).

The EIS SIA predicted a number of potential social impacts and opportunities associated with the project for the PAA and the SAA. EIS SIA assessment shows that the majority of impacts and the most significant social impacts accrue to residents in closest proximity to the mine project area i.e. residents of the PAA. The potential significant opportunities of the project accrue largely to the broader Blayney LGA. The assessment of the amended project shows that the amended project will result in small and relatively minor changes to the mitigated risk and significance of some social impacts identified in the EIS SIA. The amended project is not predicted to change the potential social opportunities predicted for the original project and described in the EIS SIA. Importantly the amended project will not give rise to any new social impacts beyond those assessed in the EIS SIA.

The most significant change in social impacts between the EIS and the amended project relate to noise and the effect on rural amenity of the PAA. Project amendments have been made specifically to reduce predicted noise levels at private landholders in the vicinity of the mine development project area. These amendments have achieved significant improvements in predicted noise levels, as described in detail in Section 6.5 of the Amendment Report (EMM, 2020a).

[3] ABS (2017) - 2016 ABS Meshblock counts (10056010000, 10149310000, 10149300000, 10115610000, 10116070000, 10116130000) have been used to calculate the estimated population of the PAA. The combined area of these Meshblocks is larger than the PAA and includes a total of 109 dwellings and 285 people. This indicates an average occupancy rate of 2.6 persons per dwelling. There are 88 dwellings (exclusive of Regis owned residences) in the PAA. Applying the rate of 2.6 persons per dwelling the population of the PAA is estimated at approximately 230 people.

[4] ABS Census Data is not available for small areas such as Kings Plains. The population estimate provided is based on a combination of house counts from aerial photography interpretation and consultation conducted to date with residents.

With respect to noise, the outcomes of the amended mine development for residential amenity (as described in the Amended NVIA (MD) are significantly better than the predicted outcomes documented in the EIS (EMM, 2019a). These improved outcomes are a direct result of the revised mine development schedule and WRE construction schedule proposed as part of the amended mine development. These revisions achieved a reduction in predicted noise levels at nearby residences but have extended the construction timeframe for the southern amenity bund and subsequently the duration that some near neighbours are exposed to high visual impacts and diffuse lighting impacts.

Impacts to residential amenity, sense of place and a perceived reduction in the value of private property remain significant potential social impacts of the amended mine development with high mitigated social risk ratings. This is consistent with the findings of the EIS SIA and is primarily attributable to cumulative biophysical changes (air, noise, visual and lighting) that together have the potential to adversely impact the residential amenity of residents in the PAA.

Regis is committed to implementing negotiated agreements with identified landholders in Kings Plains. This includes 13 of the 14 landholders identified in the EIS with predicted noise levels exceeding the project specific noise criteria, such that they would have been entitled to the implementation of voluntary mitigation measures upon request if the EIS project design was adopted (noting that the EIS listed 15 'noise-sensitive receivers'; however two of these (R23 and R24) are owned by the same landowner). The one receptor where an agreement isn't being progressed is a property in Kings Plains that has now been purchased by Regis (R27).

Two more negotiated agreements are also being progressed with landholders identified since submission of the EIS; a landholder in Kings Plains where the property owner has development consent to build a residence (R28a) and is predicted to experience noise levels up to 3dB above the relevant noise criteria for a brief period in PY 1; and a property in proximity to the mine site access intersection (R15).

Notably, these negotiated agreements will also include a clause that states landowners may request, in writing, that Regis acquires their interest in their land at any time within five years from the date that development consent is granted (provided that it remains in force).

Five additional landholders (R14, R16, R18, R20 and R36) (Amendment Report Figure 6.21) are also being offered negotiated agreements in Kings Plains in consideration of visual impacts (which will exclude the option to purchase).

This takes the number of negotiated agreements being progressed to 20.

The outcomes of the EIS SIA and the SIA for the amended project confirm that social impacts to the broader Blayney LGA are confined mainly to the construction phase of the project and relate primarily to a temporary increase in short-term accommodation demand. The Blayney

LGA and the LGAs of the RAA will experience a number of economic and social benefits from the project. These benefits were described in the EIS SIA and remain unchanged for the amended project.

The findings of the Addendum EcIA show the net social benefit of the amended project to NSW is estimated at $139M present value (at 7% discount rate) ($231M with employment benefits included) compared to $141M for the EIS project ($232M with employment benefits included). The net social benefit of the amended project to NSW is not materially different to the EIS project.

Blayney LGA will directly benefit from the project through:

- Direct and indirect employment generation;
- Investment in community infrastructure and services, made possible through the project VPA;
- Investment in education and training as Regis seeks to build a local skill base to support labour supply for the project;
- Project procurement spend. Regis is committed to securing local content on the project and supporting local businesses to participate in the project procurement process; and
- Direct and indirect population growth. The project will attract new residents to the Blayney LGA, of which the majority are anticipated to reside in Blayney.

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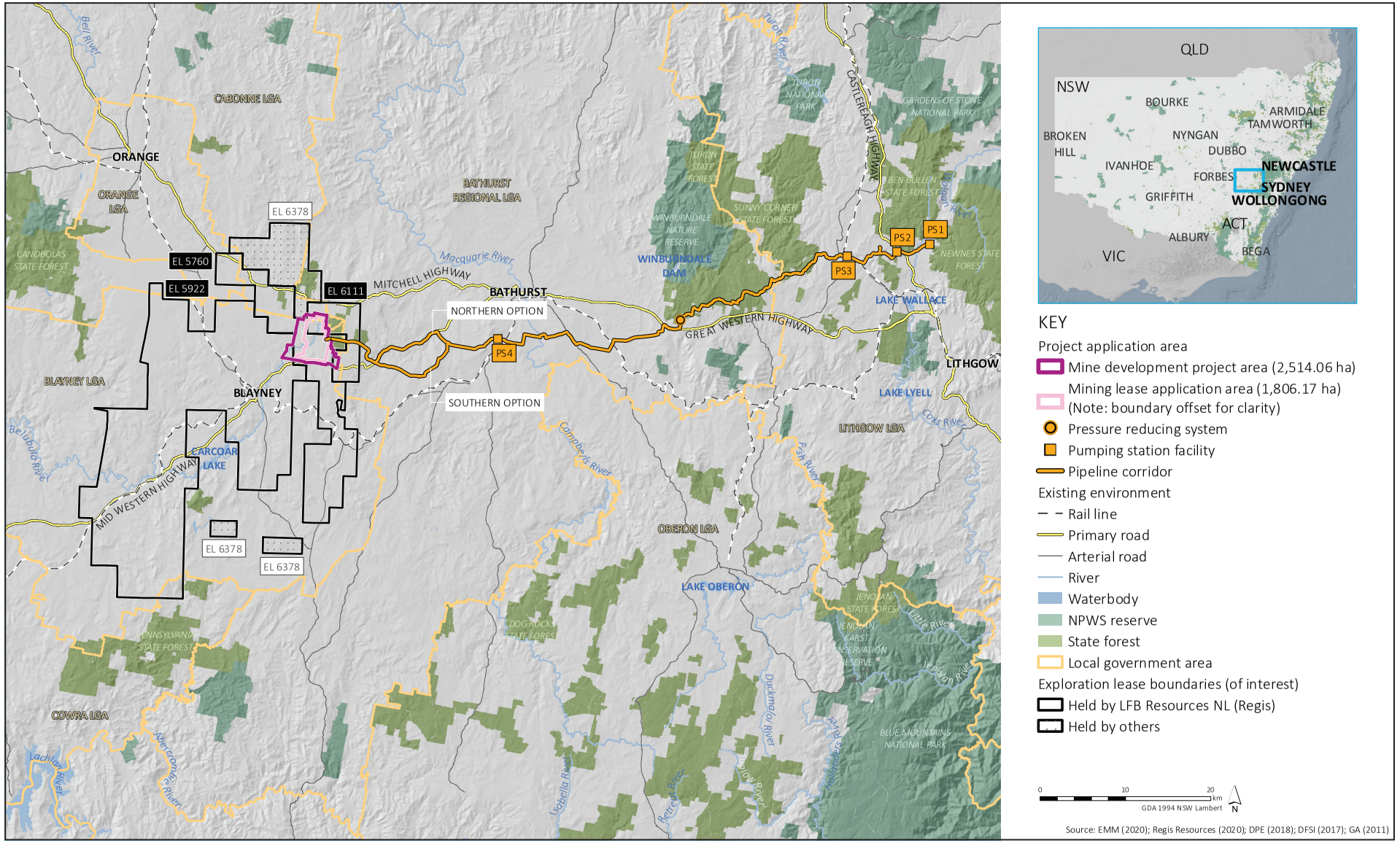
* * *

