

INTEGRA MINE COMPLEX

Emplacement Area Modification (08_0101 MOD 1 and 08_0102 MOD 1)

1 BACKGROUND

Integra Coal Operations Pty Ltd (Integra), a subsidiary of Vale Australia, operates the Integra Mine Complex, approximately 10 kilometres (km) northwest of Singleton in the Hunter Valley (see Figure 1).

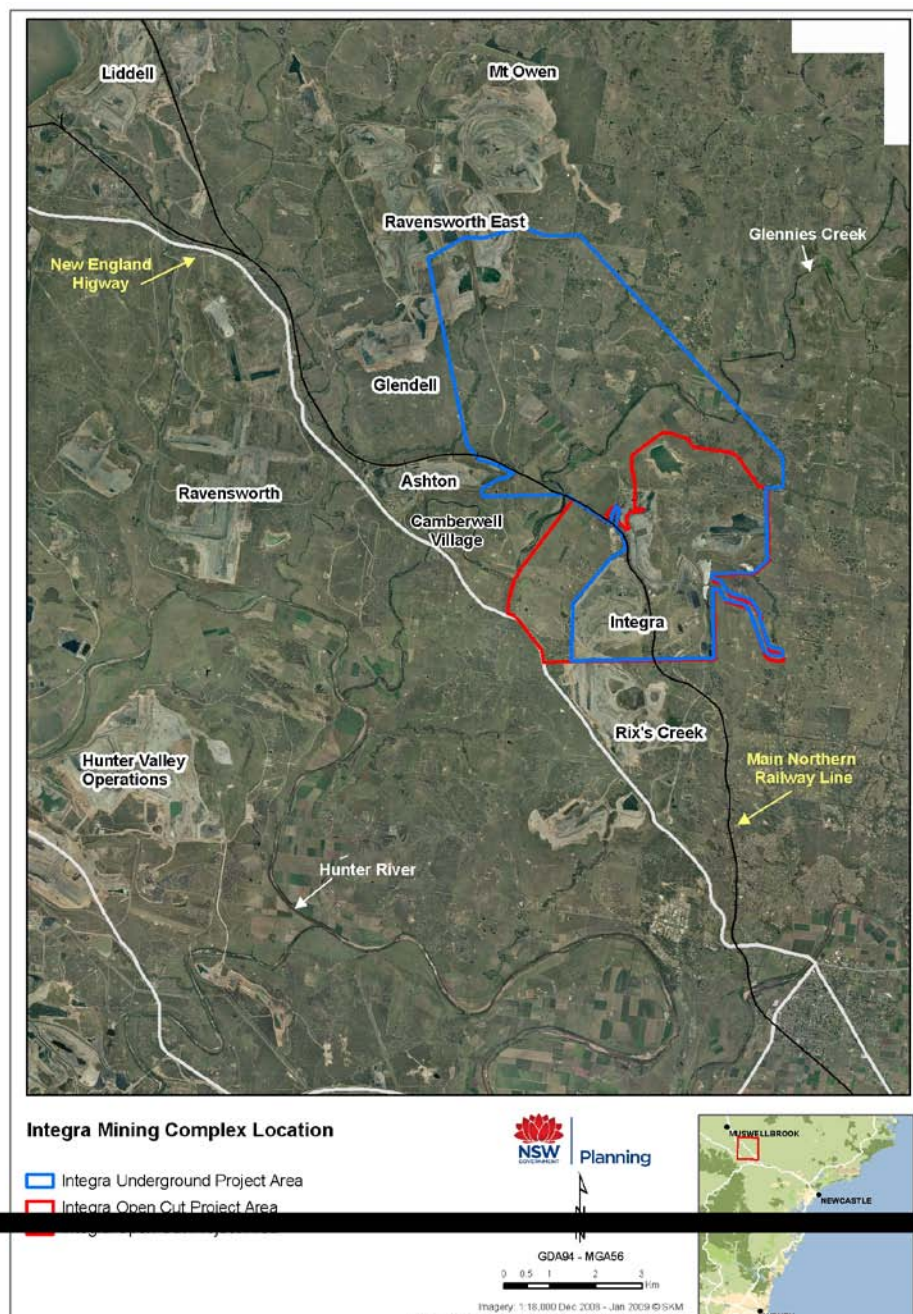


Figure 1: Location of the Integra Mine complex

The Integra Mine Complex is located in an area that is dominated by large scale and intensive mining activity (see Figure 1), including:

- Xstrata's Mt Owen Mine Complex to the north;
- Yanzhou's Ashton Mine Complex, Xstrata's Ravensworth Mine Complex and Rio Tinto's Hunter Valley Operations Mine Complex to the west; and
- Bloomfield Collieries' Rix's Creek mine to the south.

The nearest settlement is Camberwell Village, which lies about 2.5 km west of the Integra Mine Complex (see Figure 1). Mining companies now own most of the properties in the village. Rural residences are located to the north, east and south east of the Integra Mine Complex.

Key infrastructure in the area includes the regional road network (including the New England Highway, Glennies Creek Road, Bridgman Road, Stony Creek Road and Middle Falbrook Road); and the Main Northern Railway line and associated Mt Owen Rail Spur, which crosses the underground mining operations.

The Integra Mine Complex comprises 3 separate mining areas and a range of surface facilities (see Figures 2 and 3), including the:

- Camberwell open cut mine, where extraction is complete in the north pit, nearing completion in the south pit and due to commence in the western extension;
- Glennies Creek open cut mine (now known as the North Open Cut), where extraction is scheduled to be carried out for another 9 years; and
- Glennies Creek underground mine, where extraction is nearly complete in 10 of the 17 longwall panels in the Middle Liddell coal seam.

