

Appendix R

Visual Impact Assessment Addendum

McPhillamys Gold Project

visual impact assessment - ADDENDUM

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report prepared by

VPA Visual Planning and Assessment

11 Brock Street CANNON HILL Q. 4170

E| annette@vpavisual.com

T| 0451 505 218

www.vpavisual.com.au



Executive summary

A summary of the key amendments to the project since the exhibition of the EIS in relation to visual assessment and visual impacts are summarised below and described in detail in Chapters 2 to 7 of the Addendum Visual Impact Assessment.

- **Site access** – a new location for the intersection of the site access road with the Mid Western Highway results in relocation of localised lighting effects at the intersection with the Midwestern 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.
- **Mine and waste rock emplacement schedule** – revision results in longer duration of high visual impacts to any existing view locations south and south-west of the project such as Kings Plains residents and the Mid Western Highway. Previous design provided priority completion of the pit amenity bund and amenity bund to minimise duration of high level visual effects during development. The revision has extended the construction of this bund from two to four years to up to six years.

Direct lighting effects on the southern face of the waste rock emplacement and pit amenity bund were previously evident up to year 4. The revised operational schedule confines activity to daylight hours, reducing the direct lighting effects reported in EIS (VPA 2019).

- **Pit amenity bund** – the lowering of this bund results in higher visual impacts from views into the infrastructure areas up to Year 4 as there is no longer screening of higher components such as ROM pad and stockpiling. There will be some increase in diffuse light spill at night due to the lower bund height.

The final bund height results in less contrast with the existing view and is consistent with the EIS.

- **Southern Amenity Bund** – as described above, the rescheduling of waste rock emplacement results in a delay in completion of the southern amenity bund. This results in high visual effects and visual impacts for longer duration than previous mine design.

The bund reflects amended concept bund design profile which consistent with the EIS will incorporate recommended geomorphic detailed design to southern face and upper profiles to provide best visual integration outcomes. The long term visual impacts remain consistent with the EIS.

- **Soil areas** – additional soil stripping will increase areas of high visual impact to views from west, south-west and some locations south of the project. This will also result in removal of additional existing trees on the pit hill which facilitated visual screening of open cut operations and maintain visual setting as much as possible. Some trees below rim of the pit are to be retained to maintain this function.
- **Tailings Storage Facility (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** – the new mine schedule revision results in lowering of most direct lighting effects from night time operations on the southern and eastern face of the southern amenity bund. There may be slight increase in diffuse effects from operations within the infrastructure areas above the lowered pit amenity bund as viewed from the south.

- **Mitigation** – 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.

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1 Introduction

1.1 Background

LFB Resources NL is seeking State significant development consent under 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 1.1. LFB Resources NL is a 100% owned subsidiary of Regis Resources Limited (herein referred to as Regis).

As shown in Figure 1.1, 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 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 visual impacts of the amended project.

Further, this report assesses the potential visual impacts associated with the mine development component of the McPhillamys Gold Project. References to 'the project' throughout this report are therefore referring to the mine development only. The potential visual impacts associated with the pipeline development component are addressed in the Amendment Report (EMM 2020a).

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, former Roads and Maritime Services) 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 has been undertaken, 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.
- **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 changed 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 development project area** – a very small change has been made to the mine development project area along the eastern boundary (an additional 1 ha, or 0.04% change), to accommodate the required clean water management system. The change takes the project area from 2,513 hectares (ha) to 2,514 ha
- **Mine administration and infrastructure area** – the layout of this area has been revised and optimised.

No amendments have been made to other key aspects of the project as presented in the EIS for which approval is sought, such as the proposed mining method, operating hours, annual ore extraction rate up to 8.5 Mtpa, annual ore processing rate up to (7 Mtpa), employee numbers, and rehabilitation methods and outcomes.

The amended mine development project layout, compared to that assessed in the EIS, is shown in Figure 1.2.

1.3 Purpose of this report

This report has been prepared to assess the potential visual impacts of the amended project. 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 Visual Impact Assessment (VPA 2019) Assessment (Appendix S of the McPhillamys Gold Project EIS).

1.4 Submissions on the EIS

A number of issues relevant to visual impact assessment [i.e. the subject of this report] were raised in submissions received on the EIS. These issues have also been considered in this revised assessment. Detailed responses to all the submissions received are provided in the Submissions Report prepared for the project (EMM 2020b), which has been prepared in conjunction with the Amendment Report (EMM 2020a). A summary of the key issues relevant to this assessment are provided in Table 1.1, together with how each matter has been addressed within this report.

Table 1.1 **Key comments received in submissions relating to the visual impact assessment, and how they have been addressed.**

Issue	Where addressed
G7.7.1 – Blayney Shire Council - Visual Impact	Section 9: Mitigation
G7.7.2 – Blayney Shire Council - Visual Amenity	Section 9: Mitigation
G16.1.11 – Roads and Maritime Services Screening of roads	Refer Traffic Studies

1.5 Terminology

The following terms were used throughout VPA (2019) to describe the McPhillamys Gold Project, and remain relevant for this assessment:

- **the project** – the project in its entirety; encompassing the mine development and the pipeline development. In this report, the term ‘the project’ refers to the amended project for which approval is now sought. Where the original project design as presented in the EIS is being discussed, this will be clarified;
- **Southern amenity bund and pit amenity bund** – constructed landforms developed to mitigate effects of the project including visual and noise effects
- **waste rock emplacement area (WRE)** – dedicated areas within the project for placement of excess load material and waste rock extracted from mine pit; typically used to first establish amenity bunds then accumulating dumping zone behind
- **Visual character units (VCUs)** Areas of landscape with similar topographic, vegetation and land use features that create areas of similar visual character.
- **Primary view catchment (PVC)** - Areas that have potential views to the Project based on a consideration of topography alone as a screening element.
- **Visual effect** - A measure of the visual interaction between the Project and the landscape setting within which it is located.
- **TfNSW** – Transport for New South Wales

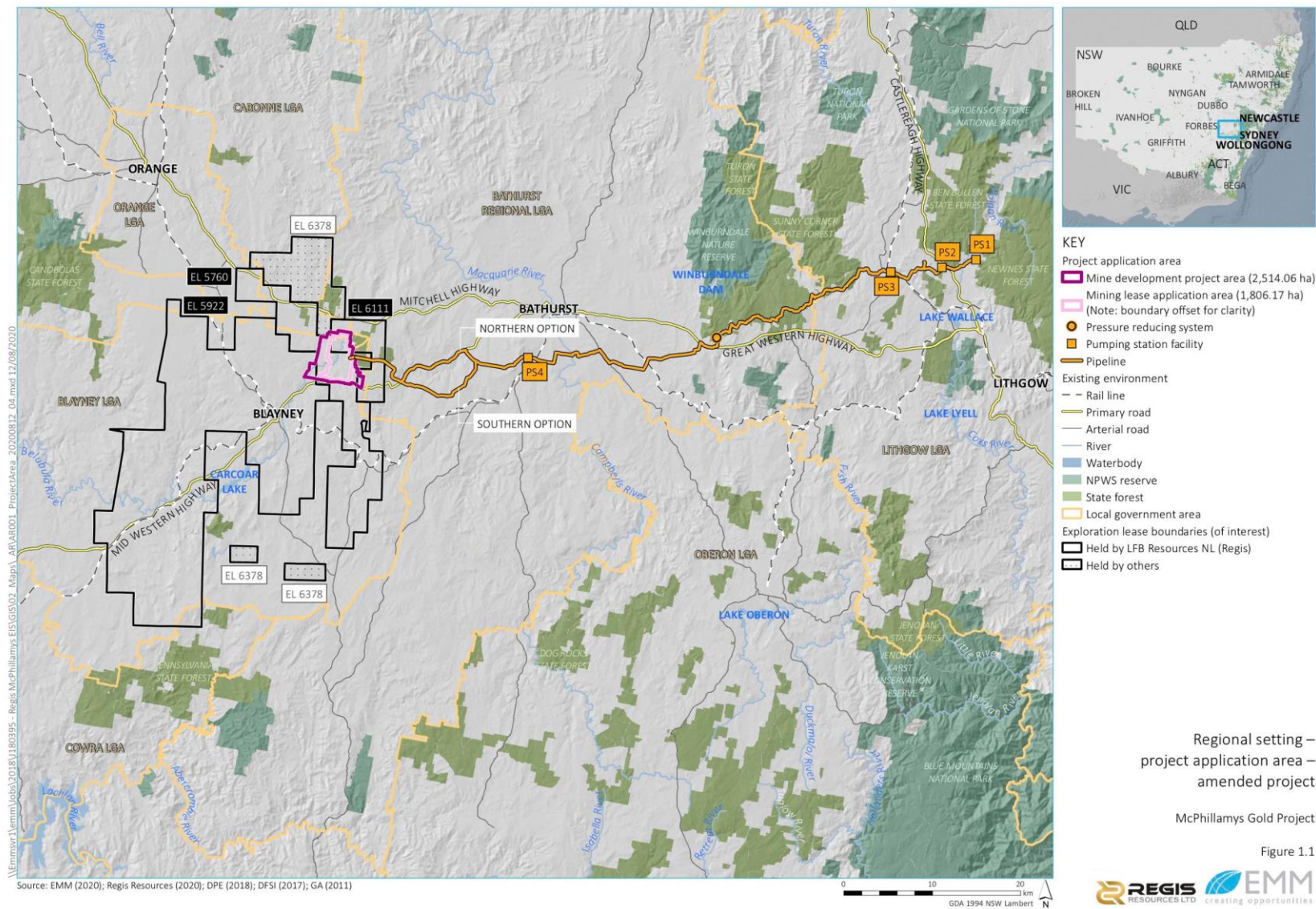


Figure 1.1 Regional setting - project area- amended project

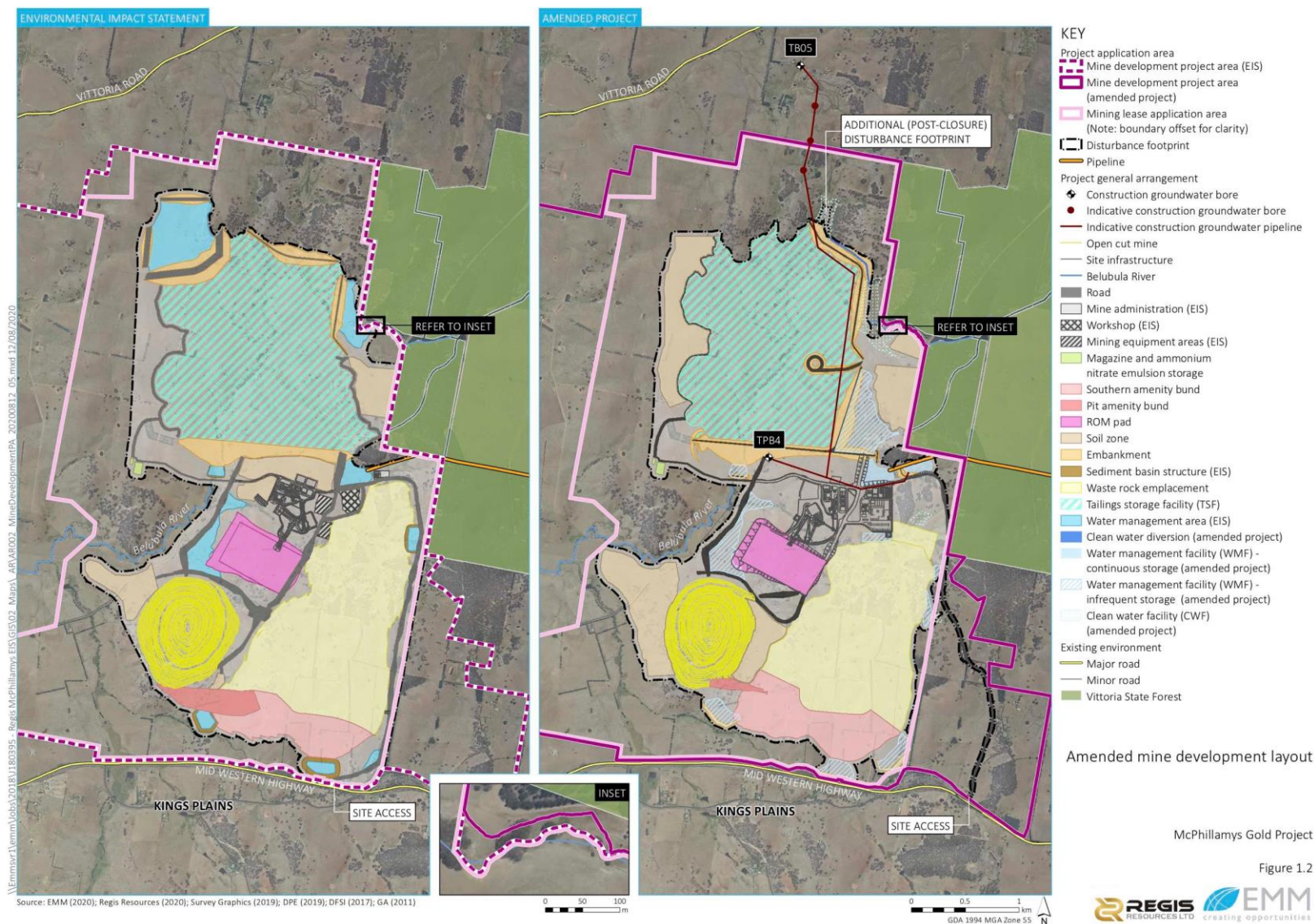


Figure 1.2 Amended mine development layout

2 Existing Environment

Outside the mine boundary, the existing environment and visual character units remain unchanged for the amended development site as described in Section 3 – Existing Environment (VPA (2019)).

A total of five visual character zones (VCU) interface with the Project, including:

- Kings Plains locality VCU
- Undulating hills VCU
- Open woodland VCU
- Creek lines VCU
- Plantation forestry VCU
- Resource extraction and recovery uses VCU - Ongoing on site exploration and test drilling and the presence of mining company vehicles and operational staff create low key changes.

3 Visual Effect of the Project

This section of the addendum provides an update on the description of project components provided in Section 4 of the VIA (Appendix S of the EIS) in relation to key amendments as identified in Section 1.2.

3.1 Project area components

3.1.1 Mine development

Figures 3.1 to 3.7 show the amended project mine development stages as referenced below.

3.1.2 Open cut mine

As a result of the amendments to the project, the open cut pit design has a modified footprint. The associated exit ramps for haul trucks has retracted further behind the pit amenity and waste rock emplacement.

Areas for soil stockpiling on the western slope of the open cut have extended further west and south increasing the areas of Level 1 (high) visual effect until Year 4 when hydromulched grass will progressively lower the colour contrast across this extended area. Soil stockpile zones will be progressively established and rehabilitated.

Note: the photomontages in Section 5 (Figures 5.2 – Figure 5.31) reflect the worst case scenario for each of the related year stage mine plans (Figures 3.1 – Figure 3.7) from a number of viewpoints).

A stand of matures woodland within the project boundary on south-west face of the open cut will be partially cleared for this expanded soil stockpiling areas. This clearing removes some of the localised screening and visual integration effects and creates further visual contrast and Level 1 localised visual effect.

3.1.3 Southern amenity bund and pit amenity bund

As a result of the revised development sequence of waste rock emplacement, the development timeframe and associated Level 1 (high) visual effects on the southern amenity bund will extend beyond previous Year 2 into Year 4 when early stages of rehabilitation is commenced. Final lifts and final height will be achieved by end of Year 6.

Between Year 4 and 6, the southern face will appear a combination of Level 1 and Level 2 visual effects as various stages of rehabilitation establishment (hydromulched grass or similar) progresses with upper benches remaining at Level 1 high visual effect.