for
HANSEN BAILEY

Bronwyn Pressland
Principal Social Planner

Peter Hansen
Director

FIGURES



McPHILLAMYS GOLD PROJECT

REGIS RESOURCES LTD

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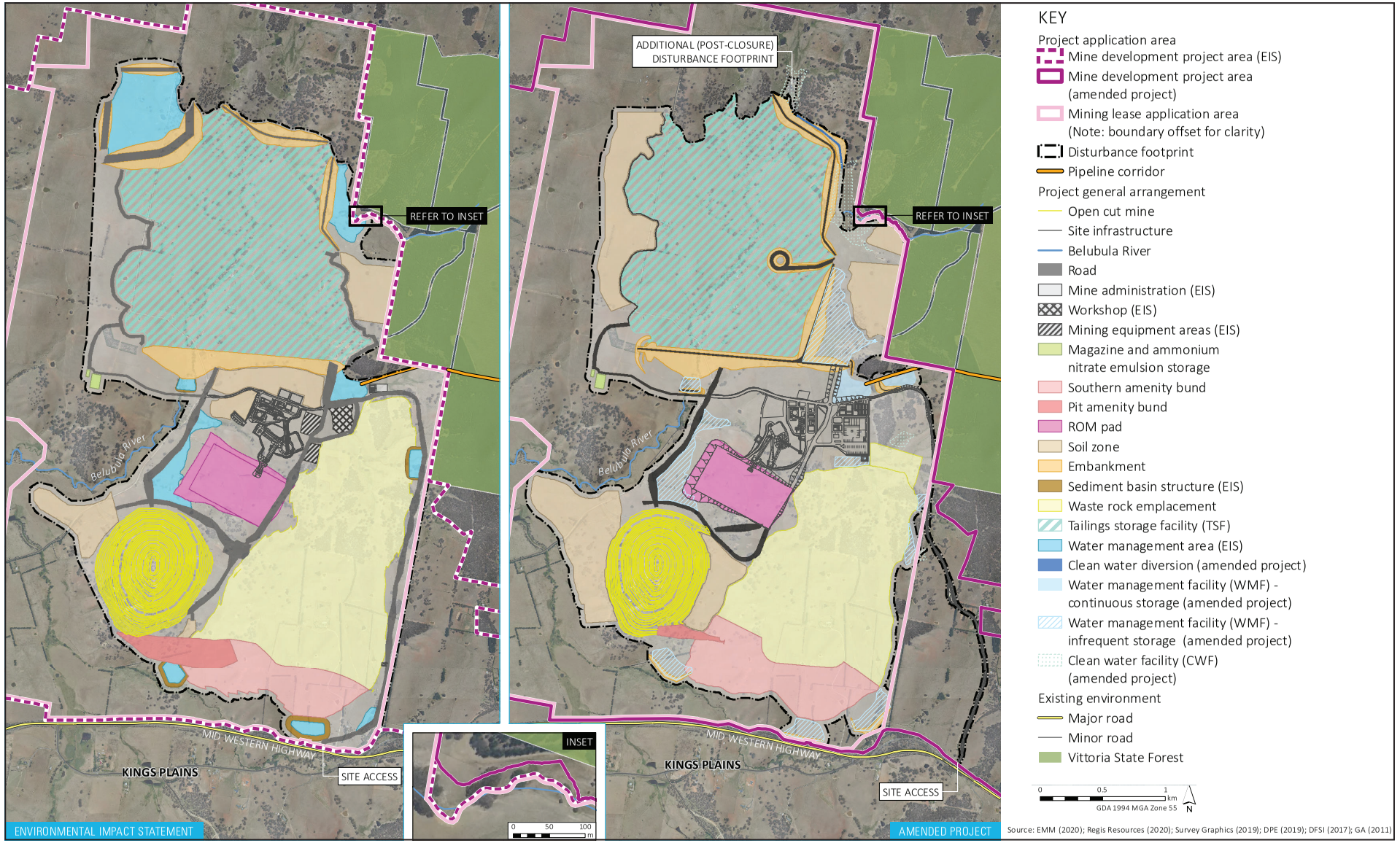
ENVIRONMENTAL CONSULTANTS