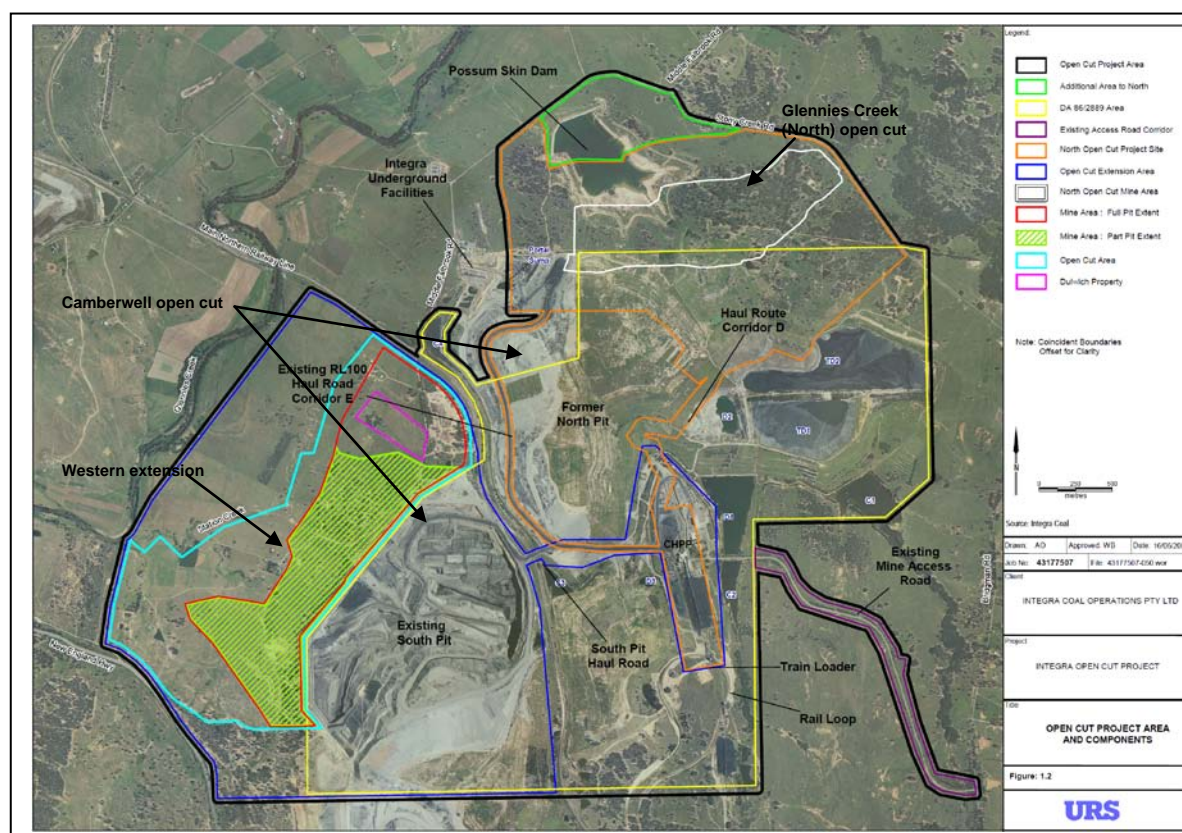


Figure 2: Open Cut Mining Operations

The complex is regulated by a single Ministerial project approval (08_0101 and 08_0102) granted on 26 November 2010. Under this 2010 project approval, Integra is allowed to extract up to 10.5 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal from its combined open cut and underground operations, see Table 1.

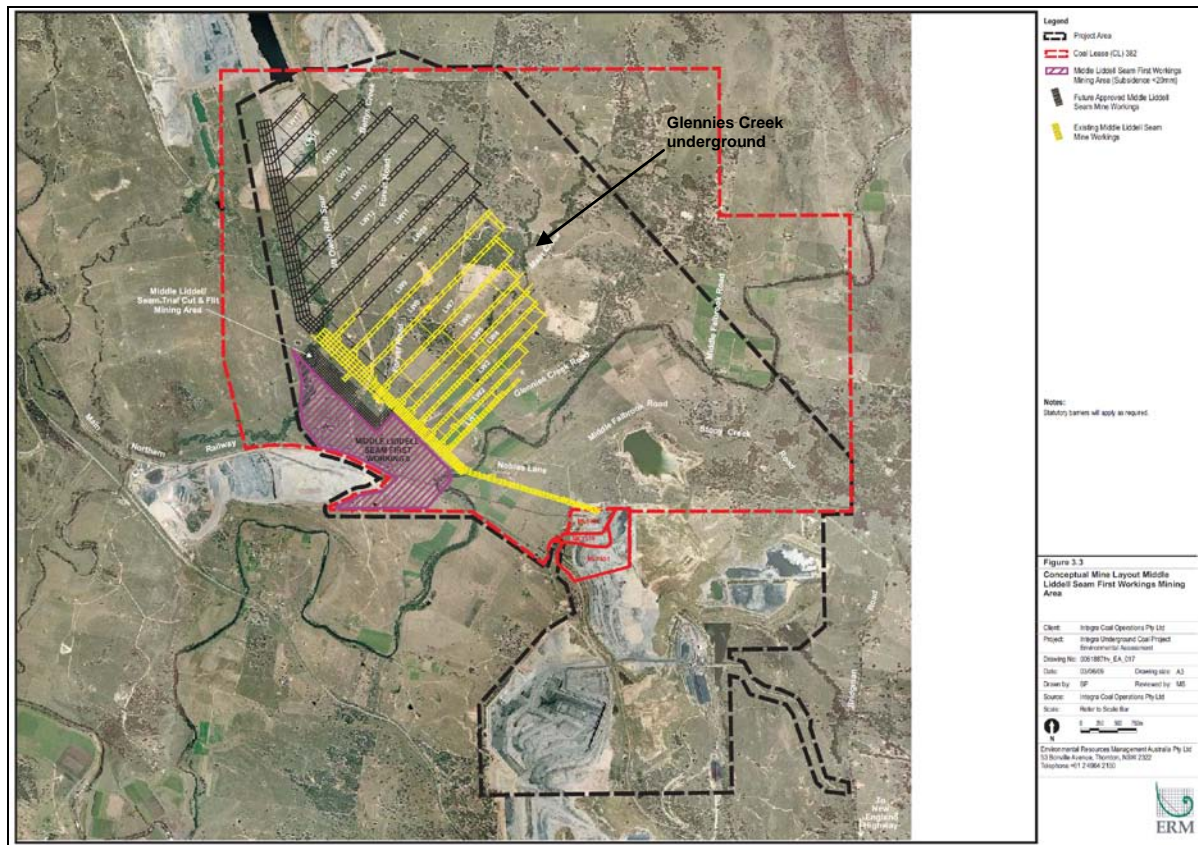


Figure 3: Underground Mining Operations

Table 1: Approved Operations Integra Mine complex

Aspect	Underground	Open Cut
Approval	MP 08_0101, expires in 2035	MP 08_0102, expires in 2022
Remaining Life	24 years	11 years
Mine Reserve	71 million tonnes	38 million tonnes
Mining Areas	Hebden, Barrett and Middle Liddell coal seams	North Open Cut; Camberwell south pit; western extension
Extraction Rate	4.5 Mtpa ROM coal	6 Mtpa ROM coal
Coal Processing	Camberwell Coal Handling and Preparation Plant (CHPP)	
Coal Transport	Coal is transported to the CHPP by internal haul roads, and then railed to the Port of Newcastle via the Main Northern Railway line	
Overburden, reject and tailings	Rejects emplaced on site, either in pits or tailings dams in approved areas of disturbance	Some in-pit and out-of-pit overburden emplacement. Coarse reject and tailings are disposed of in pits or tailings dams in approved areas of disturbance
Infrastructure	<ul style="list-style-type: none"> Camberwell CHPP; coal loader and rail loop; gas drainage boreholes; ventilation shaft and main fans; surface facilities including offices and stores 	<ul style="list-style-type: none"> Camberwell CHPP site access roads and internal haul roads coal loader and rail loop workshop, stores, vehicle wash bays and sewage treatment infrastructure office building and parking
Biodiversity Offset Areas	519 hectares (ha) comprising the Northern, Southern, Western, Supplementary, Bridgman and additional Biodiversity Offset Areas (BOAs)	

The 2010 project approval consolidated numerous development consents and project approvals covering underground and open cut mining operations since 1990, including the Glennies Creek Open Cut Project (MP 06_0073). This approval related specifically to the Glennies Creek Open Cut (now known as the North Open Cut) as shown on Figure 4. The most relevant conditions of MP 06_0073 that were consolidated into the 2010 project approval relate to biodiversity.