After Year 6, upper benches will have commenced rehabilitation. Lower face will have lower visual effect – Level 2-3 as early rehabilitation becomes established.

Year 8 of the amended project has early stages of open woodland establishment across all the southern face of amenity bund.

Final landform: The woodland and cultural hedgerow planting has advanced to improve visual integration. It will take 5-7 years to enable rehabilitated landscapes to achieve acceptable colour, texture, line, shapes and patterns that emulate surrounding natural and cultural tree patterns. This will enable rehabilitation to achieve Level 3 visual effects maximising visual integration.

The pit amenity bund has been reduced in vertical and lateral scale; Visual effect will be Level 1 during development until implementation of hydromulched grass by Year 2. This will provide gradual lowering of visual effects through the life of mine by reducing colour contrast with surrounding landscape setting once grass cover is established over time.

3.1.4 Waste rock emplacement

As a result of the revised scheduling of the waste rock emplacement, the development timeframe and associated Level 1 (high) visual effects for the larger area of the waste rock emplacement north of the southern amenity bund will extend beyond Year 8. This will continue until rehabilitation of side slopes as viewed from the west, has commenced. At that stage there will be progressive lowering over time to Level 2 (moderate) visual effects along the side slopes as first grass cover then tree planting becomes established.

By Year 11, all side slopes will have rehabilitation cover and various stages of woodland planting lowering visual effects to Level 2 - 3.

New tree planting will take 5-7 years to enable rehabilitated landscapes to achieve acceptable colour, texture, line, shapes and patterns that emulate surrounding natural and cultural tree patterns. This will enable rehabilitation to achieve Level 3 visual effects maximising visual integration.

3.1.5 Mining fleet

As a result of the amended project, visual effect levels will remain consistent but will be evident for longer (up to year 6) in areas to the south of the mine boundary.

In addition to a change in the timing of construction, a reduced mining fleet will be used in the initial years of the project, with associated less haul trucks, until the open cut pit benches are in place to shield earthworks in the pit. The reduced mining fleet will be limited to work on the southern amenity bund during the daytime period only.

This activity will now be limited to daytime hours of operation on the southern face of the amenity bunds.

3.1.6 Run-of Mine (ROM) pad, carbon-in-leach (CIL) processing plant

As a result of the amended project, visual effect levels will remain consistent. There will be views to the ROM pad from a limited number of locations in Kings Plains until Year 4.

3.1.7 Tailings storage facility (TSF)

As a result of the amended project, visual effects will be consistent with the EIS with variation in the distribution of disturbance areas and duration of higher visual effects. Also the scheduled hydromulched grassing to the main embankment has been extended from Year 2 in the EIS to Year 4 for the amended project.

There will be soil stripping in areas to develop a western embankment. This will result in Level 1 (high) visual past Year 2. Following this, the TSF will be filled and Level 1 to Level 2 visual effects will be limited to the hydromulched edges of the TSF and the embankment area.

This level of visual effects remains until Year 8. Tailings levels within basin will reduce extent of visual contrast over the broader area of TSF. Established grassing to western embankment will reduce visual effects along embankment to Level 2 (moderate). A narrow perimeter strip of further soil stripping on western ridge will have Level 1 (high) visual effects.

By Year 11 maximum tailings levels are achieved and western embankment has early stages of open woodland established.

3.1.8 Development of water management infrastructure, including water storages and pollution control infrastructure

As a result of the amended project, visual effect levels will remain consistent.

3.1.9 Development of a new intersection on the Mid Western Highway and site access road.

As a result of the amended project, the project site access road has been relocated approximately 1 km east from EIS location. TfNSW guidelines and safety standards may require intersection lighting.

Key effects will be from any required intersection lighting (static and activated as specified by TfNSW standards) and fleet vehicle headlights exiting the project. The latter will have moving headlight beam spill outside the project and site access road. This spill and variable beam direction will create transient visual effects at night particularly to receptors on residential lots adjacent the site access road and intersection.

The existing intersection location currently has roadside vegetation – Figure 3.1, providing some local filtering of lighting effects. Vegetation is ephemeral and may not provide permanent mitigation of lighting effects at the intersection.



Figure 3.1 Existing Mid Western Highway intersection

View is of Mid Western Highway looking east with Project site to left of this view. This is the proposed location for amended site access road to mine infrastructure area.



Figure 3.2 Existing roadside vegetation

Kings Plains is to the right of this view, with residence (R15) on north facing slope of adjacent hillside.

The site access road faces south and will require new road works within project boundary to construct new alignment. The visual effects will be Level 1 during development, but Level 2-3 during operations as the scale and visual elements are consistent with other rural roads in this setting.

3.1.10 Internal road networks

As a result of the amended project, visual effect levels will remain consistent.

3.1.11 Ancillary infrastructure

As a result of the amended project, visual effect levels will remain consistent.