Regional Setting - Project Application Area - Amended Project

FIGURE 1



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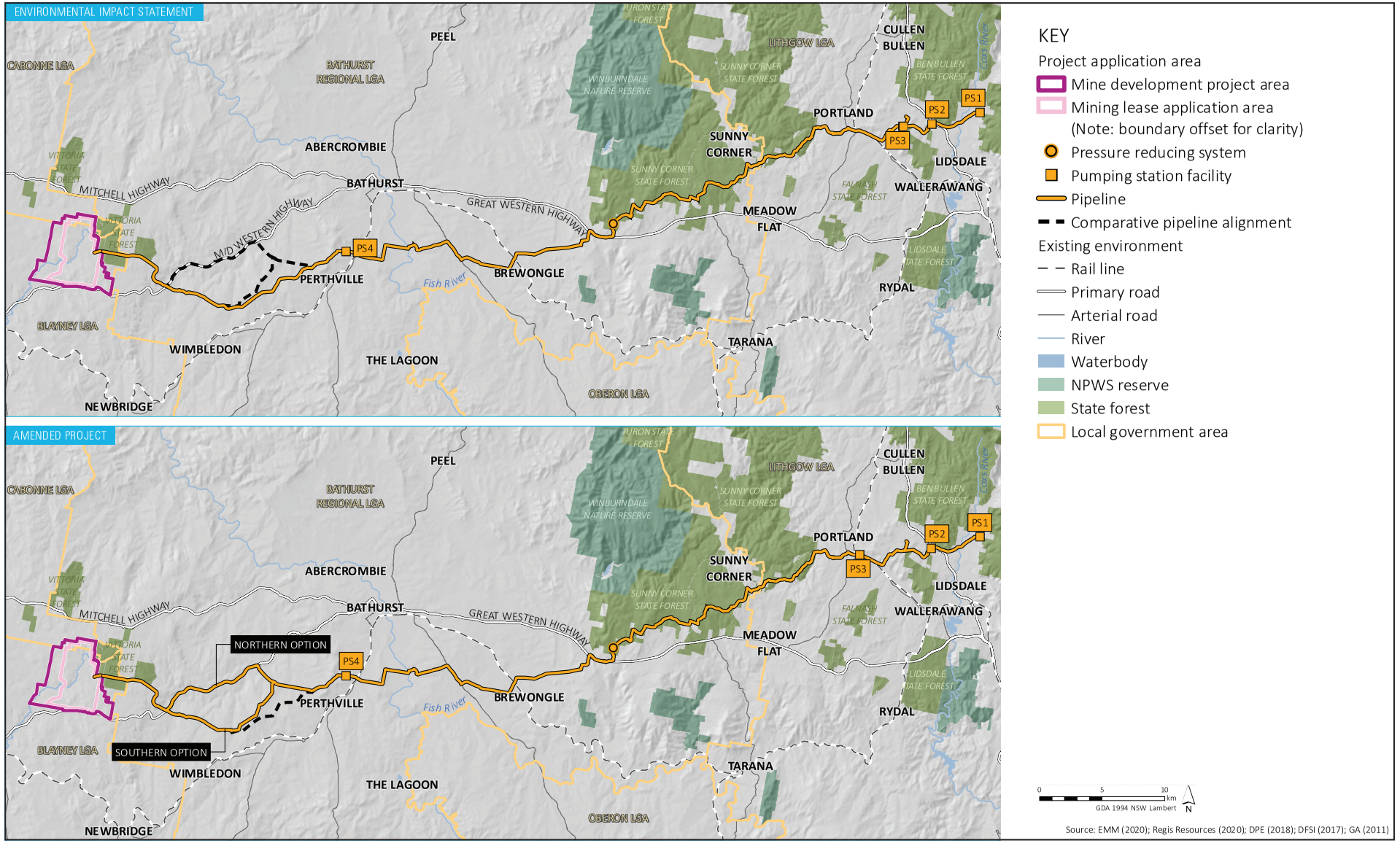
Amended Mine Development Layout

FIGURE 2



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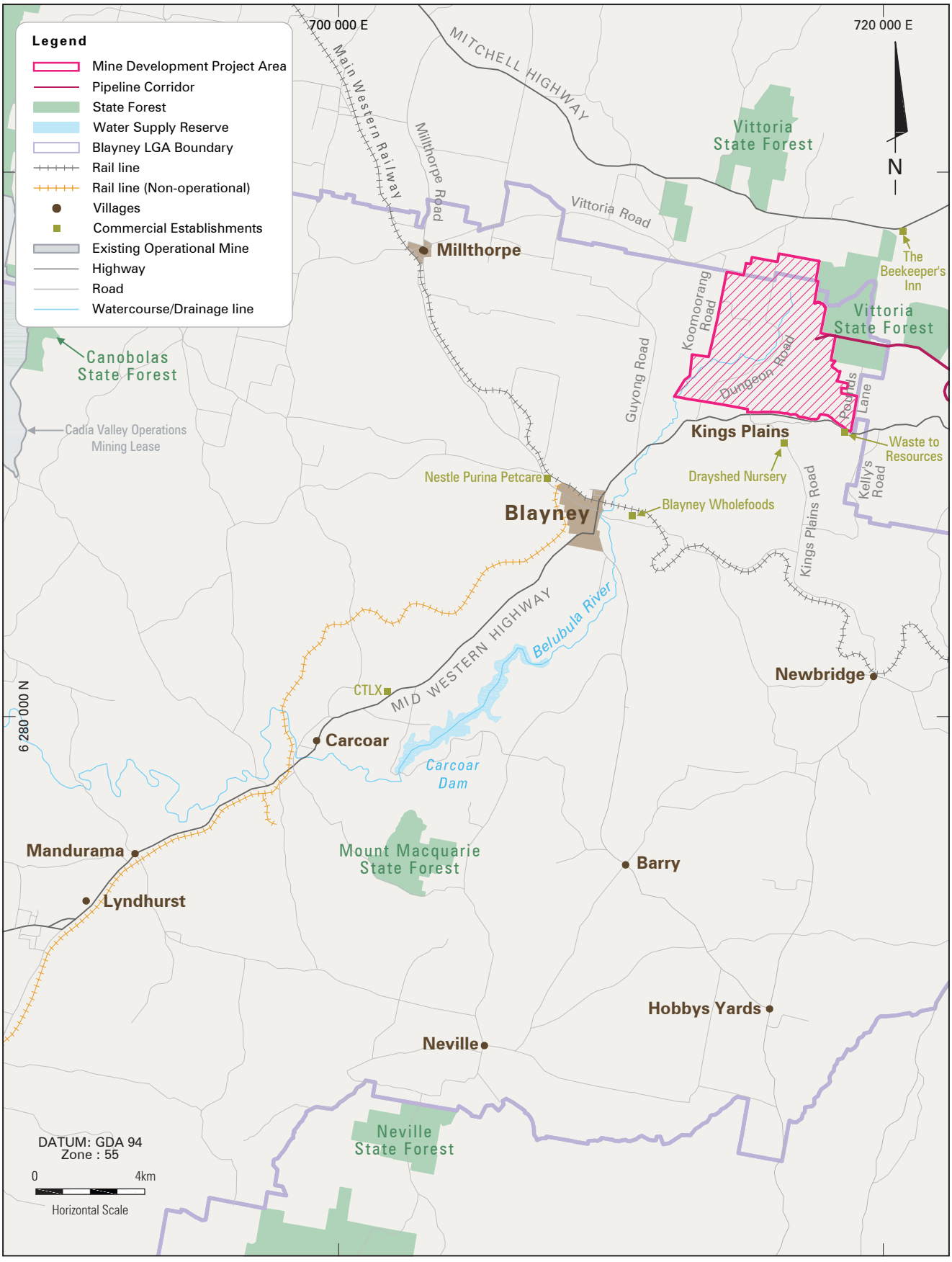
Pipeline Development Overview - Amended Project