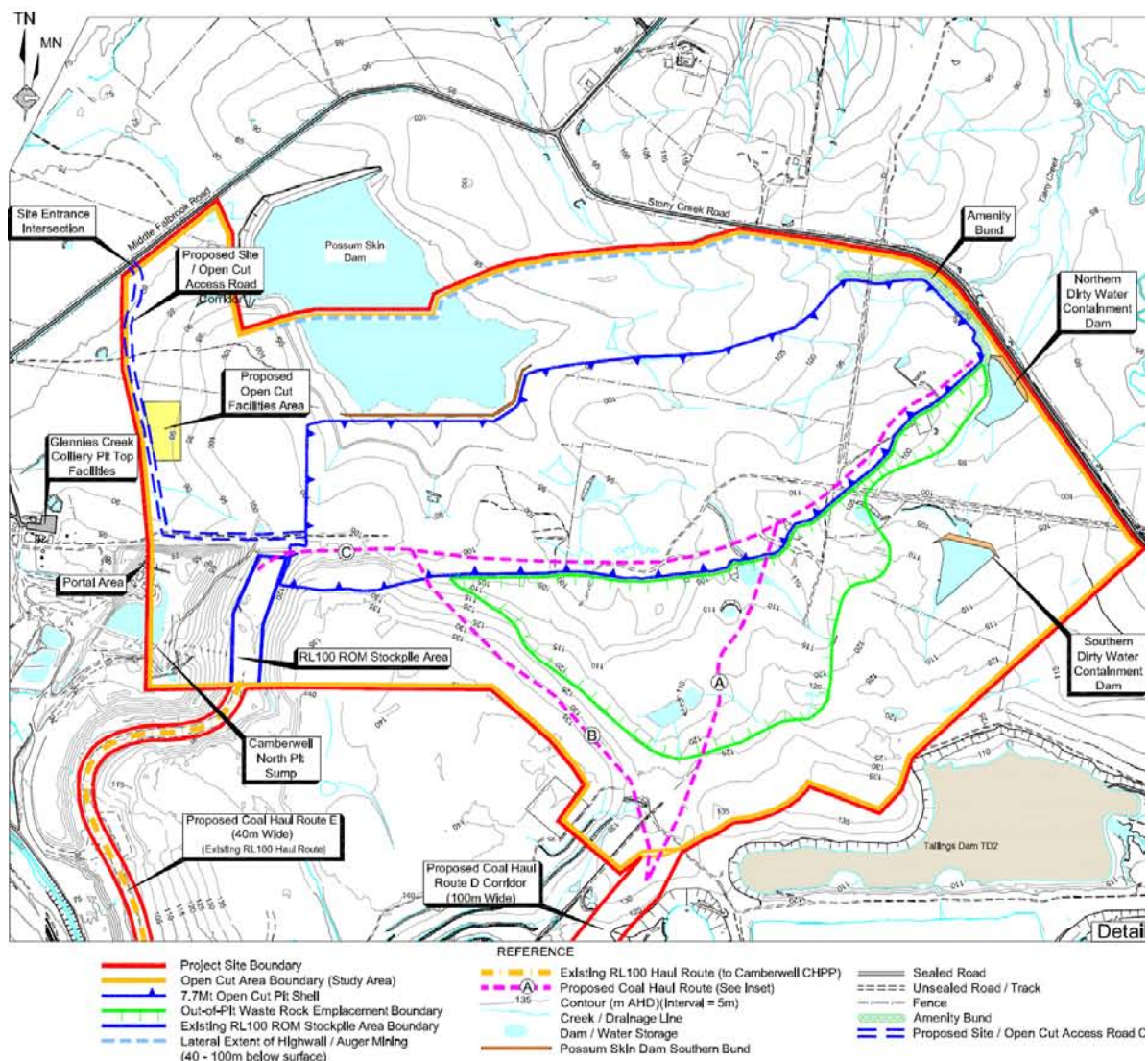


Figure 4: Approved North Open Cut (blue line) and associated Overburden Emplacement Area (green line)

2 PROPOSED MODIFICATION

On 18 November 2011, Integra submitted an application to the Department, seeking to modify the Minister's approval for the Integra Mine Complex under Section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Integra is seeking to address constraints to continued operations at its North Open Cut pit and is proposing to:

- extend the area and height of the approved out-of-pit overburden emplacement at the North Open Cut (the "NOC dump"); and
- relocate crib huts and associated infrastructure to accommodate the extension to the overburden emplacement area.

Integra is also proposing to:

- extend the timeframe for submission of a biodiversity offset strategy for the mine complex by a further 15 months; and
- extend the timeframe for installation of an overland conveyor by a further nine months.

The proposed modifications are summarised below, depicted on Figure 5, and described in detail in the Environmental Assessment (EA) supporting the request (see **Appendix E**).

Extension of overburden emplacement area (Area 9)

Integra recently reassessed the overburden emplacement requirements for the North Open Cut and identified a critical lack of dump space that would affect continued extraction from the pit. To address this constraint, Integra is seeking to extend the area and height of the NOC dump to the east and south, into an area referred to as ex-pit dump Area 9 (see Figure 5).

The proposed extension covers an area of 32 ha, extending the approved out-of-pit emplacement from 43 ha to a total of 75 ha. Figure 5 shows the approved emplacement area (labelled NOC dump) and the proposed extension (labelled Area 9). The extension would also involve the capping of Tailings Dam No. 3 (labelled TD3). The height of the emplacement would be increased from the approved 135 metres Australian Height Datum (m AHD) to 141 m AHD. The extension is required to provide sufficient overburden dumping space until 2015, allowing continued extraction from the North Open Cut until that time.

The increase in overburden emplacement height is also required to address a current non-compliance with the project approval. In October 2011, the Department identified that Integra had placed material to a height of 145 m AHD at the NOC dump, which is inconsistent with the proposed maximum height of 135 m AHD in the EA for the Glennies Creek project application (MP 06_0073, see **Appendix G**). The EA for the 2008 Integra Open Cut project application (MP 08_0101, see **Appendix F**) did not seek an increase in this maximum approved height for the NOC dump, and so (in accordance with the 2010 project approval) the previous limitations included in the EA for MP 06_0073 continue to apply. Integra agreed to remove material to reduce the height of the NOC dump to 141 m AHD and apply for a modification to legalise the height to 141 m AHD.

The proposed extension to the NOC dump forms part of a broader strategy to provide sufficient overburden dump space for the duration of mining in the North Open Cut. Integra has prepared a three stage strategy, as shown in Table 2.

Table 2: Integra Mine Complex Dumping Strategy

Stage	Description	Status
1	Remove material to reduce NOC dump height to 141 m AHD	Completed December 2011
2	Extend NOC dump to the east and south (Area 9) and cap Tailings Dam No. 3. Provides capacity to 2015.	The subject of this modification (Mod 1)
3	Further extend NOC dump to the east (Area 11), into Southern Biodiversity Offset Area. Provides capacity beyond 2015.	The subject of a separate modification (Mod 2) for which Director-General's requirements were issued in December 2011.