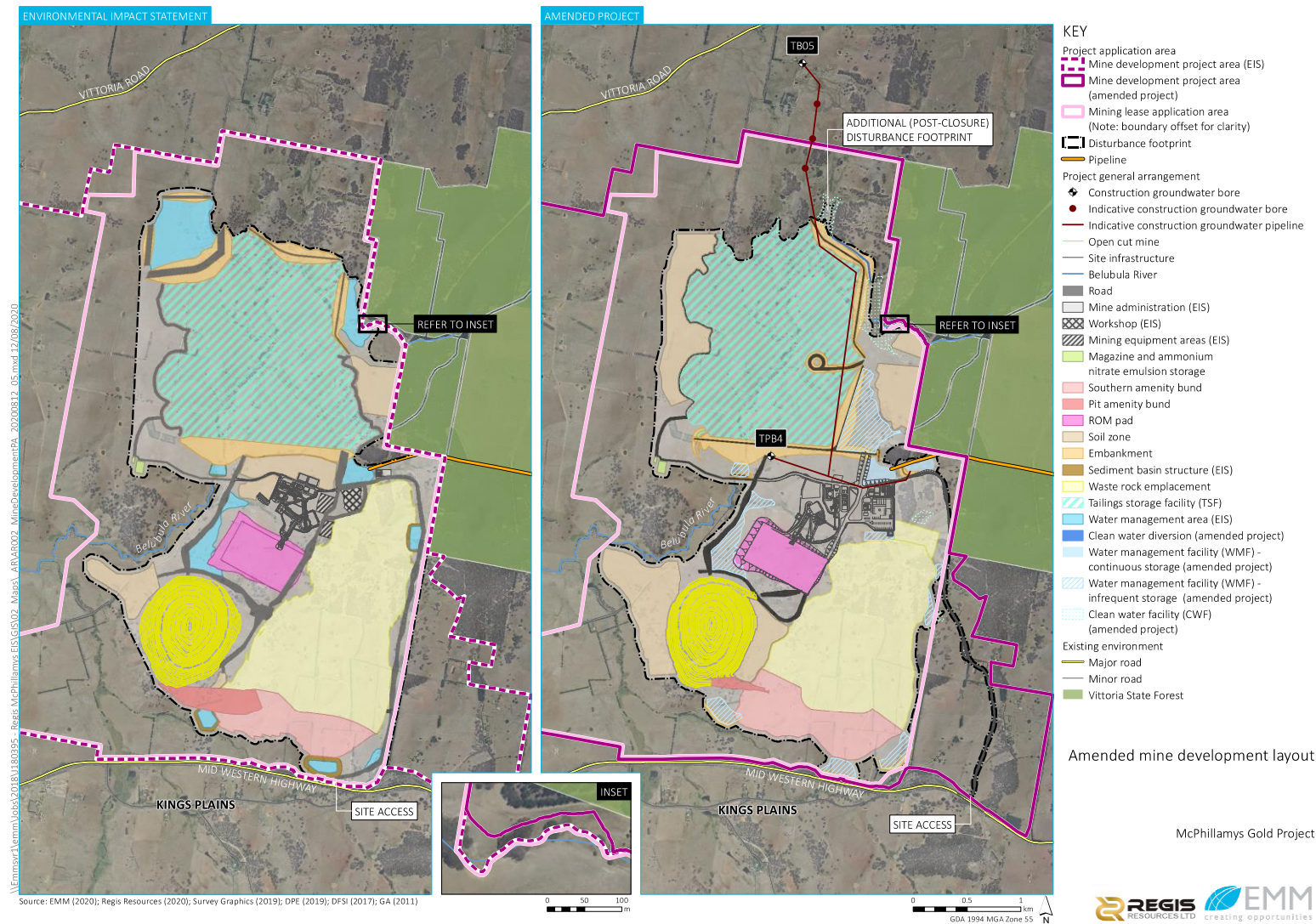


Figure 3.3 Mine development general arrangements

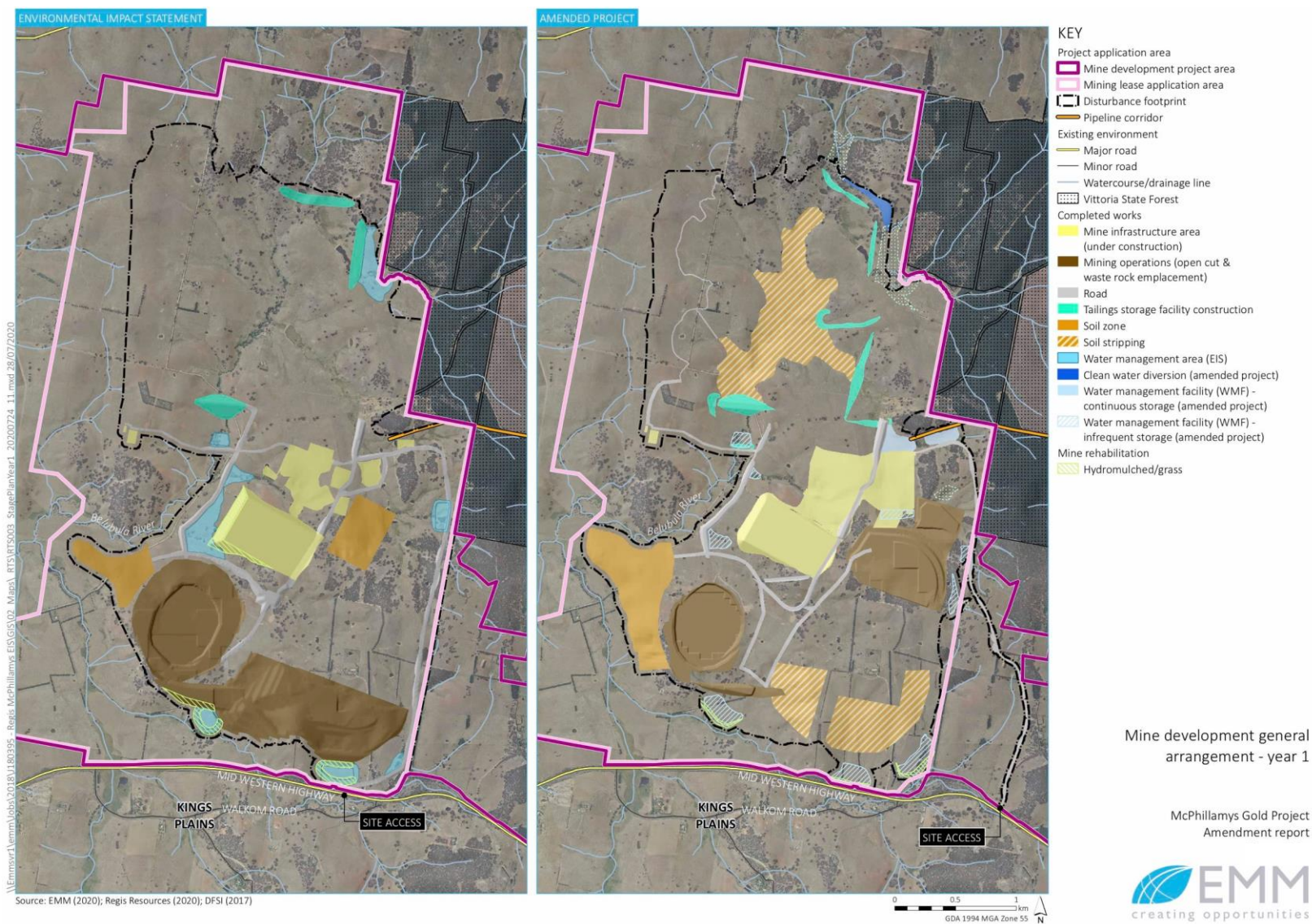


Figure 3.4 Mine development general arrangement – Year 1

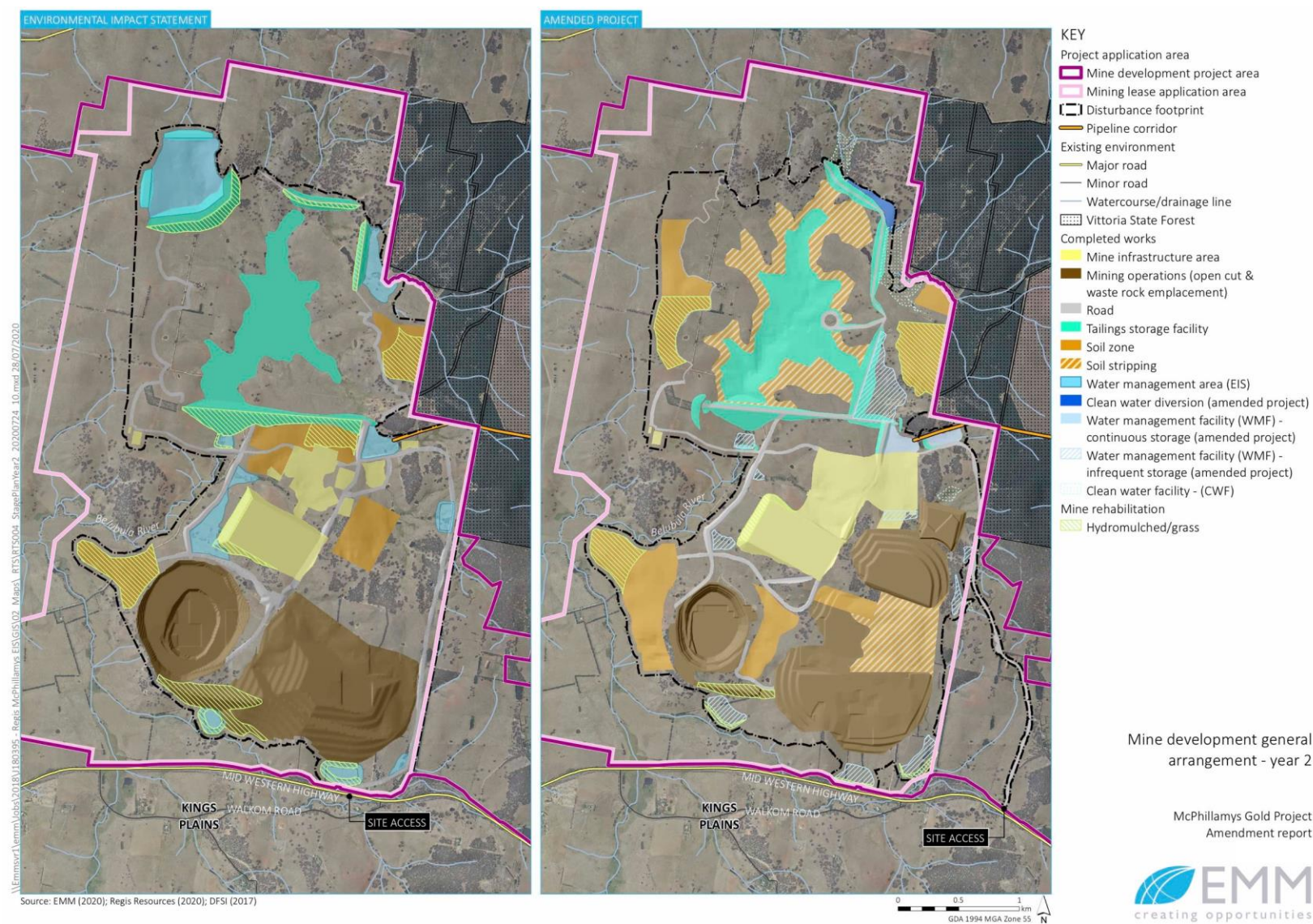


Figure 3.5 Mine development general arrangement - Year 2

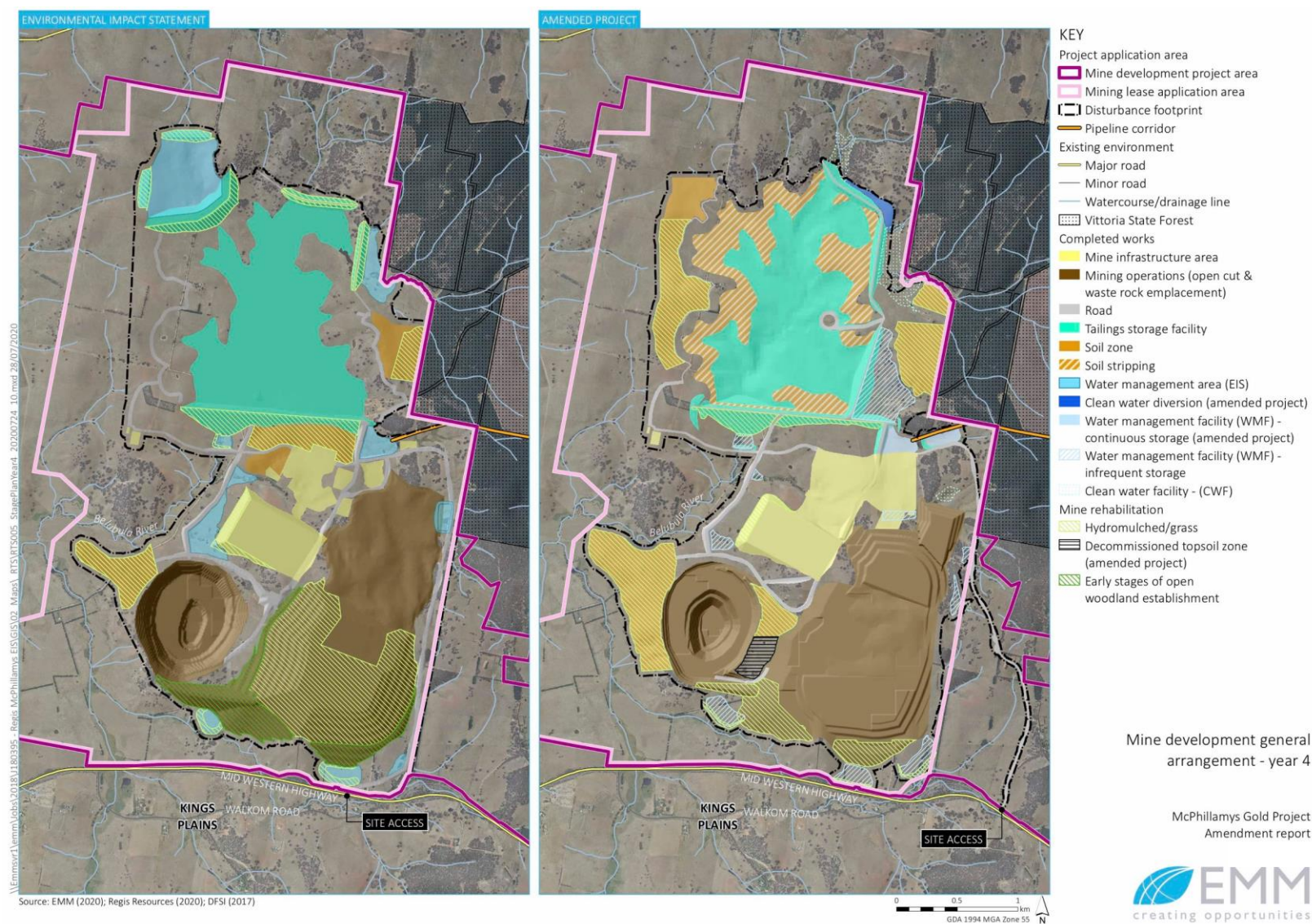


Figure 3.6 Mine development general arrangement - Year 4

No Year 6 mine plan in EIS VIA report

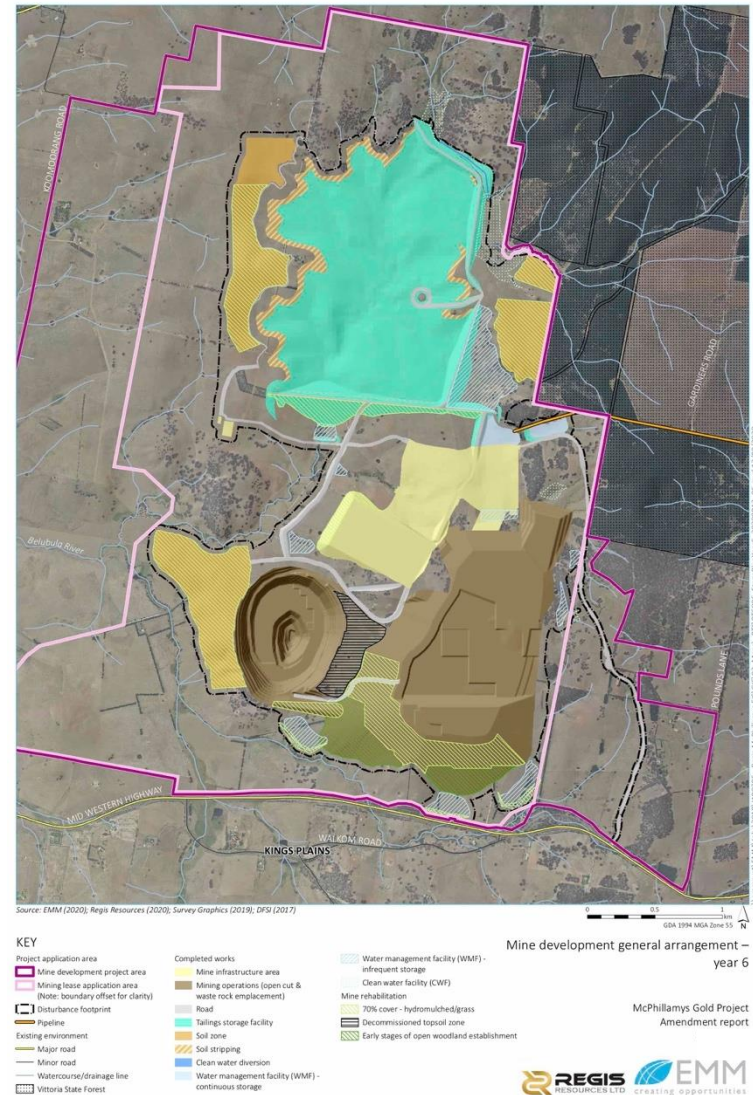


Figure 3.7 Mine development general arrangement - Year 6

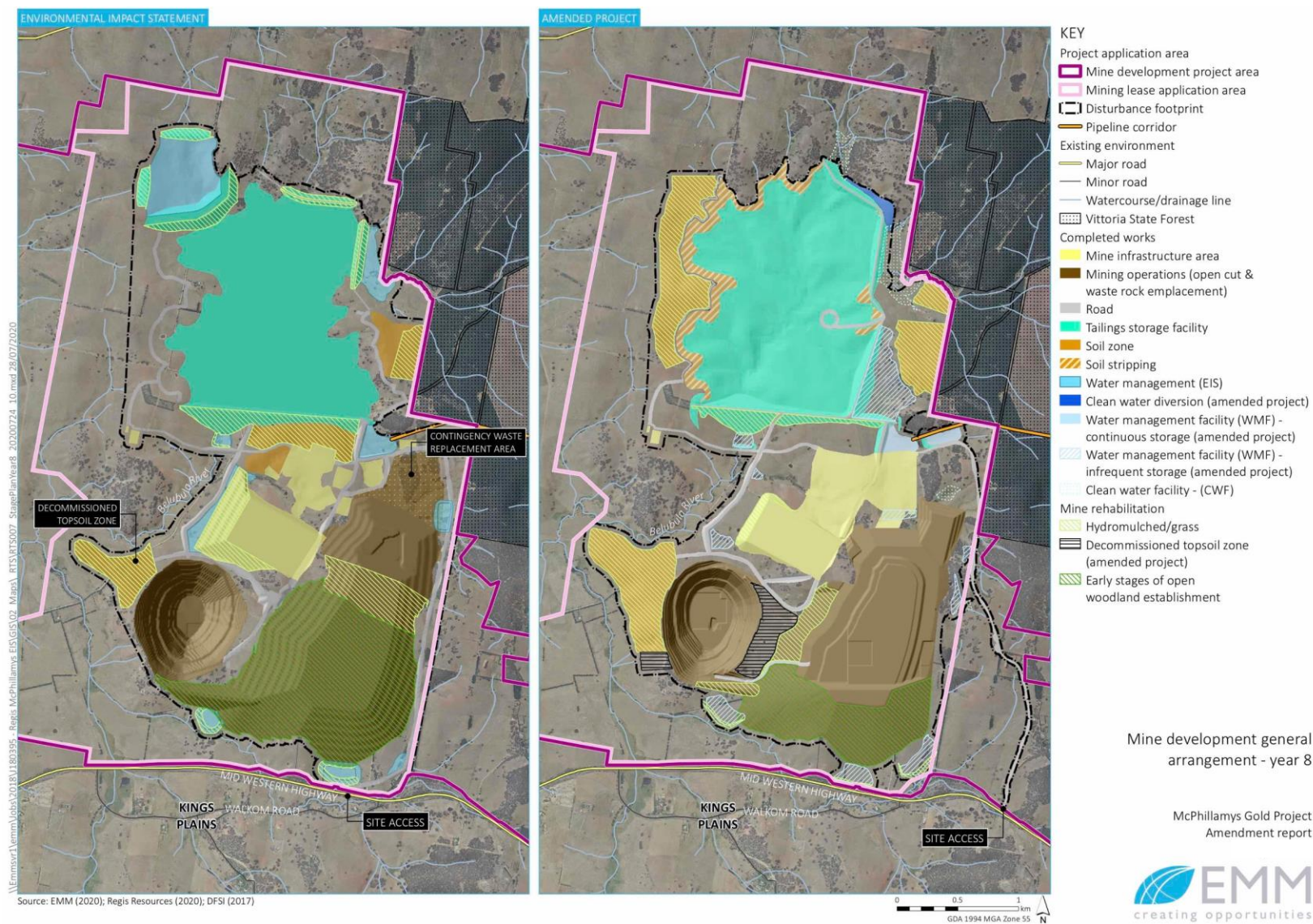


Figure 3.8 Mine development general arrangement - Year 8

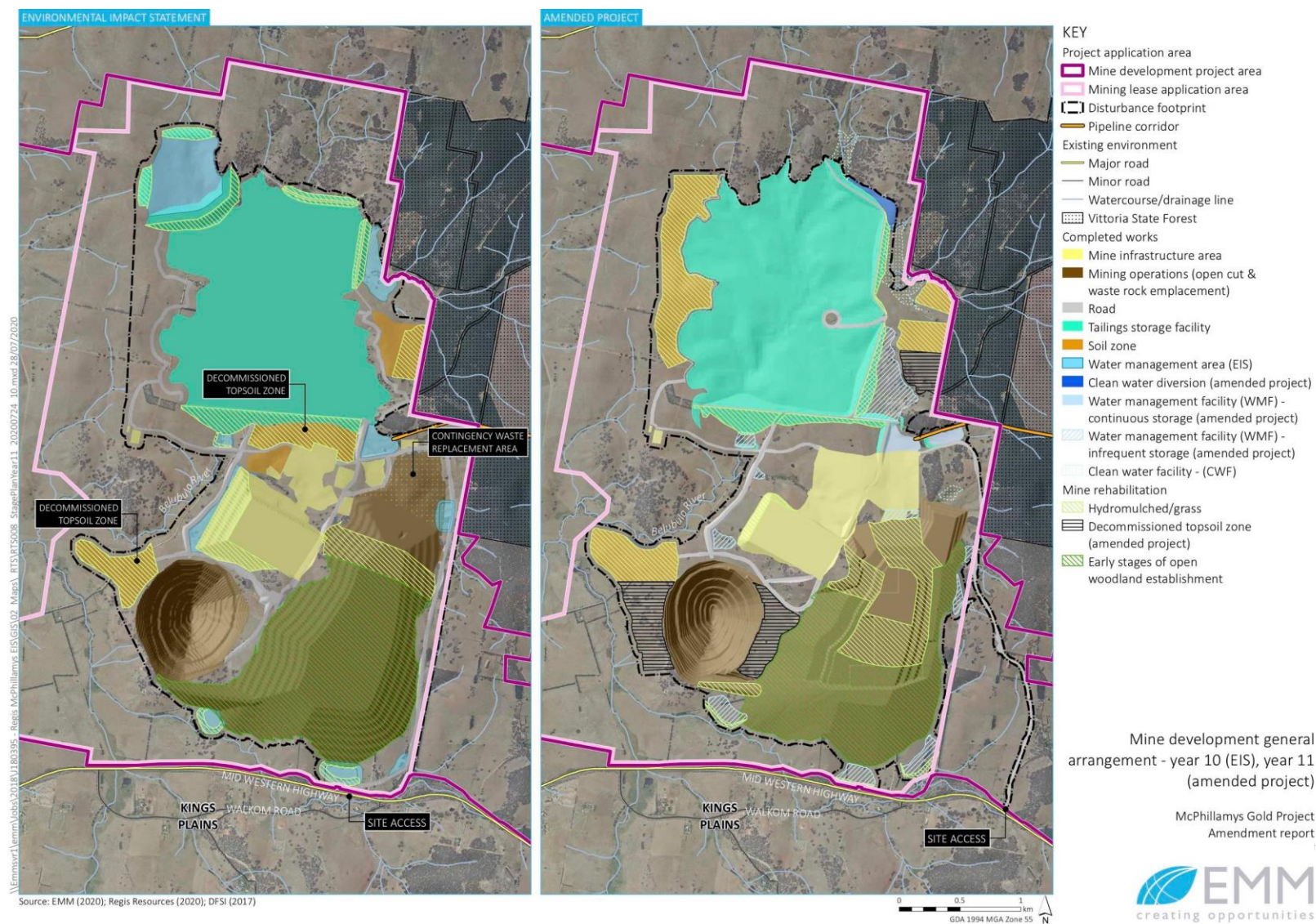


Figure 3.9 Mine development general arrangement - Year 11

4 Visibility and Sensitivity

This section of the addendum provides an update on the visibility of the various elements of the project from locations surrounding the project boundaries. It references Section 5 of the VIA (Appendix S of the EIS) in relation to key amendments as identified in Section 1.2.

This section of the report evaluates the visibility of the various elements of the Project from locations surrounding the Project boundaries. Visibility will vary depending on a combination of topography and vegetation, especially when close to points of viewing.

4.1 Factors influencing visibility and sensitivity

As a result of the amended project, there are no variations to significant topographic features, effect of foreground elements or sensitive receptors.

4.2 Significant vegetation areas

As a result of the amended project, a stand of matures woodland within the project boundary on south-west face of the open cut will be partially cleared for soil stockpiling areas. This clearing removes some of the localised screening.