FIGURE 3



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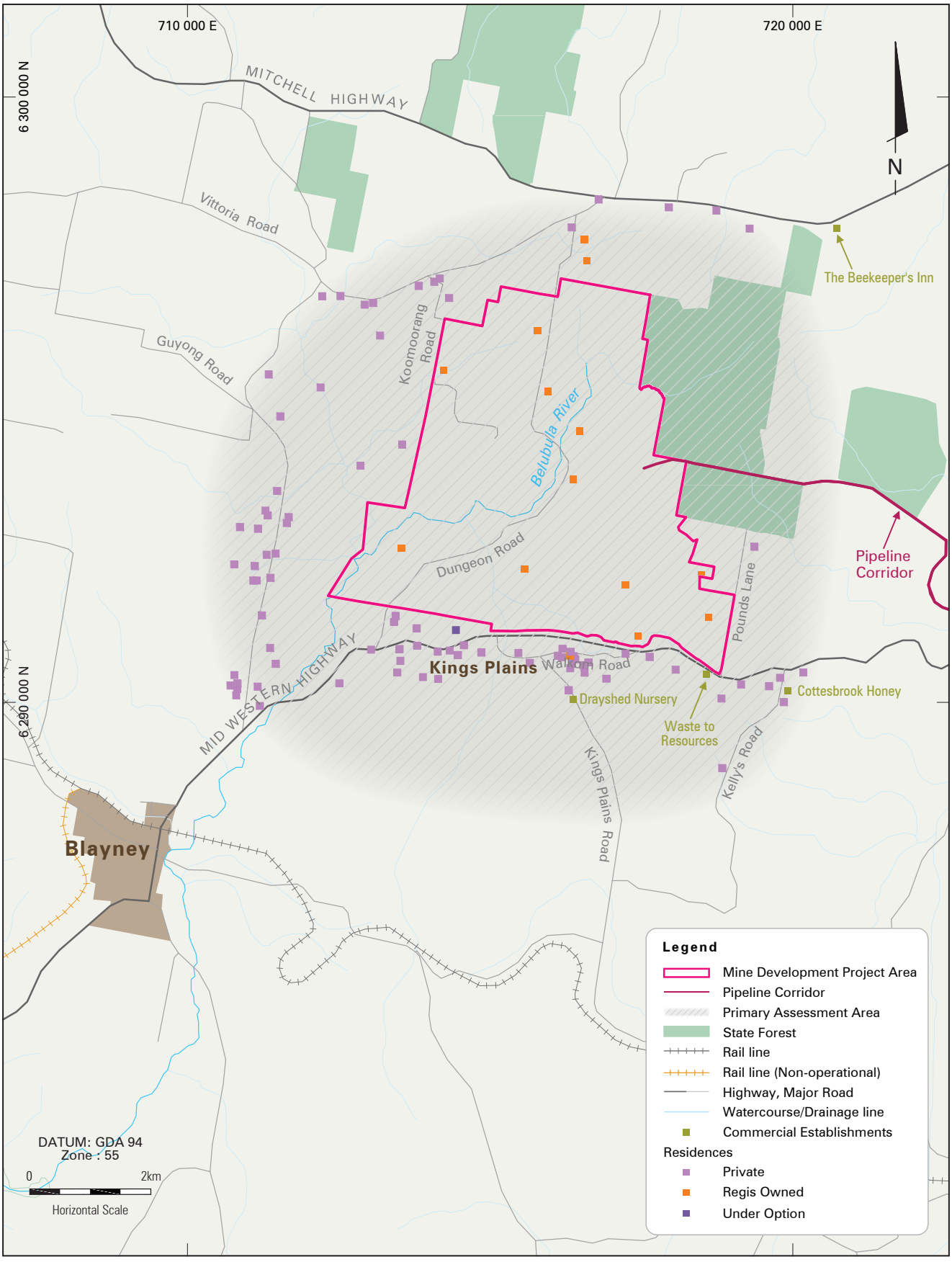
Local Context Mine Development

FIGURE 4



McPHILLAMYS GOLD PROJECT

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SIA Primary Assessment Area

FIGURE 5

APPENDIX A

Curriculum Vitae

Bronwyn Pressland

Principal Social Planner

CURRICULUM VITAE

Areas of Expertise

- Social Impact Assessment and Management;
- Quantitative and Qualitative Social Research;
- Social Risk Identification and Assessment;
- Indigenous Participation Planning;
- Local Content Planning and Management;
- Workforce Housing and Accommodation Management;
- Workforce Recruitment and Training Planning;
- Stakeholder Consultation;
- Social Performance Monitoring and Evaluation;
- World Bank and IFC Standards; and
- Environmental Impact Assessment and Approvals.

Qualifications

- Masters of Environmental Management, Griffith University 1999.
- BBE Urban and Regional Planning, Queensland University of Technology, 1992.

Career Highlights

Bronwyn is a Principal Social Planner with international experience specialising in social impact assessment, community development and community engagement. She has over 20 years of practical experience in social impact assessment with extensive experience in mining and resource development (coal, manganese, bauxite, copper and gold. Bronwyn has experience in the Philippines in social and health impact assessment, resettlement, Free and Prior Informed Consent (FPIC) in line with World Bank and International Finance Corporation Standards (IFC). Bronwyn also has experience in engagement with Traditional Owners and the assessment of significant social impacts on Indigenous communities.

Key project experience includes:

- *Social Impact Assessment – identification, analysis and management of social impacts associated with major developments including copper-gold mining in the Philippines, bauxite mining in Cape York, manganese mining within an Indigenous Protected Area (IPA) of Northern Australia, coal mining throughout Queensland (Qld) and New South Wales (NSW), gold mining activities in NSW, and port and shipping activities within Qld.*
- *Social Impact Management Plans – development of social impact management and monitoring plans for the resources sector across Australia.*
- *Workforce housing and accommodation management – development of tailored strategies for housing and accommodation of significant sized workforces, including the use of Temporary Worker Accommodation Facilities and in-town accommodation.*
- *Community Consultation – design and implementation of community consultation programs incorporating a range of consultation mechanisms for impact assessment, issue management, master planning and policy development.*
- *Local Content Planning and Management – analysis of local industry capability, preparation of local capability plans and advice on local content plans.*
- *Environmental Impact Assessment – extensive experience in the preparation and delivery of environmental impact statements for a range of complex multidiscipline projects.*

Employment History:

HANSEN BAILEY, Brisbane (2007 – present)

Principal Social Planner and Communications Consultant

PLACE Design Group, Brisbane (Feb 2007 – 2007)

Contracting Senior Environmental and Social Planner

JACOBS UK, Leeds (2005 – 2006)

Senior Environmental and Social Planner

Earth Tech Australia, Brisbane (2002 – 2004)

Senior Environmental and Social Planner

URS AUSTRALIA, Brisbane (1998 – 2002)

Senior Environmental and Social Planner

ERM Mitchell McCotter, Brisbane/Sydney (1996 – 1998)

Environmental Planner

Project Experience

Social Impact Assessment (SIA), Community Consultation and Environmental Impact Assessment

- Provision of strategic stakeholder engagement advice to Idemitsu for a range of projects in Australia.
- Various projects for Centennial Coal (Central West NSW and Newcastle) (confidential) – Preparation of social impact assessment reports in compliance with the NSW Social Impact Assessment Guideline
- Boggabri Coal Mine (BCM) (Boggabri, NSW) (Idemitsu) (under preparation) **Social Impact Management Plan (SIMP)** – Preparation of a SIMP for the existing operations at BCM.
- Aurukun Bauxite Project (Aurukun, QLD) (Glencore) (under preparation) – **SIA**. Preparation of an SIA for a substantial greenfield bauxite mining operation nearby the town of Aurukun. Project involves bauxite mining and processing, barging and transhipment activities. Design of a community engagement program for Indigenous and non-Indigenous stakeholder engagement. The SIA will require assessment of the potential social and economic impacts of the project on the relevant Traditional Owners.
- McPhillamys Gold Project (Blayney, NSW) (Regis Resources) (under preparation) – **SIA**. Preparation of an SIA for a greenfield gold mine located outside the town of Blayney in NSW. The SIA is being prepared in accordance with the NSW SIA Guidelines (2017) and supports a development application to the NSW Department of Planning and Environment for a state significant development (SSD).