Relocate crib huts and infrastructure

Integra proposes to relocate an existing crib hut site and associated infrastructure to accommodate the extension to the NOC dump. The crib site would be relocated from the eastern side of the emplacement area to the west (see Figure 5). Facilities to be relocated include two portable buildings, an ablution block, office and a 5,000 litre water tank. Some additional facilities would be constructed at the new crib site, including a second 5,000 litre water tank, a diesel/electric generator and a covered truck parking area (8.5 m²).

Extend timeframe for submission of biodiversity offset strategy

Integra is proposing to extend the timeframe for meeting conditions 42 and 43 of Schedule 3 of the 2010 project approval relating to implementation of the biodiversity offset strategy for the overall mine complex. Currently:

- condition 42 requires a revised offset strategy by the end of June 2011; and
- condition 43 requires arrangements to be in place for providing long-term security for all areas in the revised offset strategy by the end of December 2011.

Integra sought an extension to 30 June 2012 (amended during the assessment process to 30 September 2012) to address both conditions. Investigations into the biodiversity offset areas have shown that they overlie substantial coal resources. To prevent future land use conflicts, Integra proposes to carry out further detailed investigations to determine whether these areas remain appropriate as a biodiversity offset, or whether an alternate strategy would provide a better long term biodiversity outcome. Therefore, Integra is seeking an extension of time to carry out these additional investigations prior to submitting an offset strategy in accordance with condition 42. Similarly, Integra is seeking additional time to investigate the mechanisms for providing long-term security over the offset areas under condition 43.

Integra proposes to submit a separate modification application to revise the biodiversity offset strategy, address these potential land use conflicts and address Stage 3 of the dumping strategy outlined above. Director-General's requirements for the assessment of this modification (the proposed Mod 2) were issued in December 2011.

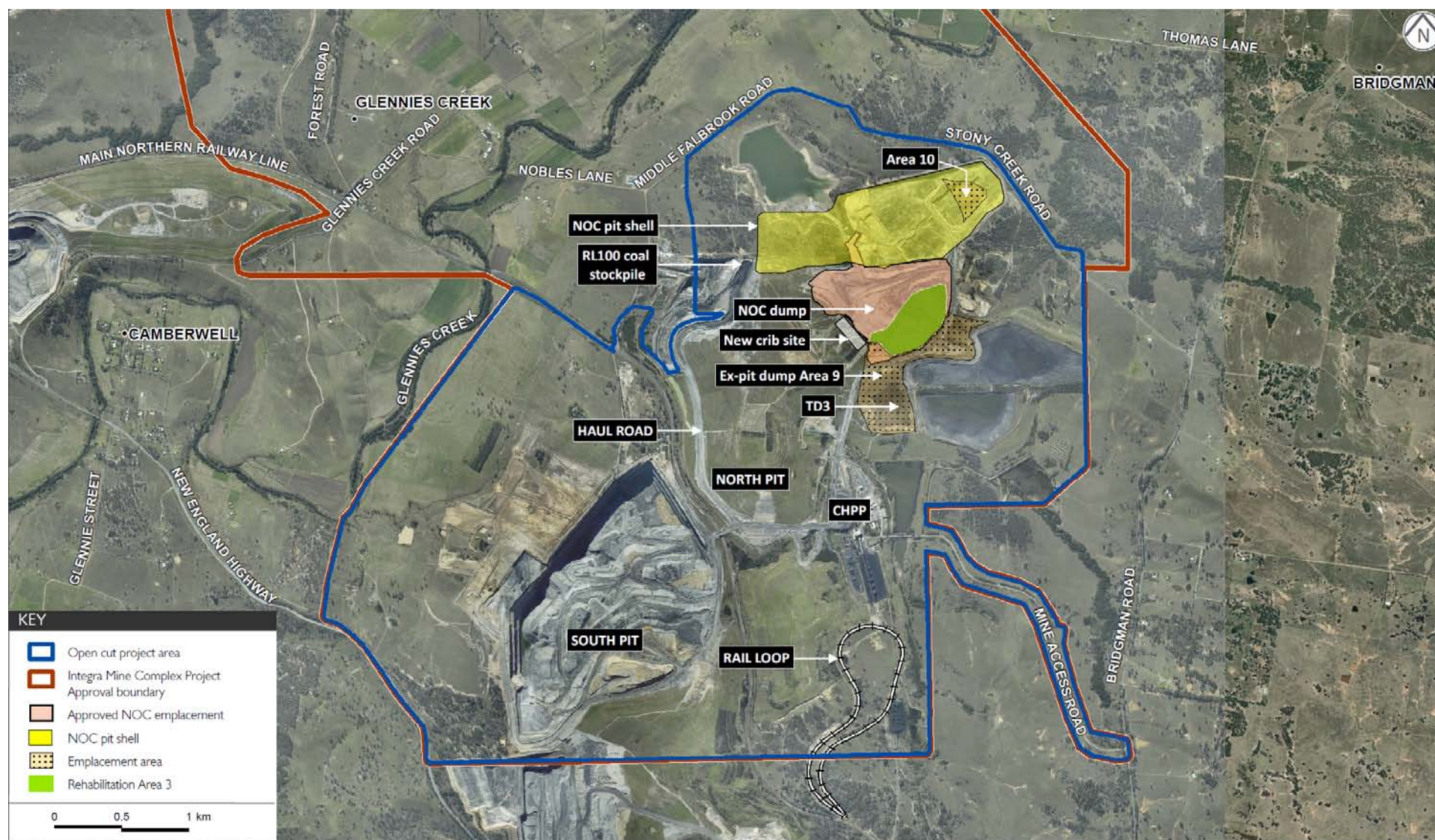


Figure 5: Proposed Modification (Emplacement Extension Area 9 and Crib Site Relocation)

Extend timeframe for installation of overland conveyor

Integra is also proposing to extend the timeframe for meeting condition 48 of Schedule 3 of the 2010 project approval by nine months, until 30 September 2012. Condition 48 states:

“By the end of December 2011, the Proponent shall cease truck haulage of ROM coal from the underground surface facilities to the CHPP, and transport such coal only via overland conveyor, except in an emergency situation and with the prior written approval of the Director-General”.

Integra has undertaken feasibility studies for the overland conveyor and will be seeking, in a subsequent modification, to remove condition 48 from the project approval and continue truck haulage of coal from the underground mine to the CHPP. Therefore, a nine month extension to the timeframe for this condition is sought to allow Integra to complete the required environmental assessment to support the subsequent modification. Director-General's requirements for the assessment were issued in December 2011 (also part of the proposed Mod 2).

3 STATUTORY CONTEXT

3.1 Legislative Framework and Approval Authority

Part 3A of the EP&A Act, as in force immediately before its repeal on 1 October 2011 and as modified by Schedule 6A to the Act, continues to apply to the modification application, since the 2010 project approval was granted in respect of “transitional Part 3A projects” for the purposes of Schedule 6A.

Consequently, the 2010 project approval must be modified under the previous section 75W of the EP&A Act. Under section 75W, the Minister for Planning and Infrastructure is the approval authority for this modification application. However, the Executive Director, Major Projects Assessment may determine the application under the Minister's delegation of 14 September 2011, as:

- less than 10 public submissions were received during the public exhibition period that were in the nature of an objection;
- Integra has not made any reportable political donations; and
- Singleton Council does not object to the proposal.