Proactive tree planting adjacent to the project boundary has been initiated with early stands of immature tree screening buffers. Currently these provide no visual screening to the project, however over a period of 5-7 years these will mature to provide low level screening from some Mid-western Highway view locations.

5 Visual Effect

This section of the addendum provides an update on the visual effect of various project components on external view locations around the site. To assess the visual effects of project components on view locations around the McPhillamys Project area, views were reassessed from the northern, southern, eastern and western view sectors and via photomontage development of the amended project from the same view locations as provided in Section 6 of the VIA (Appendix S of the EIS) in relation to key amendments as identified in Section 1.2. The following view locations are identified in Figure 5.1.

5.1 EIS Commitments

The EIS committed to a final height landform height of 1,065 m across the majority of the waste rock emplacement, with microrelief elements taking the final height up to 1,075 m in places. This final landform height is considered conservative as it assumes a higher than predicted swell factor in the waste rock, to ensure some contingency in the available storage volume. The photomontages contained in VPA (2019) were based on a waste rock emplacement design that assumed a less conservative swell factor based on the characteristics of the waste rock, thereby resulting in a final height of approximately 1,050 m (excluding microrelief). While it is likely that the final height of the waste rock emplacement will be comparable to the height shown in the VIA (VPA 2019) for conservatism, the photomontages of the amended project presented in this Addendum assessment have used the more conservative waste rock emplacement design, adopting a more conservative swell factor that show the maximum waste rock emplacement height of 1,065 m with areas of microrelief up to 1,075 m.

5.2 VP 1 – Guyong Road

This view is from Guyong Road. This viewpoint is representative of those visual effects to be expected when viewed from residences and their surrounding lands, close to this view location on Guyong Road. It also reflects the short duration views from vehicles travelling along Guyong Road.

As a result of the amended project, there are variations to visibility of mine components over the development period as follows:

Year 2: Soil stripping and development of the ROM pad are the main components in this view. The exposed soils creates colour contrast resulting in level 1 high visual effect. With some variations to soil stripping areas the visual effects are consistent with the EIS.

Year 4: Extent of waste rock emplacement landform extends further north than previous mine plan. Visual effects vary across the mine components with waste rock emplacement having high visual effect and grassed ROM embankment having Level 2 moderate visual effect due to lowering of visual contrast on western edge.

Year 6: Southern amenity bund at its final height is now visible above Sturgeon Hill; its profile and partially rehabilitated slopes have a Level 1 to Level 2 visual effect. Waste rock emplacement area extends development to the north of southern amenity bund, with visual effects consistent with the EIS. Direct and indirect lighting from night time operations would be consistent with the EIS,

Year 8: Established grass cover across parts of west facing slopes progressively lowers visual effect of mining landform and ROM embankment. Waste rock emplacement in northern areas continues to have Level 1 - high visual effect due to visual contrast of exposed earthworks and benching within the rural setting. Direct and indirect lighting from night time operations would be consistent with the EIS,

Final landform: Upper profile modulation has improved visual integration with surrounding landforms. Vegetation patterns and micro-relief of final landform create a view that is well integrated with the surrounding rural setting. Visual effects are Level 3 – Low.

VP 1: Guyong Road

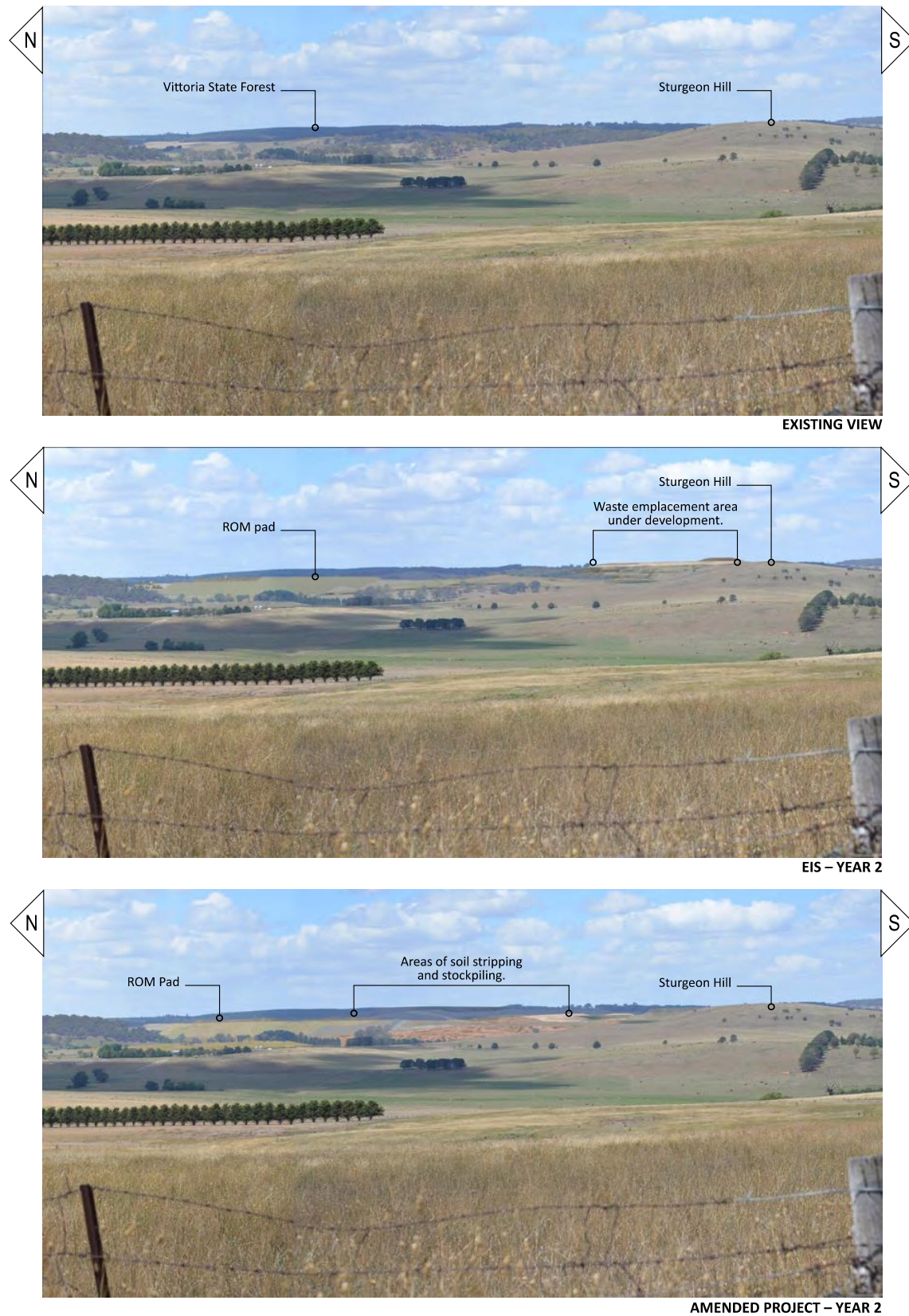
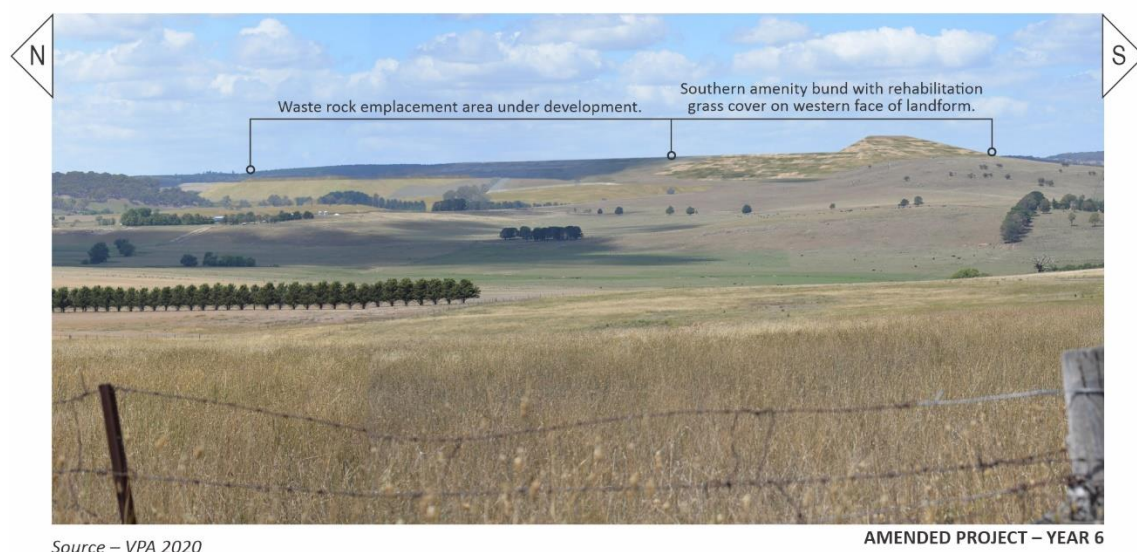
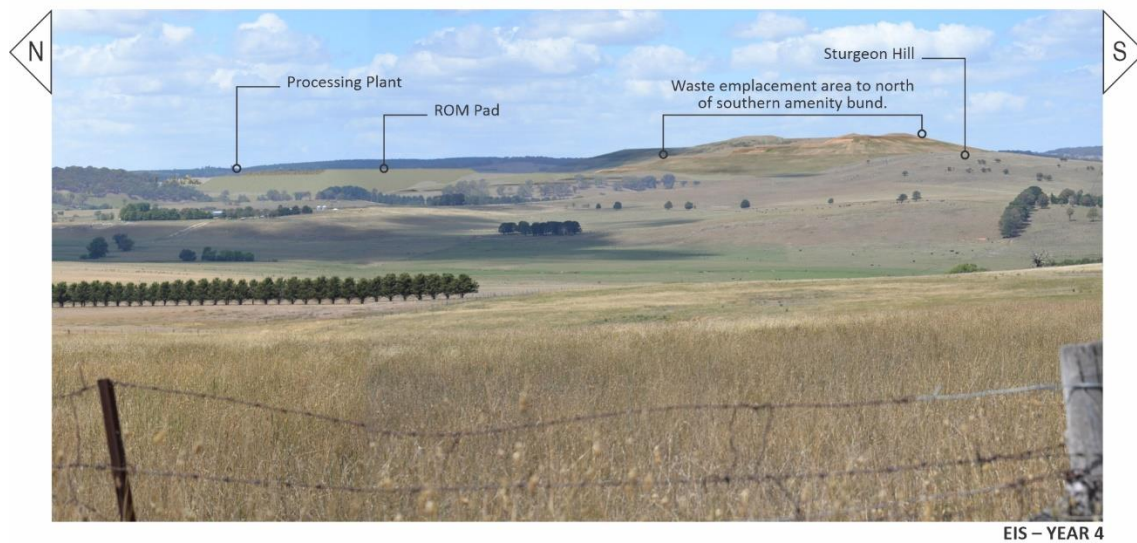


Figure 5.2 VP1 – Guyong Road – Existing view and Year 2
Comparison between EIS and amended project

VP 1: Guyong Road



Source – VPA 2020

Figure 5.3 VP1 – Guyong Road – Year 4 and Year 6
Comparison between EIS and amended project