- McPhillamys Gold Project (Blayney, NSW) (Regis Resources) – **SIA Scoping Study**. Preparation of an SIA Scoping Study for a greenfield gold mine outside the town of Blayney in NSW. The SIA Scoping Study was prepared in accordance with the new NSW SIA Guidelines (2017) and supported an application to the NSW Department of Planning and Environment for Secretary's Environmental Assessment Requirements (SEARs).
- Tcharawopin Project (Aurukun, Qld) (Glencore) – **SIA and stakeholder engagement**. Preparation of an SIA for a greenfield bauxite mining operation nearby the town of Aurukun within the Aurukun Shire. Project includes bauxite mining, and barging activity in local river systems and coastal zone. Design of a community engagement program for Indigenous and non-Indigenous stakeholder engagement. The SIA will require assessment of the potential social and economic impacts of the project on the relevant Traditional Owners
- Bylong Coal Project (Hunter Valley) (KEPCO) – **Draft Social Impact Management Plan (SIMP).** Preparation of a draft SIMP for the Bylong Coal Project, an underground and open cut mining project located nearby the small rural village of Bylong.
- Bylong Coal Project (Hunter Valley) (KEPCO) – **SIA and stakeholder engagement.** Preparation of a SIA for an underground and open cut mining project located nearby the small rural village of Bylong. The project involved extensive work around workforce accommodation and housing, including a detailed survey of housing and accommodation provision across the region. The SIA involved significant targeted consultation through focus groups with residents of the Bylong Valley, preparation of social impact management actions to address issues such as population decline, workforce housing and accommodation, rural land management. The Response to Submissions (RTS) process has also involved further baseline social surveys (tourism accommodation survey) and additional analysis of the local housing market.
- Groote Eylandt Mining Project (GEMCO) Eastern Leases Project (Groote Eylandt, NT) South 32 – **Assessment of the potential social and economic impacts of the project on the Traditional Owners of the Groote Eylandt Archipelago**. The SIA required consideration of a diverse range of issues including Indigenous use of the project land, spiritual associations with the land and water, long-term maintenance of Indigenous culture, employment and training, distribution of royalties, Commonwealth and Territory Indigenous legislation and regulations.

- Groote Eylandt Mining Project (GEMCO) Eastern Leases Project (Groote Eylandt, NT) South 32 – **Design and implementation of Indigenous consultation strategy** for the project approvals phase of the Eastern Leases Project. The consultation strategy included a significant field based component where Bronwyn conducted land use mapping with Traditional Owners. Consultation included a number of small focus groups with Indigenous women's groups and Indigenous Elders, participation in community events, meetings with education providers, health representatives, child services, emergency services etc. Bronwyn conducted significant consultation with the Indigenous Employees of South 32 on Groote Eylandt including engagement around rehabilitation practices, employment and training.
- Tampakan Copper-Gold Mine Project (Philippines) (Xstrata) – **Management of the Social Impact Assessment and Environmental Health Impact Assessment studies**. Bronwyn was responsible for managing and working closely with the locally appointed consultants for the conduct of the SIA, in particular the field surveys. Bronwyn contributed to the identification and analysis of social impacts, the drafting of the SIA report and was responsible for ensuring compliance with World Bank and IFC Standards.
- Tampakan Copper-Gold Mine Project (Philippines) (Xstrata) – **Assistance with design and implementation of the community consultation process for project approvals.** Bronwyn was involved in the design of consultation materials, key messages, issues questions and concerns. Preparation of Stakeholder Engagement Plan for the environmental approvals process. Assistance in analysis and response to the findings of significant community consultation such as public hearings. Preparation of the issue response management plan following the completion of the initial phases of stakeholder consultation
- Tampakan Copper-Gold Project (Philippines) (Xstrata) – **Preparation of Briefing Note on obtaining Free and Prior Informed Consent (FPIC) from Indigenous people**. Bronwyn assisted with the preparation of a FPIC briefing note for the project including analysis of World Bank and IFC standards. Bronwyn then assisted with the implementation of key actions around securing FPIC for the project
- Project China Stone (Galilee Basin) (MacMines) **SIA** – **Preparation of a SIA and design and implementation of a community engagement process for the development of a significant open cut and underground mining operation in the remote Galilee Basin**. The SIA involved an extensive community engagement process, labour force supply analysis, local content capability assessment and preparation of a social impact assessment management plan.
- Anglo American (Moranbah, QLD) – **Provision of strategic advice and assistance with the management of social impacts associated with mining operations in the Moranbah region**. This included the provision of assistance with the undertaking of a corporate review of operations using the Anglo American Socio-Economic Assessment Tool (SEAT), conduct of focus groups with residents of Moranbah, documentation of outcomes in the Annual Moranbah SEAT Report.

- Boggabri Coal Project (Boggabri, NSW) – Preparation of SIA for a new open cut mine at Boggabri, NSW.
- Grosvenor Project (Moranbah, Qld) – Stakeholder Consultation Coordinator and SIA Manager. **Design and implementation of a stakeholder consultation program for the preparation of an EIS for the Grosvenor underground mine.** Preparation of the SIA component of the EIS and SIMP. Assistance with the development of workforce accommodation strategy and the development of measures to manage associated potential social impacts.
- Minyango Project (Blackwater, Qld) – **Stakeholder Consultation Coordinator and SIA Manager.** Design and implementation of a stakeholder consultation program for the preparation of an EIS for the Minyango underground mine. Preparation of the SIA component of the EIS, including the design of the SIA methodology, conduct of focus group discussions with all sectors of the community and preparation of a SIMP.
- Foxleigh Project (Middlemount, Qld) – **Stakeholder Consultation Coordinator and SIA Manager**. Design and implementation of a stakeholder consultation program for the preparation of an EIS for the Minyango underground mine. Preparation of the SIA component of the EIS and SIMP.
- Belvedere Project (Moura, Qld) – **Stakeholder Consultation Coordinator and SIA Manager.** Design and implementation of a stakeholder consultation program for the preparation of an EIS for the Belvedere underground coal mine. Preparation of the SIA component of the EIS.
- Innes Park South Quarry Project (Bundaberg, QLD) – **Project Manager for the preparation of a Material Change of Use Application for the establishment of a new basalt quarry on rural land in Innes Park**. Completion of town planning report and design and implementation of a targeted community consultation process.
- Eagle Downs Project (Moranbah, Qld) – **Stakeholder Consultation Coordinator and SIA Manager.** Design and implementation of a stakeholder consultation program for the preparation of an EIS for the Peak Downs East underground mine. Preparation of the SIA component of the EIS.
- Mount Arthur North Coal Project (Hunter Valley, NSW) – Environmental Planner assisting with the compilation and final production of the EIS document.
- Darling Anabranch Pipeline and Environmental Flows EIS (Murray Darling Basin Commission) – Project Coordinator for planning and environmental approvals/specialist consultation advisor and social impact assessor.
- QNI Yabulu Nickel Refinery Extension Project EIS (QNI Pty Ltd), (Townsville, Qld) – Consultation/Social/Planning Manager for the preparation of an EIS for the refinery extension.
- Dalrymple Bay Coal Terminal Stages 6 & 7 Expansion EIS, (Ports Corporation of Queensland) – **Assistant Project Manager/Land Use Planner/Social Impact Assessor/Consultation Manager.** These roles

involved management of multiple stakeholders as well as leading and developing a multidisciplinary design and implementation team.