3.2 Modification

The proposed modification involves changes to the out-of-pit emplacement area and an extension of time to meet some project approval conditions. The modification does not involve changes to any of the mine's approved mining methods or extraction volumes. Consequently, the Department is satisfied that it can be properly characterised as a modification to the original project approval, rather than a new project in its own right, and can therefore be assessed and determined under section 75W of the EP&A Act.

4 CONSULTATION

Under Section 75W of the EP&A Act the Department is not required to notify or exhibit the application. However, after accepting the EA for the proposed modification, the Department:

- made the EA publicly available from 7 December 2011 to 23 December 2011:
 - on the Department's website;
 - at the Department's Information Centre;
 - at the offices of Singleton Council; and
 - at the office of the Nature Conservation Council of NSW;
- notified relevant State and local government authorities by letter; and
- advertised the exhibition in the Hunter Valley News and Singleton Argus.

Following the exhibition of the EA, the Department received 8 submissions on the modification including:

- 4 from public authorities;
- 1 from a special interest group; and
- 3 from the general public.

These submissions (see **Appendix D**) were made publically available on the Department's website. A summary of the issues raised during the consultation process is provided below.

The **Environment Protection Authority** (EPA), part of the Office of Environment & Heritage (OEH), objected to the proposed modification and raised concerns about the NOC dump extension (ie Area 9) encroaching into the Southern Biodiversity Offset Area (Southern BOA). The EPA requested clarification of the extent of Area 9, and specific measures to prevent impacts on the offset area. The EPA also did not support the request for extensions of time to implement the biodiversity conditions, expressing concerns including:

- vegetation and habitats have already been disturbed by mining activities without appropriate offsets for these impacts being in place; and
- sufficient time has elapsed for implementation of condition 43, since the EPA made Integra aware of the available mechanisms for providing long-term security of the offset areas in 2009, during preparation of the EA for the 2008 Integra Open Cut project application.

The **NSW Office of Water** (NOW) did not object to the modification and indicated that any impacts on the approved Station Creek diversion works should be managed via a revision to the Water Management Plan, in consultation with NOW.

The **Division of Resources and Energy** (DRE) within the Department of Trade and Investment, Regional Infrastructure and Services supported the modification. DRE indicated that the modification would result in earlier rehabilitation of 16 ha of the existing NOC dump and the earlier capping of TD3. DRE also indicated that the approved height of the NOC dump under the mine's Mining Operations Plan (MOP) is 135 m AHD, consistent with the project approval.

Singleton Council (Council) raised some concerns about the proposed extension of time to comply with the biodiversity conditions. Council also raised some questions about the subsequent modification to be submitted by Integra for an alternate offset strategy (ie the proposed Mod 2).

The **Construction, Forestry, Mining and Energy Union** (CFMEU) supported the modification.

Of the three submissions from the public:

- one supported the modification as it would provide continuing employment and positive economic benefits in the Singleton area; and
- two objected to the modification, citing unacceptable noise and dust impacts from the increased size and height of the overburden dump; impacts on the approved biodiversity offsets which provides some buffer to residents to the north; and questioning why further time was required to install the conveyor.

Integra has provided responses to the issues raised in submissions (see **Appendix C**). In response to the concerns raised by the EPA, Integra subsequently revised Area 9 to ensure that it does not encroach on the Southern BOA, reducing the proposed extension to the NOC dump from 39 ha to 32 ha. Integra also agreed to revise the mine's Water Management Plan and consult with NOW if required. The Department has considered the issues raised, and Integra's response to these issues, in its assessment of the proposed modification.

5 ASSESSMENT

The Department has assessed the various components of the modification by:

- assessing the key issues associated with extending the overburden emplacement area and relocating infrastructure, including air quality, noise, visual and rehabilitation; and
- assessing the impacts of delaying implementation of conditions relating to the biodiversity offset strategy and the overland conveyor.

5.1 Proposed Overburden Emplacement Extension and Infrastructure Relocation

Air Quality

The proposed modification to the overburden emplacement area may lead to increased dust emissions resulting from haulage of overburden material, emplacement of the material and wind erosion from the exposed surface. Dust emissions, including total suspended particulates (TSP), particulate matter less than 10 microns in diameter (PM₁₀) and deposited dust, predicted to be generated from the proposed increased size and height of the NOC dump were assessed by PAE Holmes and EMGA Mitchell McLennan (EMGAMM).

The Department's assessment of air quality impacts considered:

- dust impacts from the approved open cut and underground projects compared with dust impacts from the modification (as assessed by EMGAMM);
- an independent review of dust impacts from the Integra Mine Complex, conducted as a result of requests in respect of 11 nearby residences under conditions of the 2010 project approval, and carried out by Sinclair Knight Merz (SKM) in October 2011; and
- results of routine air quality monitoring, reported in Integra's 2010-11 Annual Environmental Management Report (AEMR) for the North Open Cut.

The nearest residences and air quality monitoring locations are shown on Figure 6. Submissions were received from two residences to the north, with both raising concerns over increased dust impacts. Residences to the north are currently located 1 km from the North Open Cut and 2 km from the NOC dump. The *Dulwich* property is located 2 km west of the emplacement area and would remain at a similar distance from the extended emplacement area. These distances would remain unaffected since the proposed extension is to the south and east. The proposed modification would result in the emplacement area moving 500 m closer to the residences to the east and southeast (located 1.5 km from the proposed boundary of Area 9). The EMGAMM assessment indicated that prevailing winds are from the northwest and southeast and residences to the southeast would be the most impacted.

EMGAMM estimated that total dust emissions would increase slightly as a result of the modification with 0.77 kg of TSP/tonne of ROM coal extracted compared with 0.74 kg under approved operations. However, predicted TSP, PM₁₀ and deposited dust levels would remain below relevant air quality impact assessment criteria at all residences to the east, north and south. It was considered that residences to the west would not experience a change in impacts.

Relocation of the crib site would not alter dust emissions from the site or at surrounding residences.

The Department's analysis of the recent SKM independent review of dust impacts at 11 residences surrounding Integra mine concluded that:

- measured annual average TSP (cumulative) was consistent with predictions for residences to the east (44 µg/m³), but higher than predictions for residences to the north (measured 69 µg/m³ compared with predicted 50 µg/m³). However, measured TSP was consistently below the project approval criteria of 90 µg/m³;
- measured annual average PM₁₀ (cumulative) was consistent with predictions for residences to the east (16 µg/m³) and north (14 µg/m³) and in compliance with the project approval criteria of 30 µg/m³;
- measured 24 hour PM₁₀ (cumulative) exceeded the project approval criteria of 50 µg/m³ on 12 days over a monitoring period of 17 months. Detailed analysis indicated that Integra may have contributed to non-compliance at residences to the east and west of the mine on 3 of these 12 days. The exceedances occurred during hot, dry and windy conditions; and
- measured dust deposition was slightly higher than predicted for residences to the north and east, however still below relevant criteria (2 g/m²/month increase and 4 g/m²/month total).

Whilst the Department agrees that the modification would not increase dust emissions to unacceptable levels, it is nonetheless reasonable that all contemporary best practice dust control measures are implemented by Integra to ensure that impacts are minimised. The independent review reiterated the Department's view that proactive management is required to ensure compliance with the project approval and maintain dust at an acceptable level at nearby residences.