VP 1: Guyong Road

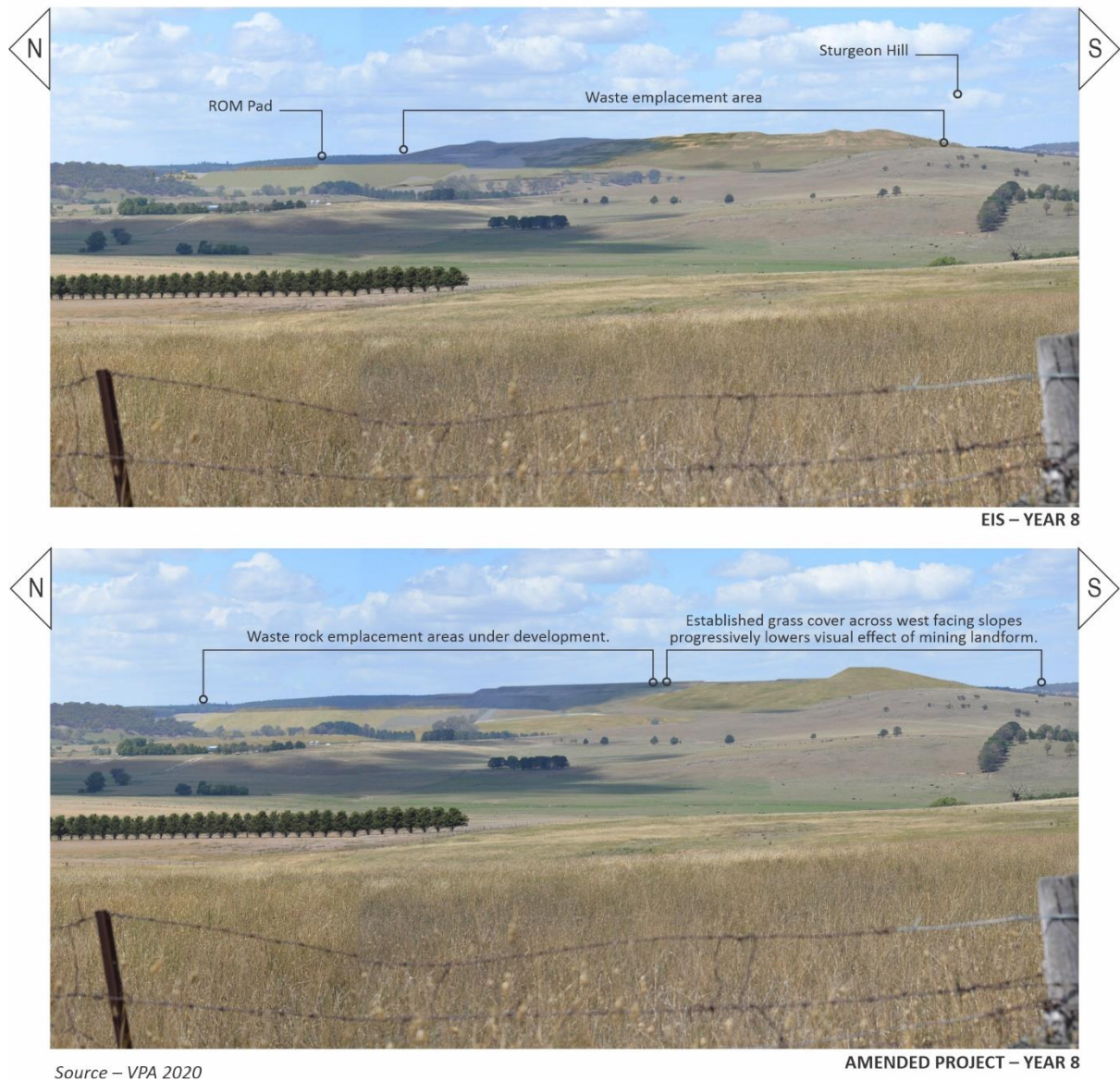


Figure 5.4 VP1 – Guyong Road – Year 8
Comparison between EIS and amended project

VP 1: Guyong Road

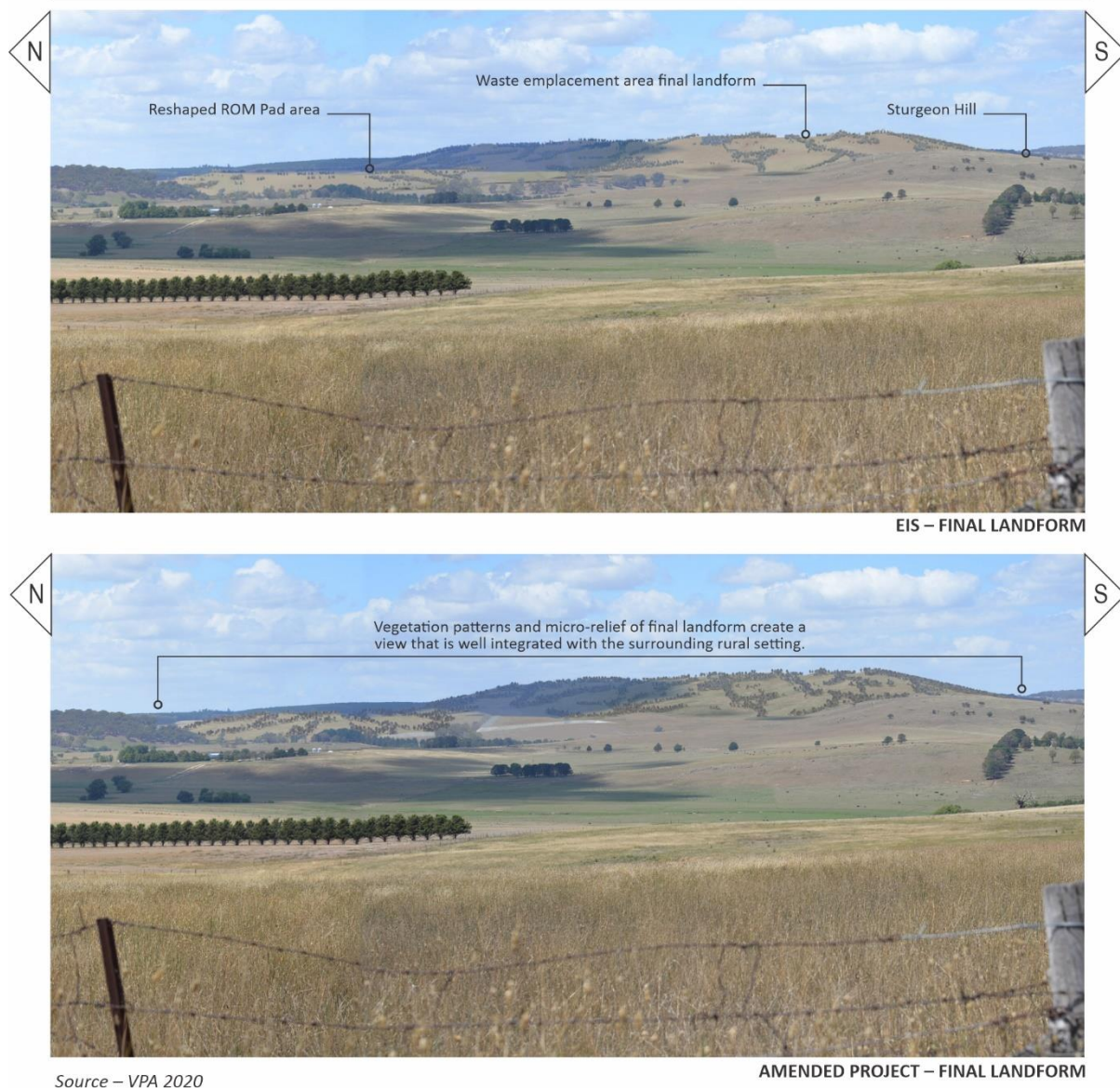


Figure 5.5 VP1 – Guyong Road – Final landform
Comparison between EIS and amended project

5.3 VP 2 – Mid Western Highway

This view is from the highway travelling east. It is representative of the short duration views from the highway whilst passing the Project area southern face. Views onto this face are limited to an approximately 3.2 km long stretch of the highway. Outside this section, such views are screened by intervening topography such as Sturgeon Hill or filtered by roadside vegetation.

As a result of the amended project, there are variations to visibility of mine components over the development period as follows:

Year 2: Development of the waste rock emplacement will continue for the life of the mine as waste rock from operations is deposited. Initially there will be vegetation clearing, soil stripping, stockpiling and creation of new landforms. Benching for development of waste rock emplacement and southern amenity bund is in view with Level 1 visual effects due to exposed earthworks causing high colour contrast and landform contrast with surround landscape setting.

Year 4: Development of waste rock emplacement is within this view. Upper benches and exposed faces create level high visual effect. Previous EIS views at Year 2 had the southern amenity bund at its final height with early rehabilitation across all of the southern face. This view shows early rehabilitation on lower slopes. Visual effects range from Level 1 high to Level 2 high across the face.

Year 6: The montage shows the southern amenity bund at its final height. Southern amenity bund face is near completion with rehabilitation in various levels of establishment. Upper profile is flat with ongoing waste rock emplacement on the upper levels. Visual effects are predominantly Level 2 high across the face. Previous mine plan has bund well established with planting of woodland species implemented. Upper profile was at maximum height with rounded upper profile. Visual effects were Level 2-3.

Year 8: Flat upper profile still under development but not clearly in view as it is above skyline from this view point. Southern face has established grass cover and early woodland establishment lowering visual effect to Level 2-3.

Previous mine plan has rehabilitation vegetation patterns more established lowering the visual effect to Level 3.

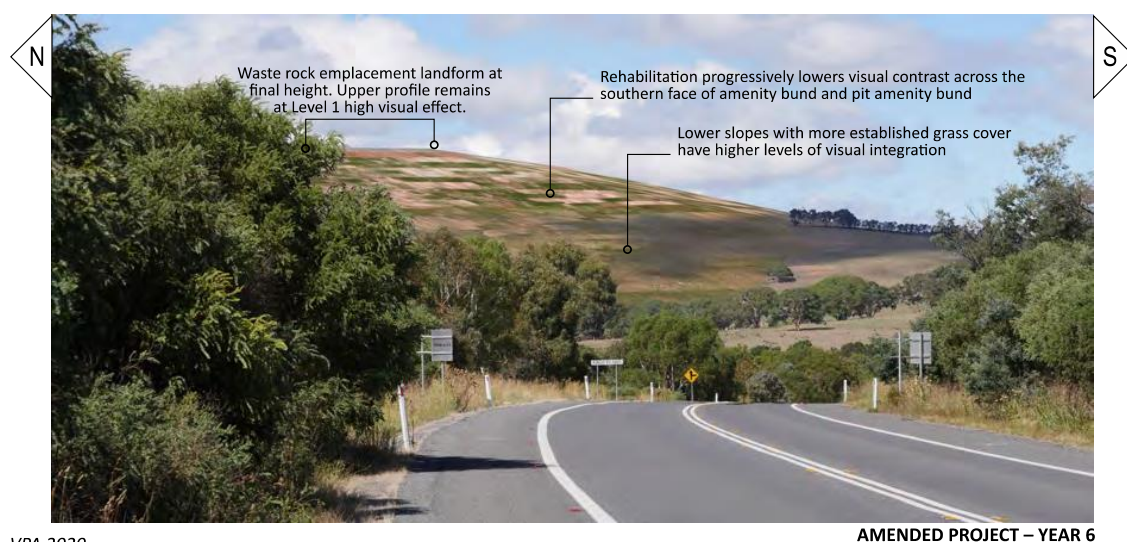
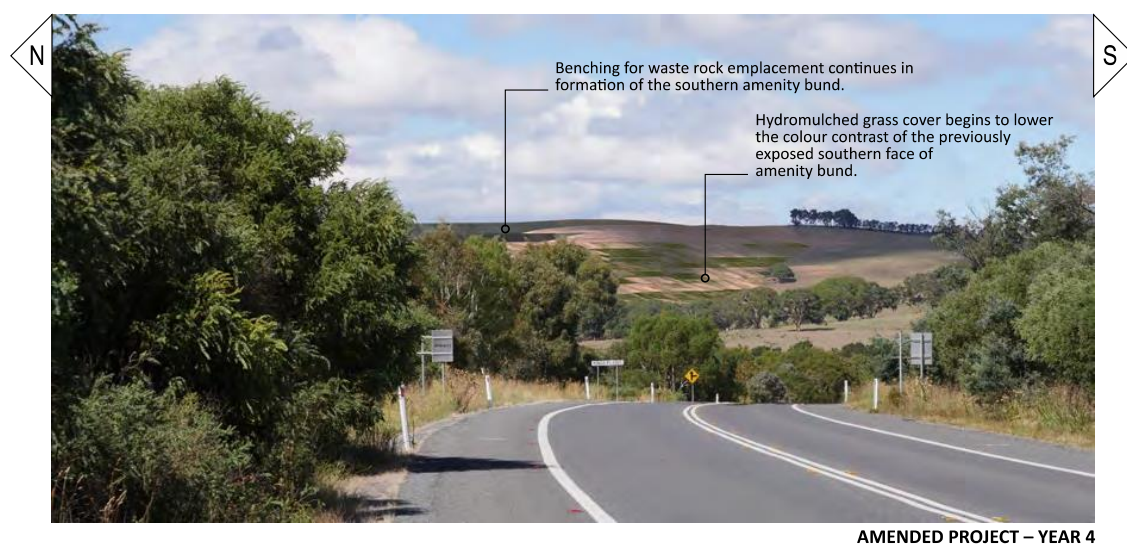
Final landform: Final landform is higher than existing ridgeline, refer to Section 5.1 regarding landform height. Upper profile modulation has improved visual integration with surrounding landforms. Rehabilitation across southern face has lowered contrast and improved overall integration. Visual effects are Level 3.

VP 2: Mid Western Highway west



Figure 5.6 VP2 Mid Western Highway – Existing view and Year 2
Comparison between EIS and amended project

VP 2: Mid Western Highway west



· VPA 2020

Figure 5.7 VP2 Mid Western Highway – Year 4 and Year 6
Comparison between EIS and amended project

VP 2: Mid Western Highway west



Figure 5.8 VP2 Mid Western Highway – Year 8
Comparison between EIS and amended project

VP 2: Mid Western Highway west



Figure 5.9 VP2 Mid Western Highway – Final landform
Comparison between EIS and amended project

5.4 VP 3 – Kings Plains Residence

As a result of the amended project, there are variations to visibility of mine components over the development period as follows:

Year 2: Soil stripping areas to south-west of open cut visible with Level 1 visual effect. Pit amenity bund is lower in elevation with Level 1 visual effect until hydromulched grassing is established within this mine stage. The southern amenity bund is consistently Level 1 visual effect with no rehabilitation at this stage. Minor views of previously screened mine components e.g. soil stockpiles, within the infrastructure area are now in views. Contributing to overall Level 1 visual effect at this mine stage.

Year 4: Rehabilitation has lowered visual effect on the pit amenity bund to Level 2. Southern amenity bund has partial rehabilitation establishment while placement of waste material continues to develop the bund profile. There will be Level 1 – 2 visual effects across the face of southern bund at this stage.

Year 6: Visual effects are lower with rehabilitation implemented across both bunds. Lower slopes are well established (Level 3 visual effects) with upper slopes of southern amenity bund showing higher level 2 visual effects. Final height of bund is achieved within this Year 6 stage.

Year 8: Rehabilitation with woodland plantings becoming established (Level 3 visual effect). Minor views of previously screened Level 1 visual effect mine components e.g. rock stockpiles, within the infrastructure area can be seen above the pit amenity bund.

Final landform: Visual effects are Level 4 with established rehabilitation reducing contrast and improving visual integration with surrounding rural setting.

VP 3: Kings Plains Residence

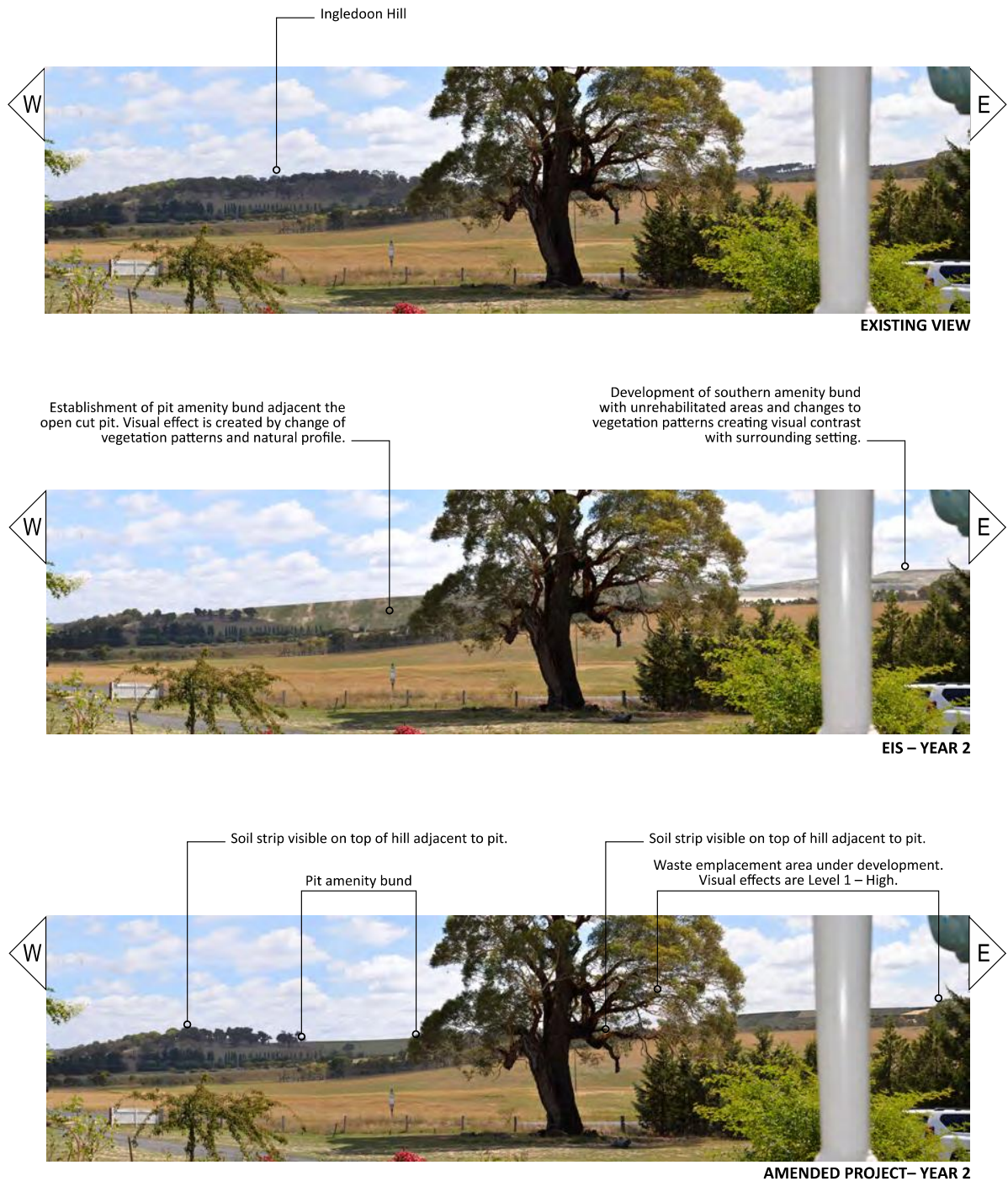


Figure 5.10 VP3 Kings Plains Residence – Existing view and Year 2
Comparison between EIS and amended project