- Bribie Island Road Upgrade (Main Roads) (Bribie Island, Qld) – Design and implementation of a community consultation program for the identification of a preferred option for road upgrade.
- Lincoln Southern Bypass (Lincolnshire County Council) – Design and implementation of a community consultation program for the conceptual and detailed design of a Southern Bypass road.
- Alcan Gove Alumina Refinery Expansion Project (Gove, NT) – Design of indigenous and non-indigenous stakeholder consultation program for the EIS. Development of the SIA methodology for the preparation of the EIS.
- Naturelink Cableway EIS – Project Manager/Land Use Impact Assessor/Consultation advisor and Social Impact Assessor.
- Interconnection to the National Grid EIS (Powerlink) – Coordination of land-use and Social Impact Assessment.
- Banyo Defence Land Disposal Study and Masterplan (Department of Defence) – Project Manager for the preparation of a land use concept plan, site constraints and analysis investigation.

Social Planning Studies

- Social Sustainability Assessment of Northern England Coalfield Communities (Northern England Economic Development Board) – Project involved a detailed sustainability assessment of 20 coalfield communities, prioritisation of communities for social infrastructure investment and development of investment programs for high priority communities.
- Preparation of Community Housing and Environmental Health Plans (CHEHP) NSW DAA/DPWS – Social Planner/Community Adviser
- Toomelah/Boggabilla Community Housing and Environmental Health Plan (CHEHP).
- Lightning Ridge/Collarenebri Housing and Environmental Health Plan.
- Gulargambone/Coonamble Aboriginal Community Development Program Early Works Implementation National Aboriginal Health Strategy.

These projects role involved assessment of community environmental health encompassing housing provision and condition as well as access to services and facilities. The role encompassed extensive consultation and negotiations with the Indigenous Community including the management of an Ingenious Working Party. Recommendations were made for the provision of additional facilities and services. Funding mechanisms were identified for the provision of additional housing and services and facilities. Implementation plan for community servicing developed.

Strategic Environmental and Planning Studies

- Regional Monitoring Report (Yorkshire and Humber Assembly UK) – Development of a new monitoring framework for monitoring the

environmental economic, built and social development aspects of the Regional Spatial Strategy.

- Yorkshire and Humber Regional Spatial Strategy (Yorkshire and Humber Assembly) – Drafting of 'outcome statements' and background reports for the preparation of the regional planning framework.

Countries Worked In

- Australia (QLD, NSW, NT, VIC), UK, Philippines.
- UK residency visa.

APPENDIX B

Significance Assessment Outcomes

Appendix B
Significance Assessment Outcomes - Amended Project

Table B-1
PAA Amended Mine Development Significance Assessment – Social Impacts

SIA Ref	Social Impact	Stakeholder	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance Ranking	Mitigated Risk	Significance Ranking
6.3.5	Resident health and wellbeing is affected by sleep disturbance resulting from the noise and vibration impacts of the mine development	Residents of the Kings Plains Locality	Short-term. Initial 6 months of the project	Initial site establishment phase	H	E1	L	E1	L
6.3.5	Resident health is affected due to dust emissions from the mine project area	Residents of Kings Plains Locality and some near neighbours to the north and west of the mine project area	Long-term	Life of Mine	H	D2	L	D2	L
6.3.7	Impacts to service delivery for the Kings Plains Rural Fire Brigade (RFB) due to project induced potential population decline in Kings Plains community	Kings Plains Service RFB and Canobolas District Rural Fire Zone	Long-term	Life of Mine	M	D1	L	D1	L

SIA Ref	Social Impact	Stakeholder	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance Ranking	Mitigated Risk	Significance Ranking
	and associated reduction in volunteer pool								
6.3.2	Blasting results in damage to private property damage	All residents of the PAA	Long-term	Life of Mine	H	D2	L	D2	L
6.3.1	Closure of Dungeon Road results in changes in property accessibility and increased travel times	All near neighbours	Long-term	Life of Mine	M	D2	L	D2	L
6.3.5	Resident health and wellbeing is affected by sleep disturbance resulting from the noise and vibration impacts of the mine development	Residents of the Kings Plains Locality	Long-term – beyond PY 3	Operations Phase	H	C2	M	D2	L
6.3.3	Mine development has an economic impact on existing commercial apiarian businesses	Existing apiarian businesses	Medium-term	Construction Phase and Operations Phase	H	D3	M	D2	M
6.3.3	Changes in groundwater accessibility impact agricultural livelihoods	Residents of the PAA	Medium-term	Construction Phase and Operations Phase	H	D2	M	D2	M
6.3.5	Resident health and wellbeing is affected by sleep disturbance	Residents of the Kings Plains Locality	Medium-term – During construction of the	Operations Phase	H	C3	H	D2	L

SIA Ref	Social Impact	Stakeholder	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance Ranking	Mitigated Risk	Significance Ranking
	resulting from the noise and vibration impacts of the mine development		southern amenity bund.						
6.3.3	Mine development reduces access to surface water or ground water resources at private properties	All residents of the PAA	Long-term	Life of Mine	H	D3	M	D3	M
6.3.3	Mine development impacts the provisioning ecosystem services accessed by residents	Residents of the Kings Plains Locality , some neighbours to north and west of the mine project area and commercial apiarists	Long-term	Life of Mine	H	B4	H	D3	H
6.3.2	Impact to sense of place due to adverse changes in valued attributes of the local area (i.e. the landscape and the natural environment, and community)	Residents of Kings Plains Locality. People with historical connection to the land and locality	Long-term. Impact most significant in the initial construction phase when landscape changes are most significant	Life of Mine	H	B3	H	B3	H
6.3.4	Fragmentation of Kings Plains community and	Residents of Kings Plains	Medium-term. Impact likely to be most significant	Construction Phase and initial years of	H	B3	H	B3	H

SIA Ref	Social Impact	Stakeholder	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance Ranking	Mitigated Risk	Significance Ranking
	potential changes to social cohesion		during PY 1-PY 3 when cumulative amenity impacts are predicted to be greatest	Operation Phase					
6.3.4	The mine development impacts the existing rural way of life	Residents of the Kings Plains Locality. Some residents of located to the north and west of the mine project area	Long-term	Life of Mine	H	B3	H	B3	H
6.3.5	Resident health and wellbeing is affected by the stress and anxiety associated with project uncertainty	Residents of Kings Plains Locality and some residents in the broader Primary Assessment Area (PAA)	Medium-term	Construction Phase and initial years of Operation Phase	H	C3	H	C3	H
6.3.2	Rural amenity of near neighbours is reduced due to the impact of cumulative biophysical changes i.e. noise levels and a reduction in visual quality	Residents of Kings Plains locality and some near neighbours to the west and north	Long-term. Impact greatest in first six years when the southern amenity bund is under construction	Life of Mine	H	B3	H	B3	H