The project approval currently contains operating conditions requiring Integra to:

- regularly assess real-time air quality monitoring and meteorological forecasting data and relocate, modify and/or stop operations to ensure compliance with air quality criteria;
- implement proactive and reactive mitigation measures; and
- utilise the air quality monitoring program to evaluate the performance of the mine.

Integra is currently revising the mine's Air Quality Management Plan to detail the real-time monitoring system and the proactive/ reactive mitigation measures, such as limiting dust generating activities during hot, dry and windy conditions. Existing conditions of approval require that Integra must amend this plan to reflect the modification. However, the Department considers that there are still significant opportunities for improving air quality management at Integra and is proposing a number of changes to the conditions which govern air quality management to significantly tighten these operating conditions. The proposed amendments are similar to the conditions recently applied by the Planning Assessment Commission (PAC) to the Warkworth Extension project.

Noise

The proposed modification would move the emplacement area and associated activities such as hauling, dumping and shaping 500 m closer to residences to the east and south east. Distances from dumping would remain the same for residences to the north, and would move slightly further away from residences to the west.

EMGAMM conducted a semi-quantitative noise assessment of the potential noise impacts of the modification which drew on data from an independent review of operational noise from the Integra Mine Complex. The independent review was conducted as a result of requests in respect of 11 nearby residences under conditions of the 2010 project approval, and was carried out by EMGAMM from June to October 2011. The Department's assessment has considered both EMGAMM noise studies in the context of the approved open cut and underground projects.

EMGAMM estimated that the additional noise contribution from the modification to the NOC dump would be 1 - 1.5 dBA. EMGAMM concluded that this would not lead to perceptible changes in impacts at the nearest residences and would not change the scale of impacts from 'marginal', 'moderate' or 'significant' at any residence. Mining operations in the North Open Cut are also restricted by the existing project approval to the Day and Evening periods.

Relocation of the crib site would not change noise emissions from the site or at the nearest residence. The crib site would be relocated 600 m west of its current location, moving it further away from the nearest residences to the east. The crib site would move closer to the *Dulwich* property, but would still remain 2 km away and therefore unlikely to be a contributor to noise at this location given it is closer to other noise generating activities (ie active mining areas).

The EMGAMM review of noise impacts over the period June to October 2011 addressed 11 residences surrounding the mine (see Figure 7). This review concluded that:

- operational noise criteria were exceeded at three properties to the north and east of the mine (residences 20, 31 and 48). These exceedances were limited, occurring once or twice over 11 or more monitoring occasions, and ranging from 2 to 10 dBA above criteria;
- there were some isolated exceedances of mitigation criteria at residences to the west and east (residences 105, 112, 11 and 14). These exceedances covered 0.5% to 4% of the total monitoring period, and were therefore not considered to be "systemic"; and
- there were some isolated exceedances of acquisition criteria at residences to the west and east (residences 105 and 11). These exceedances covered 0.2% and 1% of the total monitoring period, and were also not considered to be "systemic".

The independent review provided a number of recommendations to address these non-compliances, including:

- residences 20, 31, 32 and 48 should be offered additional noise mitigation measures, such as double-glazing, insulation, and/or air conditioning at the residence;
- residence 11 should be offered acquisition upon request, given that the two neighbouring properties were offered acquisition under the project approval, and noise impacts at residence 11 is likely to be the same as the neighbouring properties; and
- future noise monitoring should include residences 11, 20, 31, 32, 48 and 112 and should include the use of directional monitors during the winter months, supplemented with attended monitoring.

In addition, under the terms of its 2010 project approval, Integra must also:

- implement all reasonable and feasible mitigation measures, in consultation with the landowners where these exceedances occurred, and conduct further monitoring until there is compliance with the criteria; or
- secure a written agreement with the landowner/s to allow the exceedances of the criteria.

The Department accepts that the modification itself would have a minor impact on noise impacts at any residence. However, noise from the overall project (whether or not modified) may exceed the noise criteria in the project approval, as demonstrated by the EMGAMM review. The Department also notes that, during the 2010-11 annual reporting period, Integra received a total of 75 noise-related complaints and 88 related to blasting. This was considerably higher than the previous year.