VP 3: Kings Plains Residence

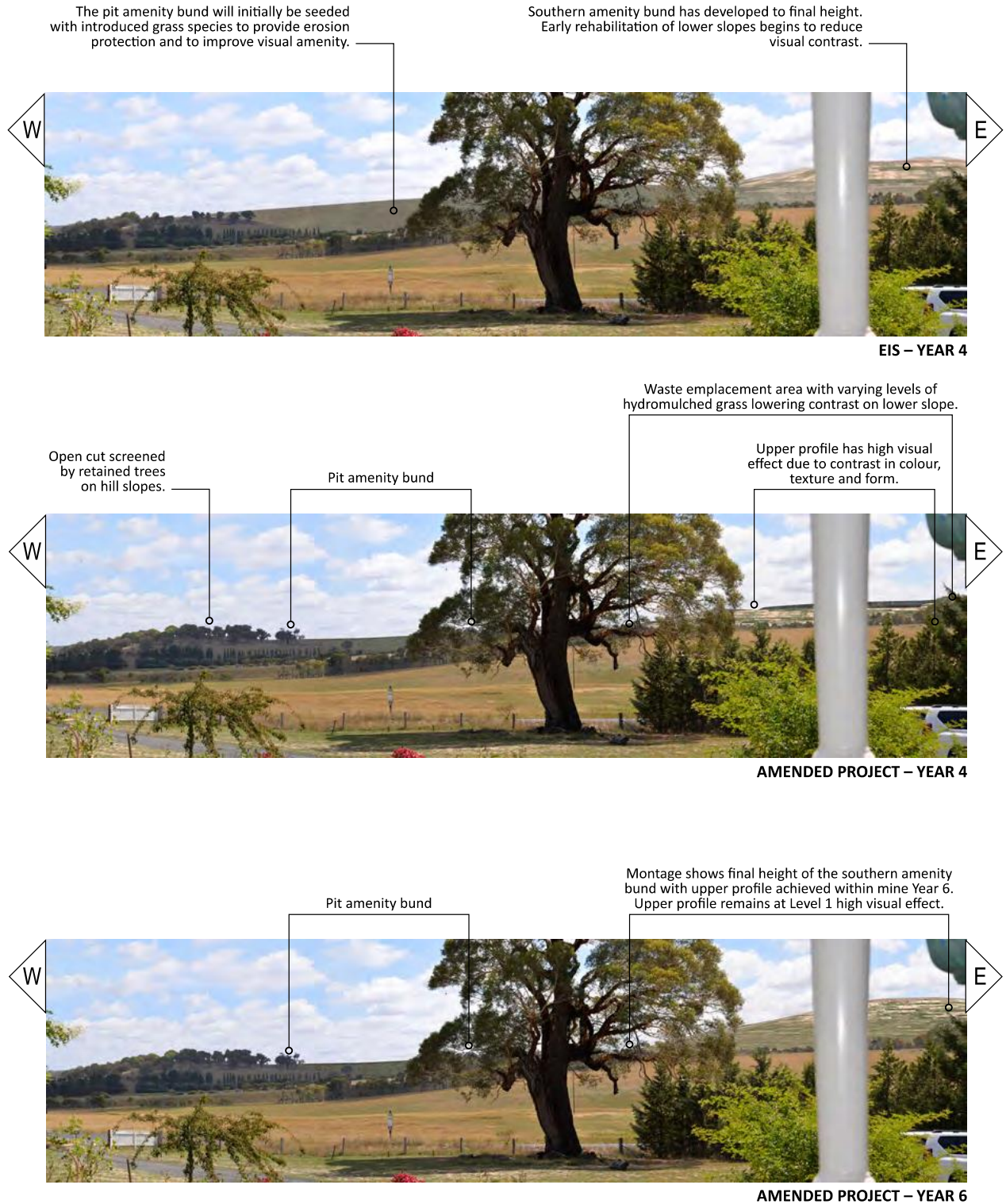


Figure 5.11 VP3 Kings Plains Residence – Year 4 and Year 6
Comparison between EIS and amended project

VP 3: Kings Plains Residence

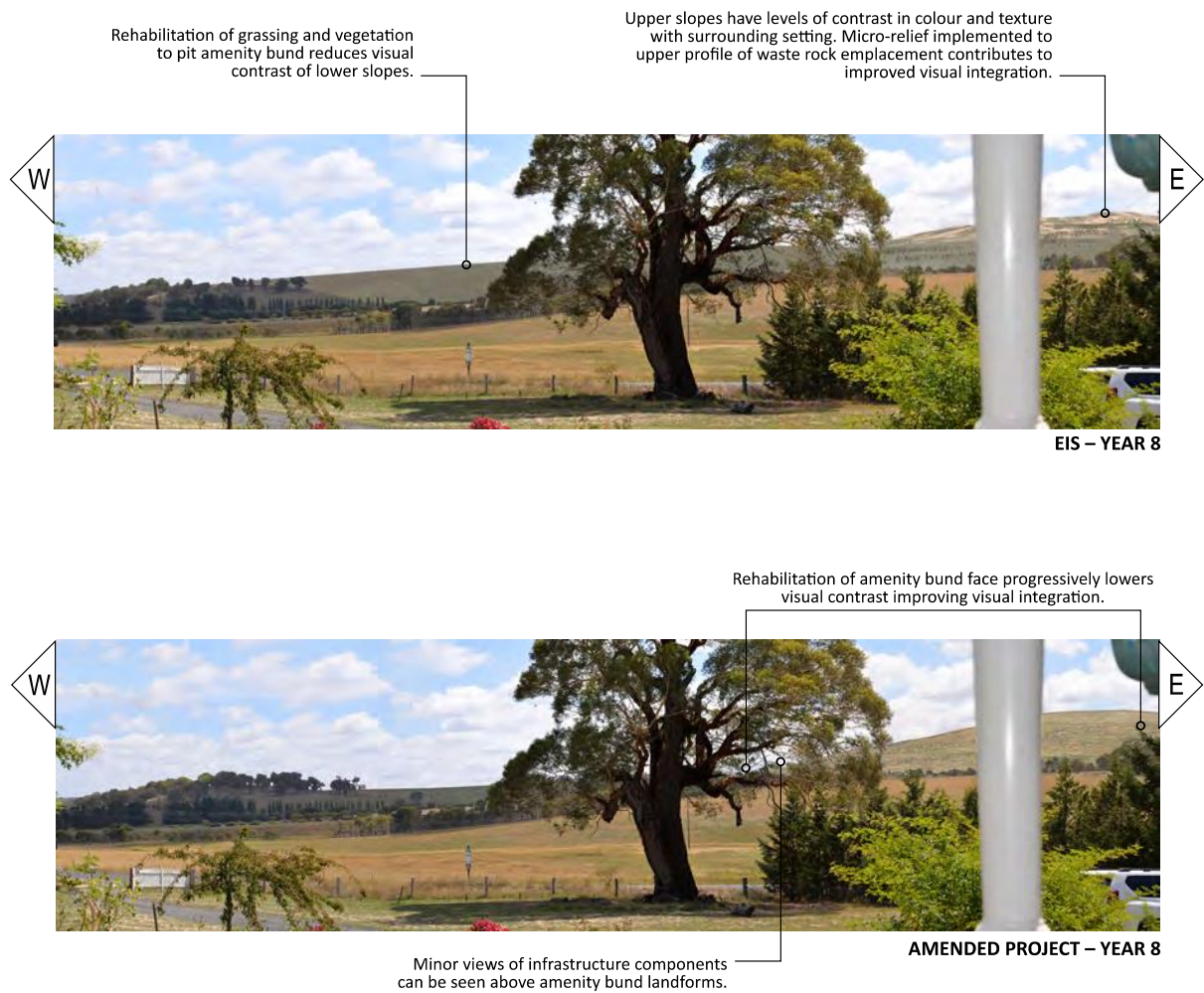


Figure 5.12 VP3 Kings Plains Residence – Year 8
Comparison between EIS and amended project

VP 3: Kings Plains Residence



Figure 5.13 VP3 Kings Plains Residence – Final landform
Comparison between EIS and amended project

5.5 VP 4 – Kings Plains Residence

Year 2: Pit amenity bund is lower in elevation with Level 1 visual effect until hydromulched grassing is established. The southern amenity bund is consistently Level 1 visual effect with no rehabilitation at this stage. Landform under development with benching and areas of stripped soil evident resulting in low visual integration and high contrast with Level 1 visual effects. ROM pad (with stockpiling) within the infrastructure area is visible above the pit amenity bund (previously screened), contributing to overall Level 1 visual effect at this mine stage.

Year 4: Rehabilitation has lowered visual effect on the pit amenity bund to Level 2. Southern amenity bund has partial rehabilitation establishment while placement of waste material continues to develop the bund profile and eastern face. There will be Level 1 visual effects for the views along the eastern face and Level 2 visual effects across the face of southern amenity bund where rehabilitation has been implemented and shows some evidence of establishment. Upper profile does not reflect previous well integrated landform at this stage.

ROM pad is now screened behind the southern amenity bund.

Year 6: Montage shows indicative final height of the Southern amenity bund with waste rock emplacement continuing to achieve profile within the Year 6 mine stage. Rehabilitation results in progressive lowering of visual effects are lower (Level 2) achieving better visual integration and less visual contrast on southern face.

Upper profile on eastern face remains at Level 1 visual effect while still under development to achieve final height and landform within six months.

Visual effects are lower (Level 3) achieving better visual integration and less visual contrast on southern face. The eastern slope remains Level 2 visual effect while hydromulched grass becomes established and improves greening of that view aspect.

Upper profile on eastern face remains at Level 1 visual effect while still under development to achieve final height and landform.

Year 8: Rehabilitation with woodland plantings becoming established (Level 3 visual effect) across all bund faces in this view. Project infrastructure remains screened from views. The upper profile is less articulated, resulting in a less natural landform.

Final landform: Final elevation of waste rock emplacement is higher (refer to Section 5.1 regarding landform height) and pit amenity bund is significantly lower than in EIS.

Visual effects are Level 4 with established rehabilitation reducing contrast and improving visual integration with surrounding rural setting.

VP 4: Kings Plains Residence

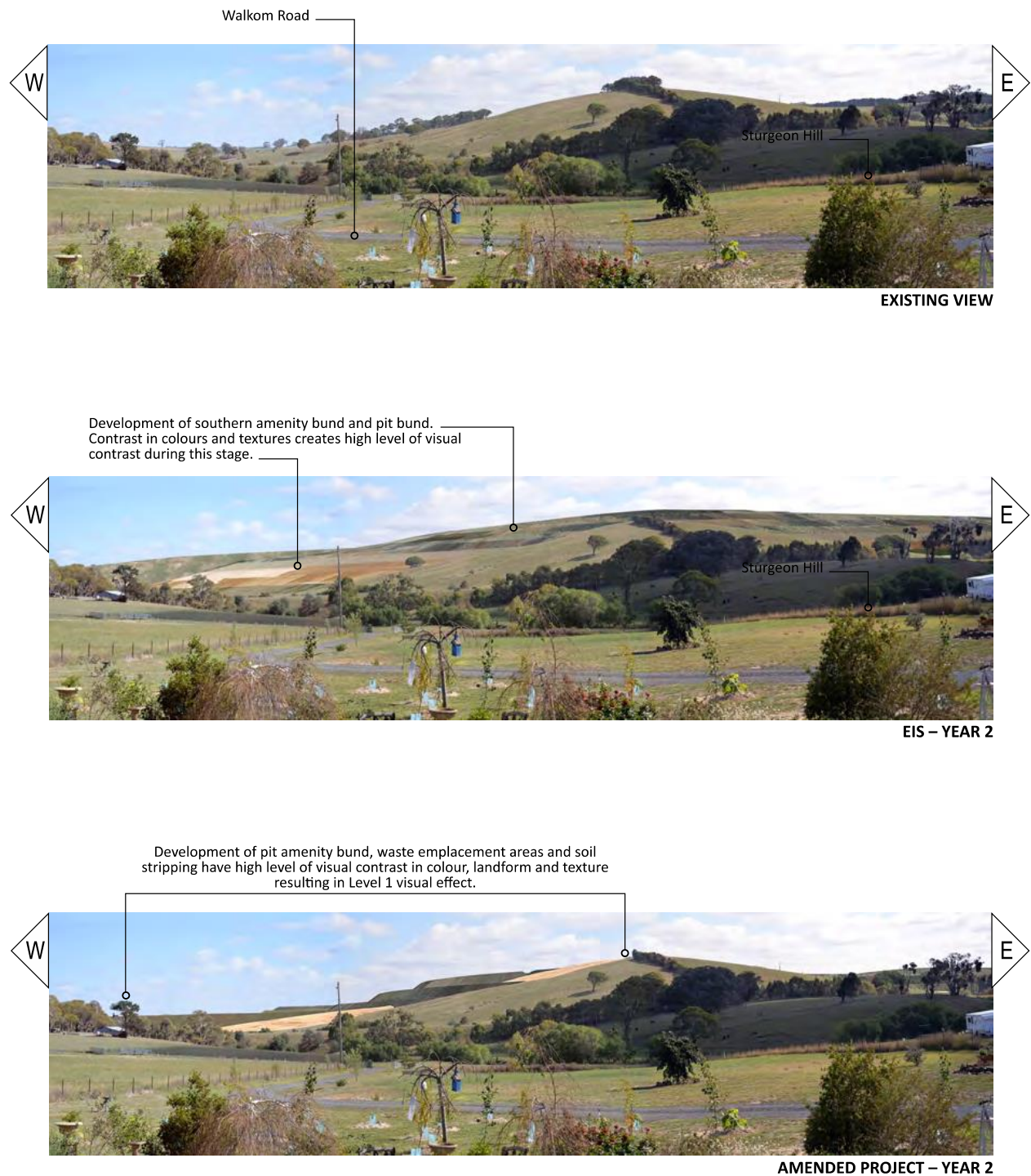


Figure 5.14 VP4 Kings Plains Residence – Existing and Year 2
Comparison between EIS and amended project

VP 4: Kings Plains Residence

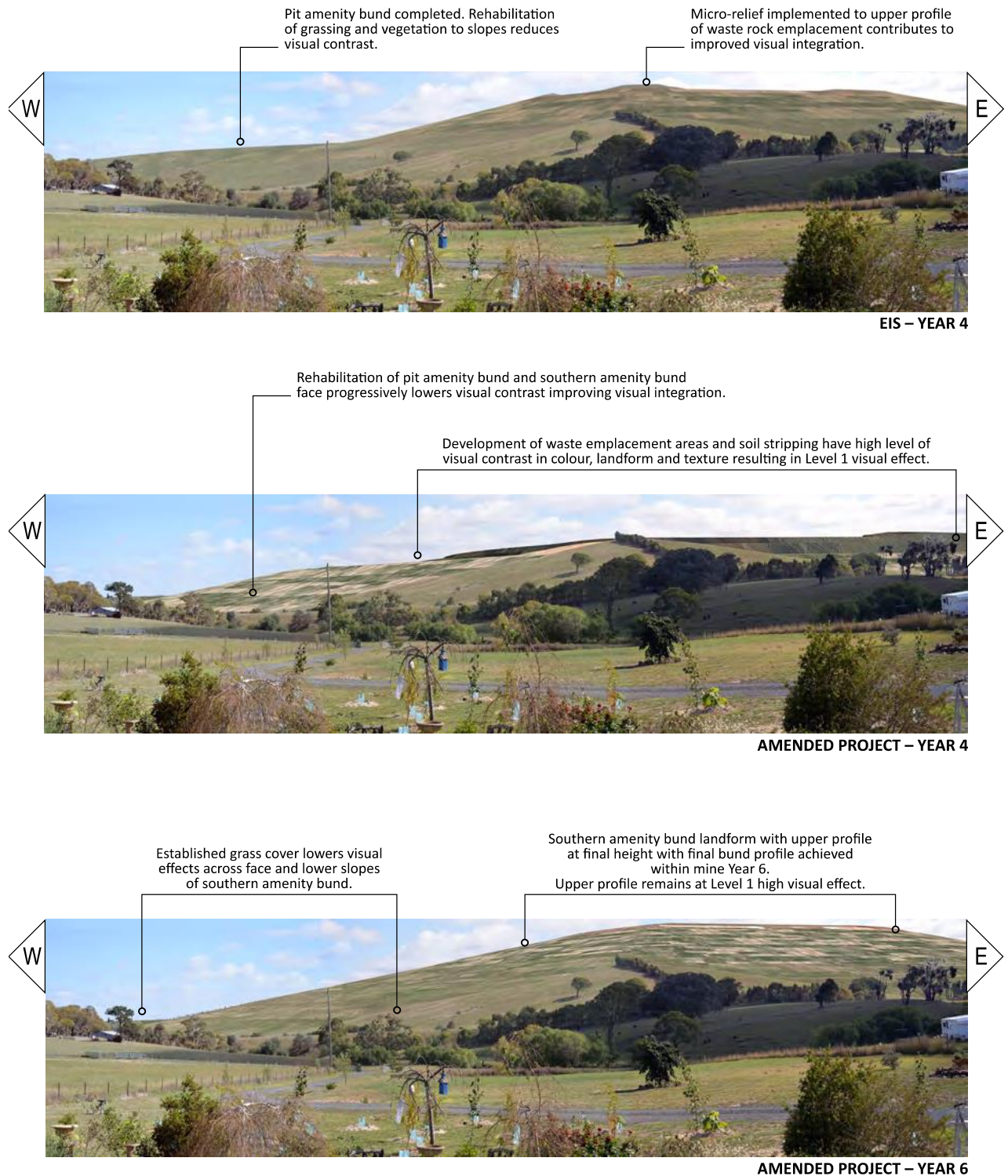


Figure 5.15 VP4 Kings Plains Residence – Year 4 and Year 6
Comparison between EIS and amended project