SIA Ref	Social Impact	Stakeholder	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance Ranking	Mitigated Risk	Significance Ranking
6.3.3	Mine development impacts the cultural ecosystem services accessed by residents	Residents of the Kings Plains Locality and some neighbours to north and west of the mine project area	Long-term	Life of Mine	H	C3	H	C3	H
6.3.2	Residents experience reduced enjoyment of outdoor spaces at night due to intrusive lighting and resulting impacts on dark skies.	Residents of Kings Plains locality and some near neighbours to the west and north	Long-term	Life of Mine	H	C3	H	C3	H
6.3.6	Perceived reduction in the value of private property due to proximity of the mine development and anticipated amenity impacts	All residents of the PAA	Long-term	Life of Mine	H	C4	H	C4	H

Note: H – High, M – Moderate, L – Low

Table B-2
PAA Amended Mine Development Significance Assessment – Social Opportunities

EIS SIA Ref	Social Opportunity	Stakeholder	Temporal	Project Phase	EIS		Amended Project	
					Enhanced Opportunity	Significance	Enhanced Opportunity	Significance
6.2.9	Employment opportunities for local residents	Some near neighbours, particularly residents with children	Long-term	Life of Mine	B2	L	B2	L

Note: H – High, M – Moderate, L – Low

Table B-3
SAA Mine Development Significant Assessment – Social Impacts

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance	Mitigated Risk	Significance
6.2.8	Increased demand for health and emergency services by the operations workforce reduces access to these services for existing residents	Existing residents of Blayney LGA, and health and emergency service providers	Long-term	Operations Phase	M	D2	L	D2	L
6.2.8	Increased demand for children's services and facilities e.g. child care in Blayney LGA reduces service accessibility for existing residents and/or increases cost of services	Low-socio economic households, families with young children and single parent families	Long-term	Operations Phase	M	D2	L	D2	L
6.2.8	Increased demand for community services reduces access to these services for existing residents	Residents of Blayney LGA	Long-term	Life of Mine	L	C1	L	C1	L
6.2.1	Closure of Dungeon Road impacts access and connectivity	Residents of the PAA and Blayney residents	Long-term	Life of Mine	L	D2	L	D2	L

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance	Mitigated Risk	Significance
6.2.8	Project workforce increases demand for delivery of services e.g. waste management by Blayney Shire Council (BSC)	BSC and residents of Blayney LGA	Long-term. With majority of the impact experienced during Construction Phase	Life of Mine	L	C2	L	C2	L
6.2.7	Influx of operations workforce leads to changes in structure and cohesion of the Blayney township community and Millthorpe Village community	Residents of Blayney and Millthorpe	Long-term	Operations Phase	L	E1	L	E1	L
6.2.7	Proximity of the mine development to Blayney the increased presence of a mine workforce in Blayney township results in permanent changes to the character of Blayney township	Residents of Blayney township	Long-term	Life of Mine	M	D2	L	D2	L
6.2.4	The Mine Development results in a loss of valued rural heritage	Residents of Blayney LGA	Construction Phase	Life of Mine	L	D2	L	D2	L
6.2.10	The project leads to reduced productivity in the agricultural sector	Existing agricultural businesses in Blayney LGA, including supporting businesses	Long-term	Life of Mine	H	D2	L	D2	L

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance	Mitigated Risk	Significance
6.2.1	Disruption to the local road network impacts resident accessibility and connectivity	Residents of Blayney LGA	Short-term	Construction Phase	L	C1	L	C1	L
6.2.7	Reduction in the "journey experience" for tourists arriving in Blayney via the Mid Western Highway	Visitors to Blayney	Medium-term. Impact greatest in PYs 1-3 as the waste rock emplacement (WPE) is constructed	Construction and Operations Phase	H	D2	L	C2	L
6.2.2	Increased mine traffic on local roads leads to an increased need for road maintenance and places a financial burden on the BSC or Cabonne Council	BSC, CSC and LGA residents	Long-term	Life of Mine	M	D2	L	D2	L
6.2.3	The project's dependency on ecosystem services reduces accessibility for other users	Water users	Long-term	Life of Mine	M	D2	L	D2	L
6.2.11	Removal of mine project area from the supply of agricultural land in the Blayney LGA impacts agricultural production in the LGA	Local agricultural industry, NSW Farmers Federation and neighbours in proximity to	Long-term	Life of Mine	H	D2	L	D2	L

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance	Mitigated Risk	Significance
		the mine project area							
6.2.5	Increased demand for short-term accommodation by the operations workforce presents challenges for competing local industry and businesses	Residents of Blayney LGA	Short-term. Impact felt with initial influx of workforce	Operations Phase	L	D2	L	D2	L
6.2.5	Economic and environmental costs arising from the introduction of possible "poor" quality water from the Centennial pipeline	Property owners and surface water users	Long term	Life of Mine	M	E2	L	E2	L
6.2.2	Increased traffic on the local road network disrupts school bus routes and poses a risk to passenger safety	School bus service operators and user groups	Long-term	Life of Mine	H	D2	L	D2	L
6.2.5	The use and enjoyment of Carcoar Dam by the public is impacted by the project	Existing and potential users of Carcoar Dam recreation area	Long-term	Life of Mine	H	D2	L	D2	L

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance	Mitigated Risk	Significance
6.2.5	Operations Phase workforce accommodation demands reduce accessibility to private housing for existing and future residents	Existing and future residents of Blayney	Short-term as impact will be experienced with initial influx of Operations Phase workforce	Operations Phase	L	D2	L	D2	L
6.2.5	The use and enjoyment of the Belubula River by the public is impacted by the project	Residents of Blayney LGA and Landowners along the Belubula River	Long-term	Life of Mine	H	D2	L	D2	L
6.2.7	The mine development leads to adverse changes in the public perception of the character of Blayney LGA and township reducing the attractiveness of the destination to tourists and potential future residents	Residents of Blayney LGA, business operators, service and facility providers and BSC	Long-term	Life of Mine	H	D2	L	D2	L
6.2.5	Increased demand for local and regional housing support services due to displacement of low-income households	Housing Plus and other housing support services as well as low-	Medium-term (18 months)	Construction Phase	M	C2	M	C2	M

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance	Mitigated Risk	Significance
		income households							
6.2.3/ 6.2.11	Downstream landholders experience livelihood impacts due to project impacts on the quantity and quality of water in the Belubula River	Downstream landowners along the Belubula River	Long-term	Life of Mine	H	D3	M	D3	M
6.2.3	The mine development reduces existing accessibility to ecosystem services for residents of the Blayney LGA	Residents of Blayney LGA	Long-term	Life of Mine	H	C2	M	C2	M
6.2.10	Reduced employment and economic output in other sectors of the economy (e.g. trades and services) as a result of the project	Businesses and residents employed in non-mining sectors of the economy	Medium-term	Construction Phase	H	C3	M	C3	M
6.2.4	The Mine Development results in further loss of cultural heritage and connection to country for Aboriginal people, and further impacts to the beliefs and values of the Wiradjuri People	Wiradjuri People and Orange Local Aboriginal Land Council	Intergenerational	Life of Mine	H	C2	M	C2	M
6.2.12	Difference sectors of the Blayney LGA experience a	Vulnerable groups, Low	Medium-term	Life of Mine	M	B3	M	B3	M