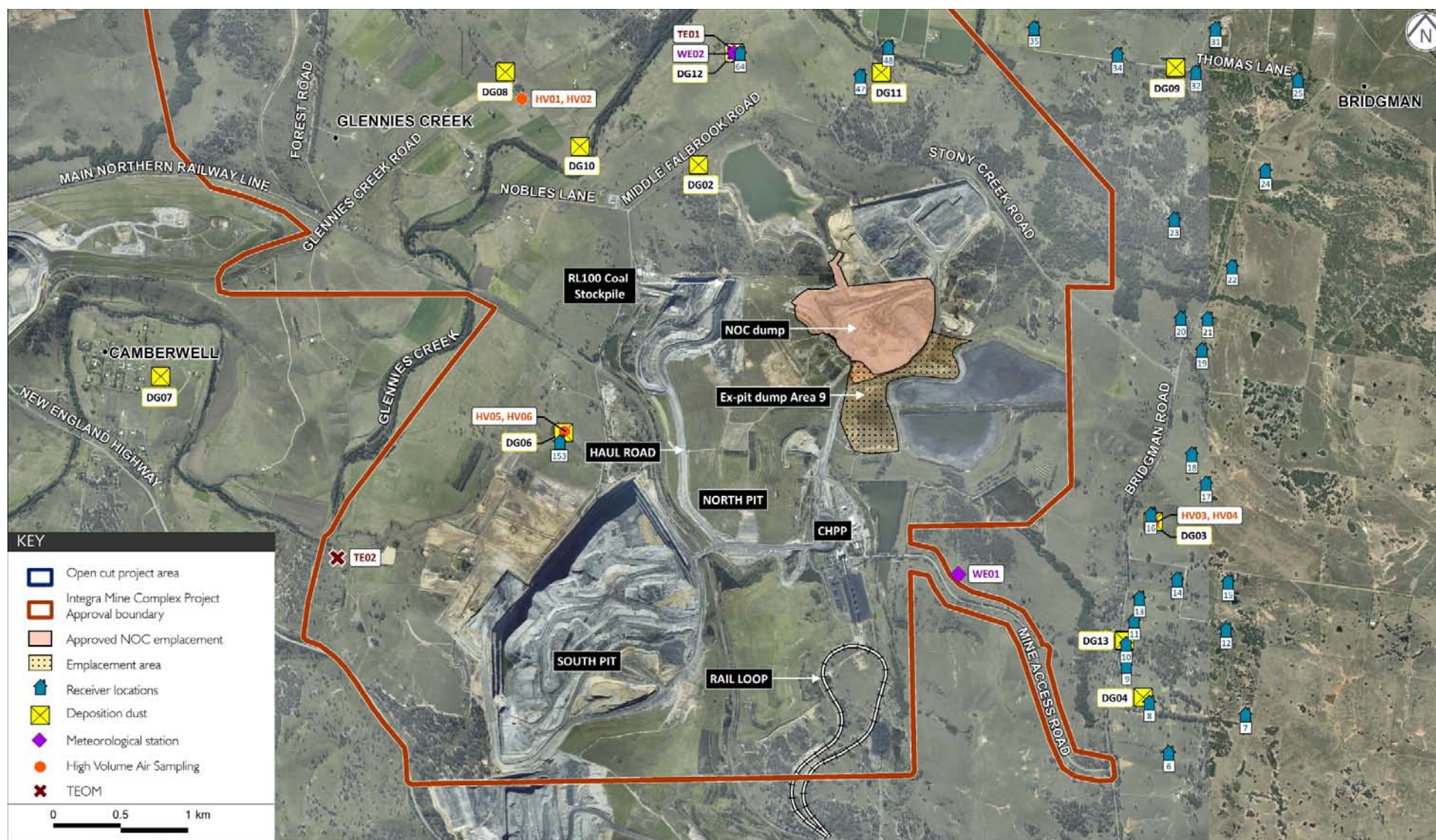


Figure 6: Nearest residences and air quality monitoring locations

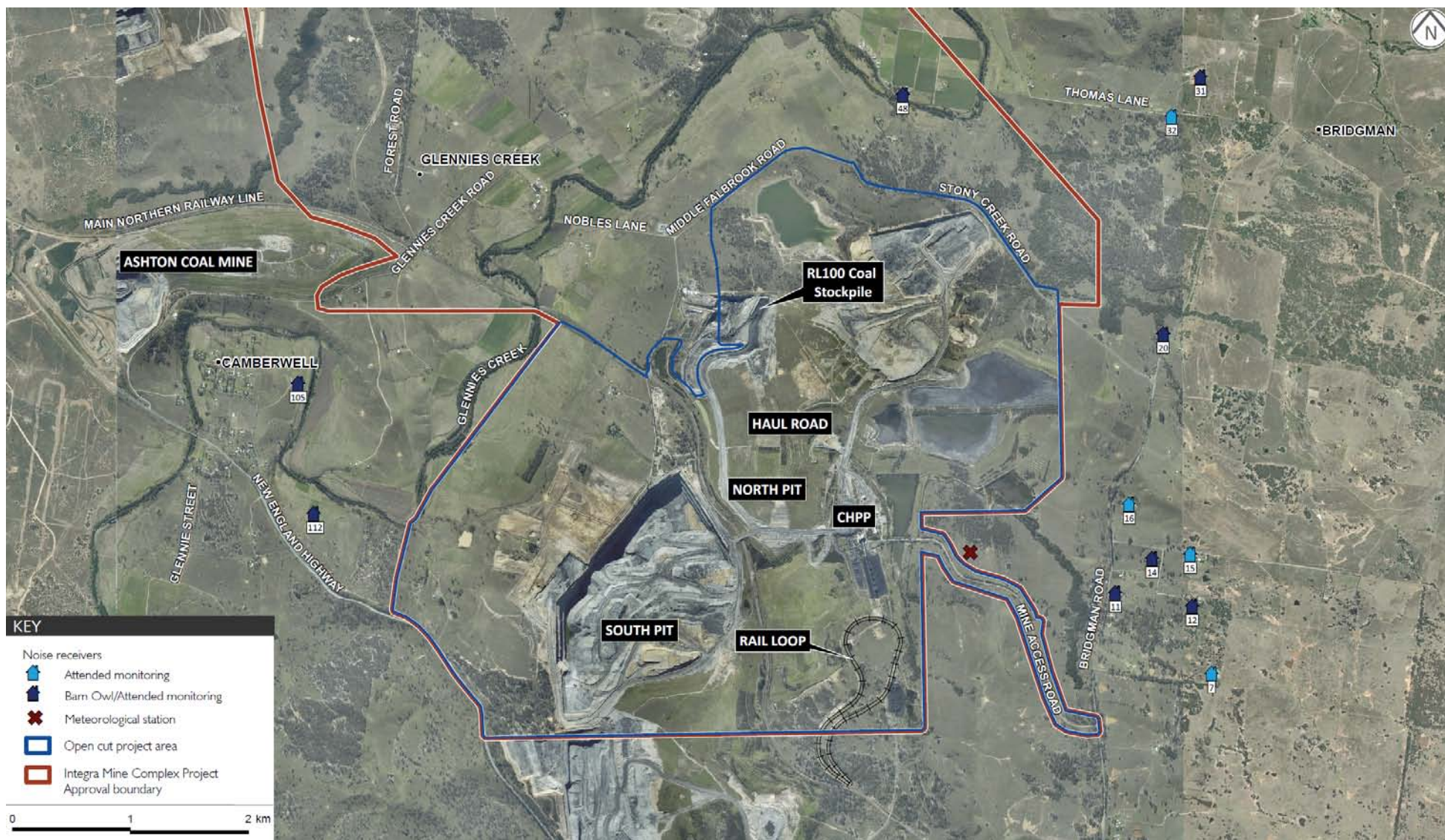


Figure 7: Nearest residences and noise monitoring locations (Independent review June – October 2011)

Given that the approved open cut and underground projects are regularly close to, and on some occasions, exceeding the noise criteria, and the high level of community complaint relating to noise and blasting, the Department considers that it is imperative that contemporary best practice noise management is implemented and maintained by Integra to both ensure compliance and to reduce noise emissions.

As part of its existing project approval, Integra is required to prepare a Noise Management Plan for the mine complex describing measures to be implemented to evaluate the project's performance and ensure compliance with noise criteria. The plan is required to include details of a real-time noise management system that employs both proactive and reactive mitigation measures. The Department's view is that effective implementation of a real-time management system is the most effective way of managing noise emissions from the complex.

The Department proposes conditions requiring that Integra:

- update the Noise Management Plan for the mine complex to address the modification, as is required under the project approval; and
- implement the recommendations of the EMGAMM independent review including:
 - offering noise mitigation at residences 20, 31, 32 and 48;
 - offering acquisition upon request to residence 11; and
 - augmenting the monitoring program to include additional residences, directional and attended monitoring.

The Department also proposes a number of other changes to Integra's noise management conditions which tighten noise management operating conditions and reflect similar conditions recently applied by the PAC to the Warkworth Extension project. The Department is satisfied that these changes to conditions are adequate to manage the minor noise increases associated with the modification and will lead to improved management of noise at the mine complex and reduce noise impacts on nearby residences.

Visual

The NOC dump extension and relocated crib site are to be located adjacent to the existing NOC dump and the North Open Cut pit. This site and the Integra Mine Complex more broadly, is characterised by intensive mining activity; including open cut pits, the CHPP, haul roads, mining vehicles, road and rail infrastructure.

The modification would result in the emplacement area moving 500 m closer to residences to the east and southeast and would also increase the approved height of the overall NOC dump by 6 m. The extension would merge with the existing emplacement area and would ultimately be shaped and rehabilitated as a single landform unit.

The nearest residences along Bridgman Road are located 1.5 km from the extended emplacement area and would have partial views due to intervening topography and vegetation. It is considered unlikely that these residences would experience additional visual impacts beyond those already approved. Similarly, residences to the north and west are located 2 km away with partial views of the emplacement area and would not experience a significant change in visual impacts.

The project approval enables landowners with significantly affected views to request additional visual mitigation measures, such as landscaping treatments or vegetation screens. The Department considers the existing conditions to be sufficient for managing any visual impacts from the modified project.