VP 4: Kings Plains Residence



Figure 5.16 VP4 Kings Plains Residence – Year 8
Comparison between EIS and amended project

VP 4: Kings Plains Residence

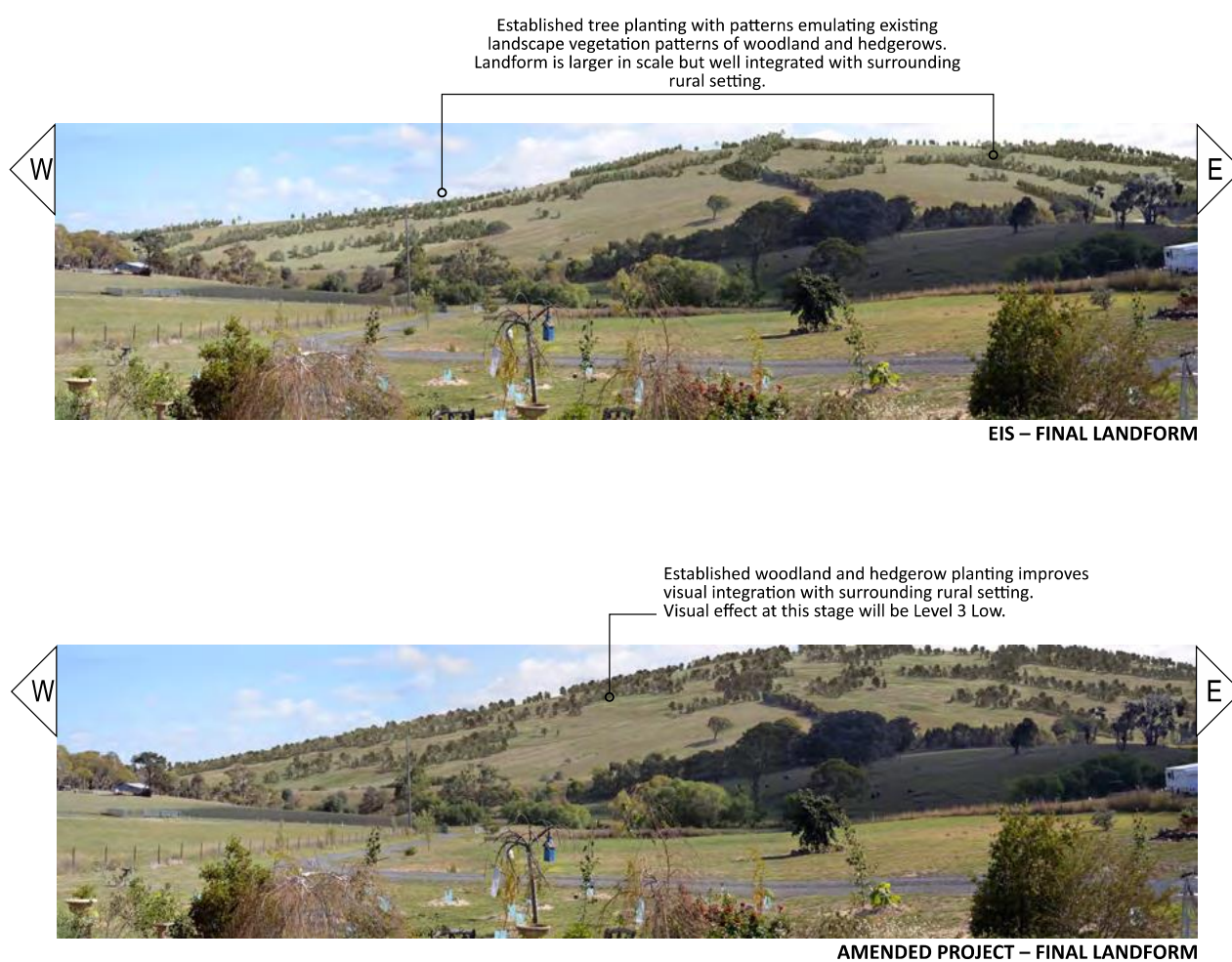


Figure 5.17 VP4 Kings Plains Residence – Final landform
Comparison between EIS and amended project

5.6 VP 5 – Mid-Western Highway (East)

Year 2: The waste rock emplacement creates high levels of visual effects on the lower to mid slopes. The removal of some woodland in the mine development project area is consistent with the EIS. Exposed soil and mine operations around open cut create high colour contrast with surrounding setting. Vegetation and soil has been cleared from southern face of waste rock emplacement which also has high colour and texture contrast. Together they result in Level 1 high visual effects from this view point.

Year 4: Waste rock emplacement creates high levels of visual effects across the mid to upper face of WRE. Benching also contrasts in form with landscape setting. Mine operations create high colour contrast with surrounding setting.

Lower slope of WRE has initial hydromulched grassing implemented which lowers contrast in those zones of southern face. There are consistent Level 1 high visual effects across face of WRE from this view point.

Year 6: Montage shows indicative final height of the Southern amenity bund with waste rock emplacement continuing to achieve profile within the Year 6 mine stage. Rehabilitation results in progressive lowering of visual effects (Level 2) achieving better visual integration and less visual contrast on southern face.

Upper profile on eastern face remains at Level 1 visual effect while still under development to achieve final height and landform within six months.

Year 8: Rehabilitation with woodland plantings becoming established (Level 3 visual effect) across all southern bund face in this view.

Final landform: Final elevation of waste rock emplacement is higher, (refer to Section 5.1 regarding landform height) and pit amenity bund is significantly lower than in EIS, as indicated by upper profile line in Figure 5.31.

Visual effects are Level 4 with established rehabilitation reducing contrast and improving visual integration with surrounding rural setting. The upper profile is modulated consistent with the EIS outcome.

VP 5: Mid Western Highway east

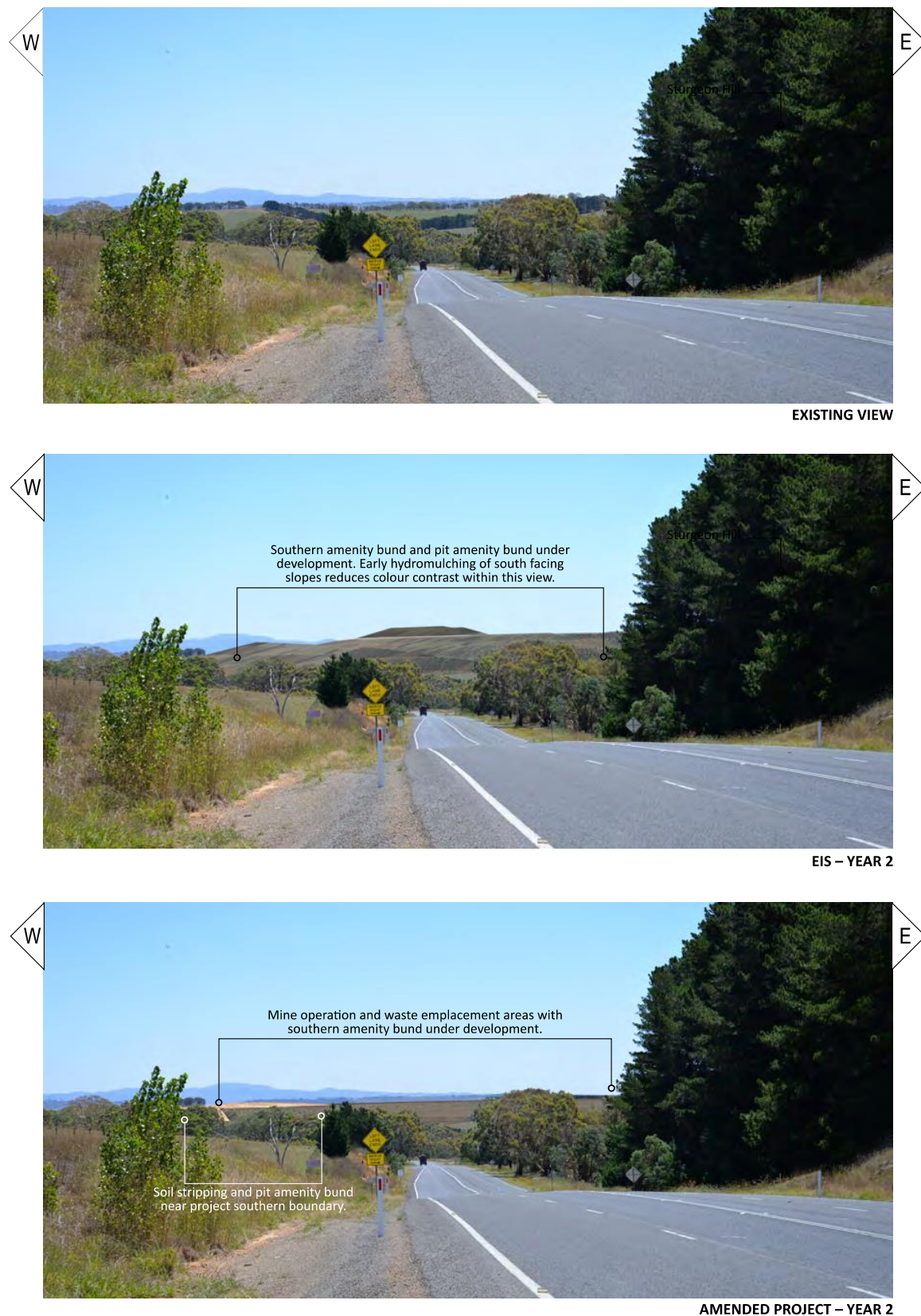


Figure 5.18 VP5 Mid Western Highway (East) – Existing view and Year 2
Comparison between EIS and amended project

VP 5: Mid Western Highway east

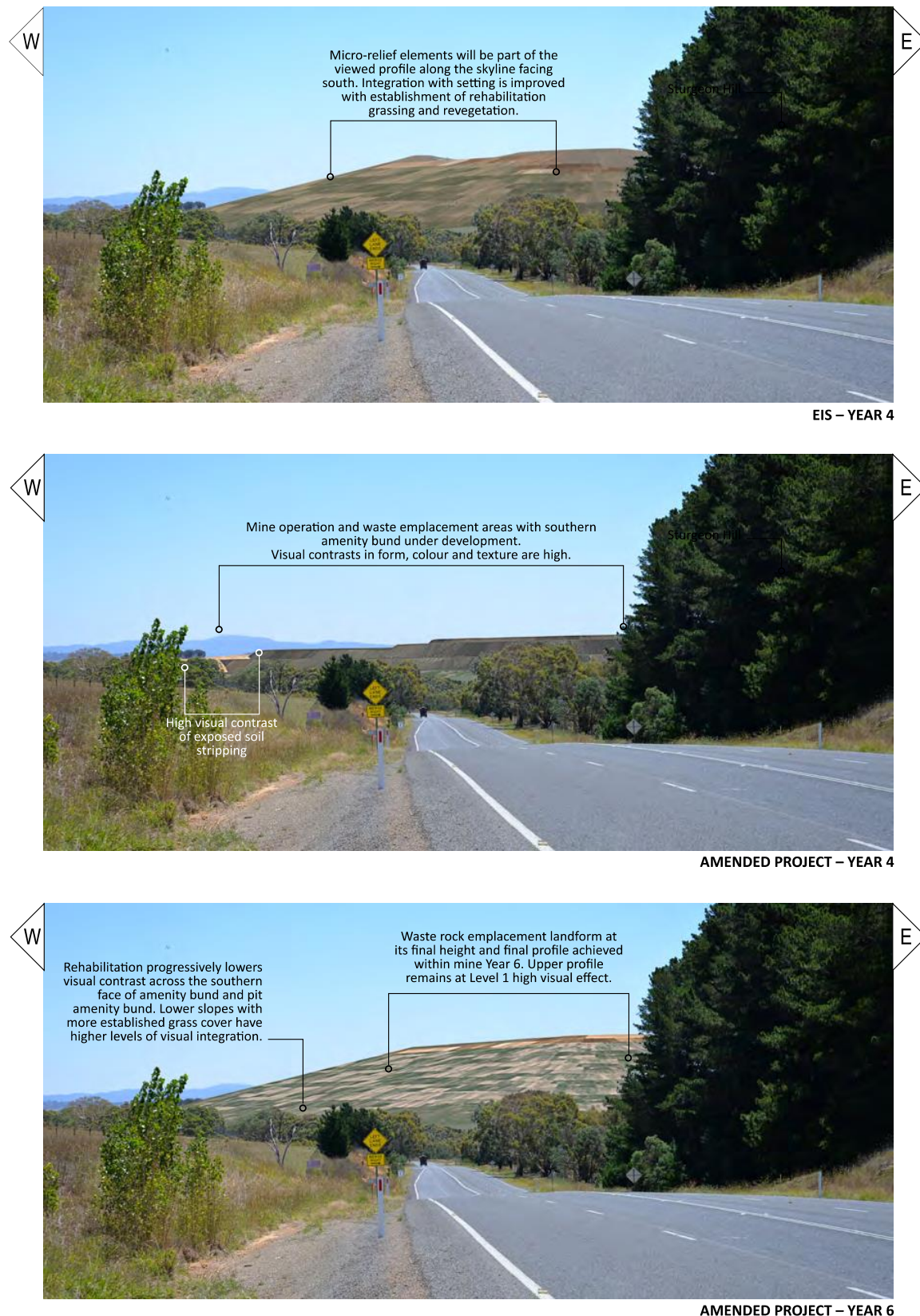


Figure 5.19 VP5 Mid Western Highway (East) – Year 4 and Year 6
Comparison between EIS and amended project

VP 5: Mid Western Highway east



Figure 5.20 VP5 Mid Western Highway (East) – Year 8
Comparison between EIS and amended project