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance	Mitigated Risk	Significance
	greater social and economic burden of the project	income households							
6.2.2	Increased mine traffic on the local and regional road network reduces safety for road users	Local road users	Long-term	Life of Mine	H	C2	M	C2	M
6.2.10	The project generates inflationary pressures contributing to changing lifestyle affordability	Non-mining sector of Blayney LGA, low-to medium income households of Blayney LGA, and vulnerable households (e.g. elderly)	Long-term. Impact likely to be most significant during Construction Phase	Life of Mine	M	C2	M	C2	M
6.2.2	The potential for significant economic and social costs to society due to a cyanide contamination event	Residents of Blayney LGA and neighbouring Cabonne LGA	Intergenerational	Life of Mine	H	D3	M	D3	M
6.2.10	The economic and social benefits of the project do not accrue to Blayney LGA	Residents of Blayney LGA	Long-term	Life of Mine	H	E3	H	E3	H

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance	Mitigated Risk	Significance
6.2.10	Local business expectations in relation to project opportunities are not met resulting in a financial burden for some local businesses and potential loss of services for Blayney community	Local business owners and operators, and their families	Ongoing risk throughout Construction and initial phases of Operation	Construction and Operations	H	C3	H	C3	H
6.2.7	Influx of construction workforce leads to changes in structure and cohesion of the communities of Blayney and Millthorpe townships	Residents of Blayney and Millthorpe	Medium-term. Impact likely 18 months, and temporary	Construction Phase and initial Operations Phase	H	C3	H	C3	H
6.2.5	Increased demand for short-term accommodation by the construction workforce presents challenges for competing local industry and businesses	Residents of Blayney LGA, business operators, service and facility providers and BSC	Medium-term (18 months)	Construction Phase	H	C3	H	C3	H
6.2.5	Construction Phase workforce accommodation demands reduce accessibility to private housing for existing and future residents	Existing and future residents of Blayney	Medium-term	Construction Phase	M	B3	H	B3	H
6.2.5	Low-income households are displaced from private rental accommodation in Blayney due	Low-income households, vulnerable groups (e.g.	Medium-term (18 months)	Construction Phase	M	C3	H	C3	H

EIS SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	EIS		Amended Project	
						Mitigated Risk	Significance	Mitigated Risk	Significance
	to workforce accommodation demands	elderly and Indigenous households)							
6.2.9	Construction phase labour demands results in labour draw from the non-mining sector impacting economic output and business viability	Non-mining sector in Blayney LGA	Medium-term	Construction Phase	H	A3	H	A3	h
6.2.9	Construction phase labour demands significantly constrain the local labour market of Blayney LGA	Blayney LGA	Medium-term	Construction Phase	H	B3	H	B3	H
6.2.10	The project reinforces the Blayney LGA's specialisation in mining potentially increasing economic vulnerabilities	Blayney LGA	Long-term	Life of Mine	L	C3	H	C3	H
6.2.8	Increased demand for health and emergency services by the construction workforce reduces access to these services for existing residents	Existing residents of Blayney LGA and health and emergency service providers	Medium-term	Construction Phase	M	C3	H	C3	H

Note: H – High, M – Moderate, L – Low

Table B-4
SAA Amended Mine Development Significance Assessment – Social Opportunities

SIA Ref	Social Opportunity	Stakeholders	Temporal	Project Phase	EIS and Amended Project	
					Enhanced Opportunity	Significance
6.2.7	Resident population growth in Blayney township enhances volunteer labour pool	Residents, service providers and organisations in Blayney LGA	Long-term	Life of Mine	C3	L
6.2.7	Project induced resident population growth in Blayney township and Blayney LGA supports stronger community cohesion and enhanced liveability	Existing residents of Blayney LGA, BSC, Service and facility providers and local businesses.	Long-term	Operations Phase	B3	M
6.2.9	Opportunity to increase labour and skills capacity in the Local Area	LGAs of the Local Area	Long-term	Life of Mine	C3	M
6.2.9	Indigenous people in the Local Area are employed on the project	Indigenous population	Long-term	Life of Mine	B3	M
6.2.9	Enhanced education and training opportunities available at Blayney High School	High school students at Blayney High School and local business operators	Long-term	Life of Mine	B3	M
6.2.10	Economic benefit to the Central West Region (CW Region)	Residents, business operators, service providers and Councils in the CW Region	Long-term	Life of Mine	A4	M
6.2.8	Stronger local investment supports improvements and/or expansion in services and facilities in Blayney LGA	Residents of Blayney LGA and visitors to the region	Long-term	Life of Mine	A3	H
6.2.10	Increased local spend supports long-term sustainability of existing local businesses and creates opportunities for expansion or establishment of new businesses	Local business owners and residents of Blayney LGA	Long-term	Life of Mine	B3	H

SIA Ref	Social Opportunity	Stakeholders	Temporal	Project Phase	EIS and Amended Project	
					Enhanced Opportunity	Significance
6.2.10	The significant economic benefits of the project accrue to the Blayney LGA	BSC, Blayney residents, and businesses and service providers in Blayney LGA	Long-term	Life of Mine	A3	H
6.2.5	Growth in the land and housing development market in Blayney	Existing and new residents of Blayney township, BSC, business operators and service providers	Long-term	Operations Phase	A3	H
6.2.9	The creation of direct and indirect jobs in Blayney LGA	Residents of Blayney LGA and business operators	Long-term	Life of Mine	A4	H

Note: H – High, M – Moderate, L – Low

Table B-5
Cumulative Amended Mine Development Significant Assessment – Social Impacts

SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	EIS and Amended Project	
						Mitigated Risk	Significance
6.4.2	Reduced productivity in the local agricultural industry	Agricultural businesses and residents of the Blayney LGA	Long-term	Life of Mine	H	D2	L
6.4.2	Reduced accessibility to short-term accommodation due to cumulative impacts of other projects in the Blayney LGA	Low-income households, vulnerable groups (e.g. elderly, single parent households and Indigenous households)	Medium-term	Construction Phase	H	C3	H
6.4.2	Sustained reliance on a single industry for economic growth and infrastructure provision	BSC and broader Blayney community	Long-term	Life of Mine	M	A3	H
6.4.2	Temporary shortage of short-term accommodation impacts accessibility to accommodation for the non-mining sector	Visitors to the Blayney LGA, non-mining sector business, low-income households and vulnerable groups (e.g. elderly, single parent households and Indigenous households)	Medium-term	Construction Phase	H	A3	H
6.4.2	Short-term cumulative shortage of private rental accommodation for the non-mining sector	New and existing residents of Blayney LGA, low-income households, vulnerable groups (e.g. elderly, single parent households and Indigenous households)	Medium-term	Construction Phase	H	A3	H
6.4.2	Temporary increase in demand for health and emergency services increases demands for service providers and reduces access to services for existing residents	Blayney LGA health and emergency service providers and Blayney LGA	Medium-term	Construction Phase	M	B3	H

SIA Ref	Social Impact	Stakeholders	Temporal	Project Phase	Stakeholder Concern	EIS and Amended Project	
						Mitigated Risk	Significance
6.4.2	Cumulative increase in temporary workforce in Blayney leads to temporary changes in community cohesion	Residents of Blayney LGA	Medium-term	Construction Phase	L	C3	H
6.4.2	Short-term labour draw from the non-mining sector impacts the operation of non-mining sector businesses	Blayney LGA businesses	Medium-term	Construction Phase	H	C3	H

Note: H – High, M – Moderate, L – Low