VP 5: Mid Western Highway east

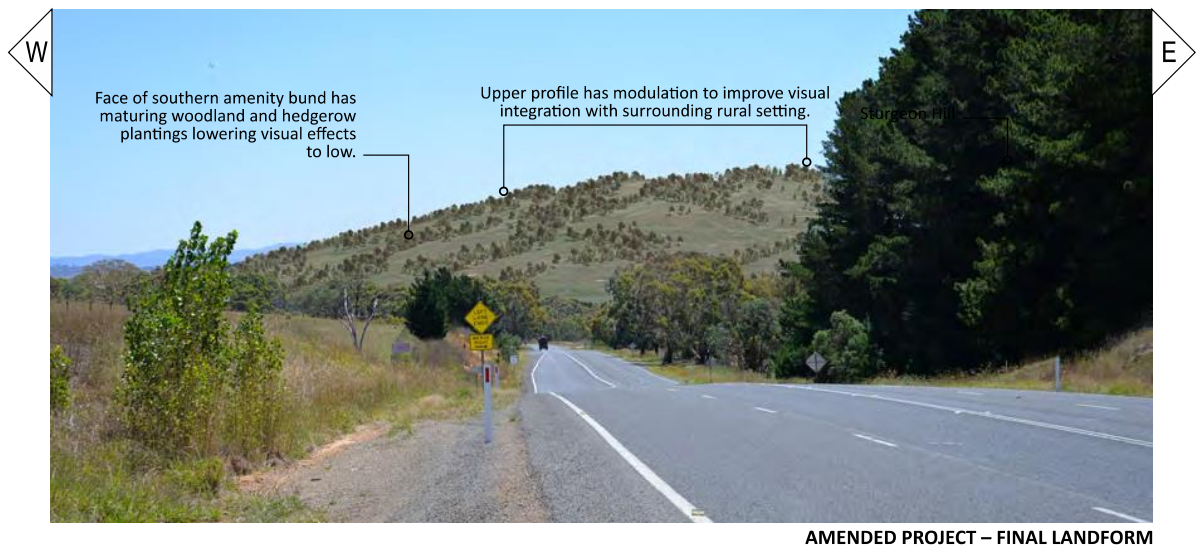


Figure 5.21 VP5 Mid Western Highway (East) – Final landform
Comparison between EIS and amended project

Table 5.1 Visual effects summary

View location	Nearest Visible Project component	Distance	Visual sensitivity	Visual effect	EIS	Amended Project
VP1	Guyong Road	4.5 km	Low	During mine life: Final landform: Long term:	Level 1 – High Level 3 – High Level 4 – Very low	Level 1 – High Level 3 – High Level 4 – Very low
VP2	Mid Western Highway – views east	2.1 km	High	During mine life: Final landform: Long term:	Level 1 – High Level 3 – High Level 4 – Very low	Level 1 – High Level 3 – High Level 4 – Very low
VP3	Kings Plains Residence	1.0 km	High	During mine life: Final landform: Long term:	Level 1 – High Level 3 – High Level 4 – Very low	Level 1 – High Level 3 – High Level 4 – Very low
VP4	Kings Plains Residence	0.83 km	High	During mine life: Final landform: Long term:	Level 1 – High Level 3 – High Level 4 – Very low	Level 1 – High Level 3 – High Level 4 – Very low
VP5	Mid Western Highway – Views west	2 km	High	During mine life: Final landform: Long term:	Level 1 – High Level 3 – High Level 4 – Very low	Level 1 – High Level 3 – High Level 4 – Very low

5.7 Lighting Effects

As a result of the amended project, the previous direct lighting effects from movement of vehicles operating at night will no longer be an issue as operations on the southern face and amenity bund will be limited to daylight hours.

There may be some direct lighting above the pit amenity bund up to Year 4 from within the infrastructure area from stockpiling activity on ROM pad. After year 4 the effects will be more attributed to a strong skyglow effect on the skyline of pit and southern amenity bunds.

Sky glow effects from the Project area will occupy this view at night and create moderate to high contrast to existing dark sky character of the existing setting.

5.8 Summary

As a result of the amended project, the visual effects as represented by these viewpoints remain consistent generally with the EIS with variations due to the scheduling of mine development. Visual effects remain high for longer at various locations during the life of the mine but reduce to Level 3 for the final landform following implementation of progressive rehabilitation over pit amenity bund, southern amenity bund and other areas of disturbance such as soil stockpile areas and ROM embankments.

6 Visual Impact

As a result of the amended project, visual impacts remain at consist levels from all sensitive receptors included in the EIS (VPA 2019). The duration of impacts has extended due to the rescheduled mine development.

6.1 Views from the South:

High visual impacts will be experienced beyond year 4 to Year 6 predominantly by receptors within and near the Kings Plains settlement. Some receptors have more impacted views than others based on distance, orientation of residence, driveways and associated outdoor areas, and intervening trees or low ridgelines that may filter direct views.

These include:

R14, R15, R16, R17, R18, R19, R20, R21, R23, R24, R25, R26, R28, R28A, R29, R30, R31, R32, R33, R34, and R36.

These extended impacts will also be experienced from the Mid Western Highway and Walkom Road adjacent to the development of the waste rock emplacement, pit amenity bund and southern amenity bund.

Visual impacts will be reduced over time following rehabilitation and the lowering of visual effects on the Southern amenity bund and pit amenity bund.

R35 lies within this view sector but has a minor intervening ridge line near the highway topography that will limit the views to the project from most areas within the property.

6.2 Views from the North:

Visual impacts are consistent with the EIS.

6.3 Views from the East:

Visual impacts are consistent with the EIS.

6.4 Views from the west:

There are variations in the visual effects due to amended project , however the visual impacts are consistent with the EIS.

Table 6.1 summarises the visual impacts of the revised mine design in relation to the EIS visual impacts.

Table 6.1 *Visual impact summary*

Receptor	Land Use Sensitivity	Visual Sensitivity	Visual Effects	EIS Visual Impact	Amended Project Visual Impact
NORTHERN VIEW SECTOR					
Rural residences	High	Low (No views)	Low	No impacts	No impacts
Highways	High	Low (No views)	Low	No impacts	No impacts
Local roads (Vittoria Road)	Moderate to Low	Moderate to Low	High to Moderate	Moderate to Low	Moderate to Low

Receptor	Land Use Sensitivity	Visual Sensitivity	Visual Effects	EIS Visual Impact	Amended Project Visual Impact
Rural lands	Low	Low	Low	Moderate to Low	Moderate to Low
EASTERN VIEW SECTOR					
State Forest recreation trails	Low	Low	High to Moderate	Moderate to Low	Moderate to Low
Commercial facilities	High	Low (No views)	Low	No impacts	No impacts
Rural residences	High	High	High	High	High
Local roads (Dungeon Road)	Low	Low	High	Low	Low
Rural lands	Low	Low	High	Moderate to Low	Moderate to Low
SOUTHERN VIEW SECTOR					
Kings Plains Locality	High	High	High	High	High
Rural residences	High	High	High	High	High
Heritage listed items	High	High	High to Low	High to low	High to low
Highways	High	High	High	High	High
Local Roads (Walkom Road)	Moderate	Moderate	High	High	High
Local roads (Kings Plains Road)	Moderate to Low	Moderate to Low	High to Moderate	Moderate to Low	Moderate to Low
Rural lands	Low	Low	High	Moderate to Low	Moderate to Low
WESTERN VIEW SECTOR					
Blayney Township	High	High to Moderate	Low	Moderate to Low	Moderate to Low
Rural residences	High	High	High	High	High
Recreation areas Billy Soo Rest area Church Hill Rotary Lookout Heritage Park	High	Moderate	Low	Moderate to Low	Moderate to Low
Commercial Facilities	High	High to Moderate	Low	Moderate to Low	Moderate to Low
Highway	High	Moderate	Moderate to Low	Moderate to Low	Moderate to Low
Local roads (Guyong Road)	Moderate to Low	Low	High	Moderate to Low	Moderate to Low
Rural lands	Low	Low	High	Moderate to Low	Moderate to Low

6.5 Impact of Night Light

In addition to those impacts identified in the EIS, there will be lighting impacts associated with any street lighting if installed at the access road intersection with the Mid Western Highway as per TfNSW safety guidelines. This light will impact residences in the vicinity of this intersection. Localised vegetation near the intersection may provide some filtering of lighting effects.

The revised alignment of access road will create headlight spill from mine vehicle movements. This would be viewed from residences on north facing hills adjacent this access road particularly (R15).

There will be reduced light levels from the development of the pit amenity bund and southern amenity bund as work will be limited to the daytime period.

7 Mitigation

This section of the addendum provides an update on the mitigation measures as identified in Section 9 of the VIA (Appendix S of the EIS) in relation to key amendments as identified in Section 1.2. It also summarises early off-site residential visual mitigation measures that have been undertaken to date prior to the EIS approval.

7.1 Project design mitigation measures

As a result of the amendments to the project, incorporated features remain consistent except for the changes as follows with visual assessment responses in boxes:

- Priority development of the pit and southern amenity bunds to screen development of open cut, infrastructure and haul roads at early stage of mine development has been;

- *The amended waste emplacement schedule is a key part of the project amendments and has achieved a reduction in noise levels at nearby residences while extending the development time frame for the southern amenity bund, resulting. Visual impacts are unchanged but will not be limited to the two – four years as per the EIS.*

- Protect and maintain existing trees and vegetation screening below open cut mine clearing zone from mine machinery and damage by creating vehicle and machinery exclusion zones.

- *Amendments to the project have resulted in clearing of some of the above vegetation screening below the open cut mine with a visual screen of trees at upper edge of pit retained.*

7.2 Waste Rock Emplacement Area

- As the highest visual priority, complete the southern face of the amenity bund and waste rock emplacement to provide a visual and landscape buffer to ongoing within the Project area as seen from residences to the south, most significantly Kings Plains.

- *The amended waste emplacement schedule is a key part of the project amendments and has achieved a reduction in noise levels at nearby residences while extending the development time frame for the southern amenity bund, resulting. Visual impacts are unchanged but will not be limited to the two – four years as per the EIS.*

7.3 Lighting impacts

As a result of the amended project, mine operations plan needs to regulate vehicle movement along the site access road to ensure headlights are where possible on low beam and movement is rationalised to limit traffic after dark.

7.4 Off-site treatments

As a result of the amended project, additional residences to the south and south-west of the project require further consideration for residential landscape mitigation treatments to screen or mitigate visual impacts.

Residence (R15) adjacent the amended site access road intersection is to be included in those residences with partial views.

Views will vary from different residences due to screening by intervening topography and vegetation (either natural or part of visual mitigation planting). All sectors with the exception of the southern sector have areas of view that do not include mine operational areas.

Further engagement was undertaken with potentially impacted landholders via the community workshop and face to face consultations held in October 2019. Further detailed review mitigation measures were identified and discussed, followed by development of conceptual landscape plans for 10 residences within Kings Plains.

From feedback by the REGIS community liaison officer, early off-site tree screen planting has been implemented. Also concept plans for three representative residences are in advanced stages with eight more contacted and plans are progressing.

The intention is for this representative residence to reflect effectiveness of a range of off-site residential visual mitigation measures.

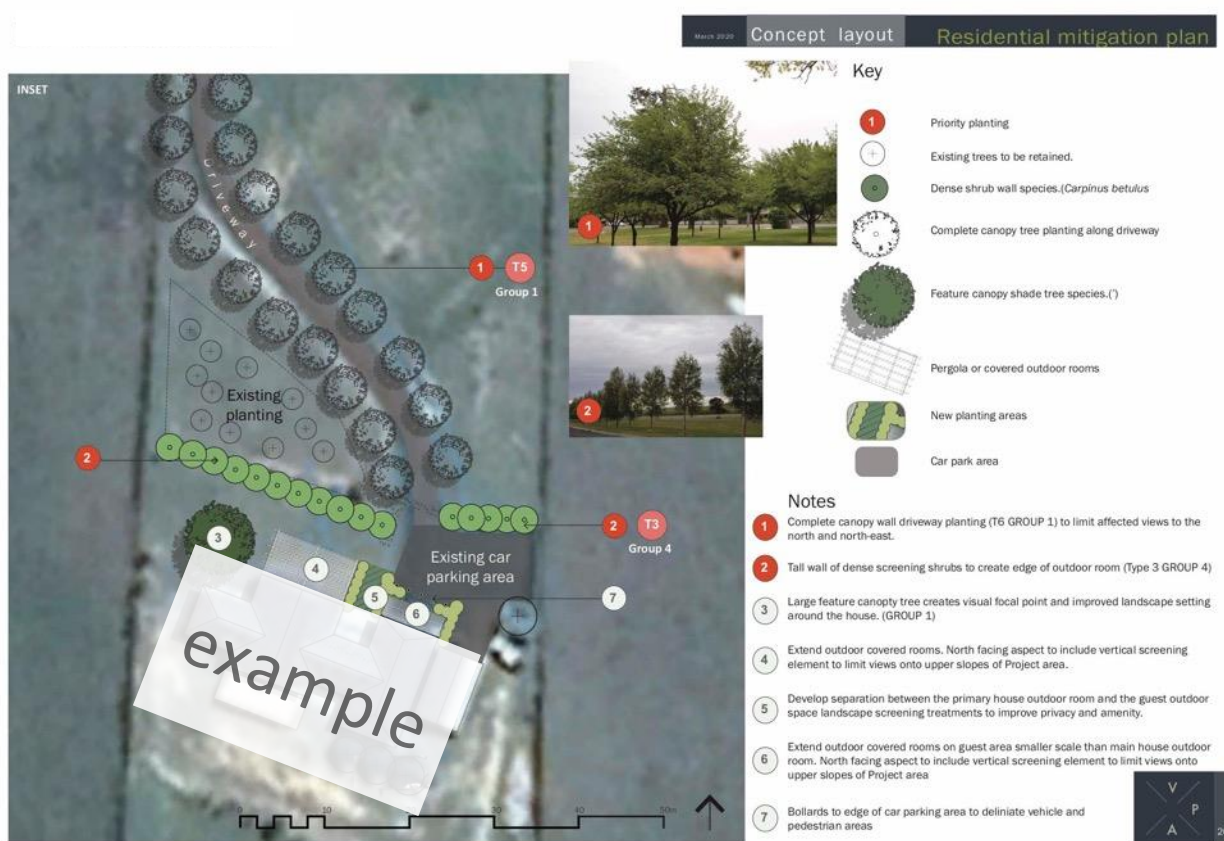


Figure 7.1 Residential mitigation concept plan example

7.5 Negotiated agreements

Project amendments have been made specifically to reduce predicted noise levels at private landholders in the vicinity of the mine development 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).

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).

These agreements include voluntary visual mitigation measures (including soft and hard landscaping treatments).

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 Year 1; and a property in proximity to the mine site access intersection (R15).

These receptors are R15, R17, R19, R21, R23 and R24, R25, R26, 28, R28a, R29, R30, R31, R32, R33, and R34.

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) 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 agreements being progressed to 20.

These landholders have been provided the proposed mitigation treatments along with letters outlining options for property specific mitigation plans which included:

Voluntary mitigation measures

- a. First Stage – immediate implementation of visual mitigation
- b. Second Stage – upon approval, development of further noise and/or visual mitigation measures
- c. Third Stage – upon approval a 5-year option to relocate

The plans may also include activating alternative use areas or outdoor rooms on properties to focus recreational space away from impacted view zones.

In addition, meetings have also taken place and continue to take 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 are considered to be of a nature that:

- tree planting would assist in mitigation changes to amenity; and
- residents are willing to take up the offer.

8 Conclusions

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. 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.

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 waste rock emplacement for longer.

Views from other view locations to the north, east have had no discernible changes to the visual effects and visual impacts.

The final southern amenity bund landform is higher in elevation than the EIS mine design. This change must take into consideration that the montages in Section 5 reflect design contingency factors that allow for swell in the waste rock as described in Section 5.1. The micro-relief additions to height are an important part of the detailed micro-relief design that aims to improve final visual outcomes for this mine landform.

This revised final landform will still 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; these areas are generally screened from the south, south-west and west by local topographic features thereby limiting visual impacts from this project component.

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.

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.

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.