Rehabilitation

Requirements to rehabilitate the North Open Cut and NOC dump are described in the following documents:

- 2008 EAs for the open cut and underground projects describe the mine's rehabilitation strategy;
- 2010 project approval sets out rehabilitation objectives and includes requirements for progressive rehabilitation and a rehabilitation management plan; and
- MOP for the North Open Cut includes various rehabilitation objectives and describes the final landform.

From review of the modification EA, and the MOP and 2010-11 AEMR for the North Open Cut, the Department considers that:

- progressive rehabilitation of the NOC dump has, to date, been limited; and

- the timeframe for commencement and completion of rehabilitation of the NOC dump is not clear.

Rehabilitation of the NOC dump extension should also be consistent with the broader rehabilitation strategy for the Integra Mine Complex and the North Open Cut. The Department considers the progress of rehabilitation to be a critical element in minimising dust and visual impacts from the mine. Given the lack of certainty about the progress and plans for rehabilitation at the North Open Cut, the Department will require (under existing conditions of approval) that Integra revise its Rehabilitation Management Plan within 3 months of the modification to include a forward program for implementation of rehabilitation of the NOC dump and extension.

Biodiversity

The emplacement area would be extended by 32 ha, covering previously disturbed land and TD3. The size of the extension was reduced from the 39 ha proposed in the EA in response to the EPA's concern about potential impacts on the Southern BOA.

Figure 8 shows the vegetation communities and the previously approved NOC dump, as surveyed for the North Open Cut EA in 2007. Parts of the NOC dump extension were not covered by this ecological survey. However, these areas were previously disturbed by mining activities and have little ecological value. The NOC dump extension and crib site would impact only on areas of previously disturbed land and a small area of land previously rehabilitated by Integra. Extension of the NOC dump and construction of the crib site would require removal of a small number of immature planted trees and shrubs. The Department concludes that, following the amendment of the proposed NOC dump extension to exclude 7 ha of the proposed Southern BOA, the impacts on biodiversity from this component of the modification would be negligible.

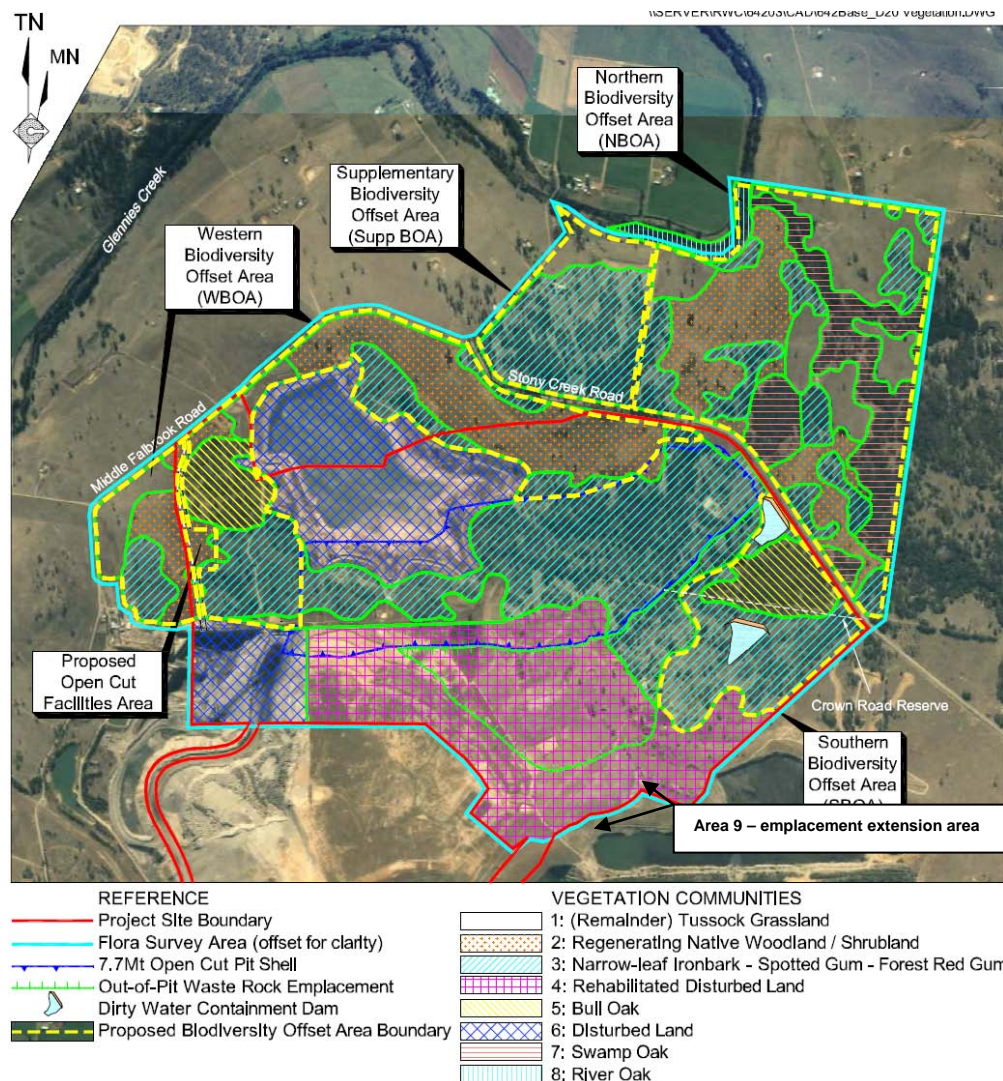


Figure 8: Vegetation communities in the area

5.2 Proposed Extension of Timeframes to Implement Biodiversity Conditions

Background

The biodiversity offset requirements for the North Open Cut were first set out in its 2008 project approval (MP 06_0073). These requirements were then subsumed into the Integra Mine Complex 2010 project approval, which addressed all offsets for the impacts of clearing for both the North Open Cut and the western extension of the Camberwell Open Cut. Key vegetation communities to be offset under this latter project approval included:

- *Narrow-leafed Ironbark – Spotted Gum – Forest Red Gum*; and
- *Central Hunter Box – Ironbark Woodland*.

The 2010 project approval's offset strategy is shown on Figure 9 and includes:

- a number of biodiversity offset areas (BOA), comprising:
 - Northern BOA = 121 ha;
 - Southern BOA = 39 ha;
 - Western BOA = 94 ha;
 - Supplementary BOA = 33 ha;
 - Bridgman BOA = 86 ha (added to address clearing associated with the western extension of the Camberwell Open Cut);
- at least 140 ha of *Narrow-leafed Ironbark-Spotted Gum-Forest Red Gum Forest*, as requested by DECC (now OEH) during the assessment process for the North Open Cut; and
- an additional 6 ha of *Central Hunter Swamp Oak Forest*.

The 2010 project approval also required that:

- the offset strategy is implemented by the end of June 2011 (condition 42);
- a mechanism is in place to provide long term security of the offset areas by the end of December 2011 (condition 43);
- a biodiversity management plan is submitted by the end of December 2011 (condition 44); and
- a conservation bond is lodged with the Department within 6 months of approval of the biodiversity management plan (condition 45).

It should be noted that Integra has had obligations to protect and manage land for the purpose of biodiversity offsets since December 2008.

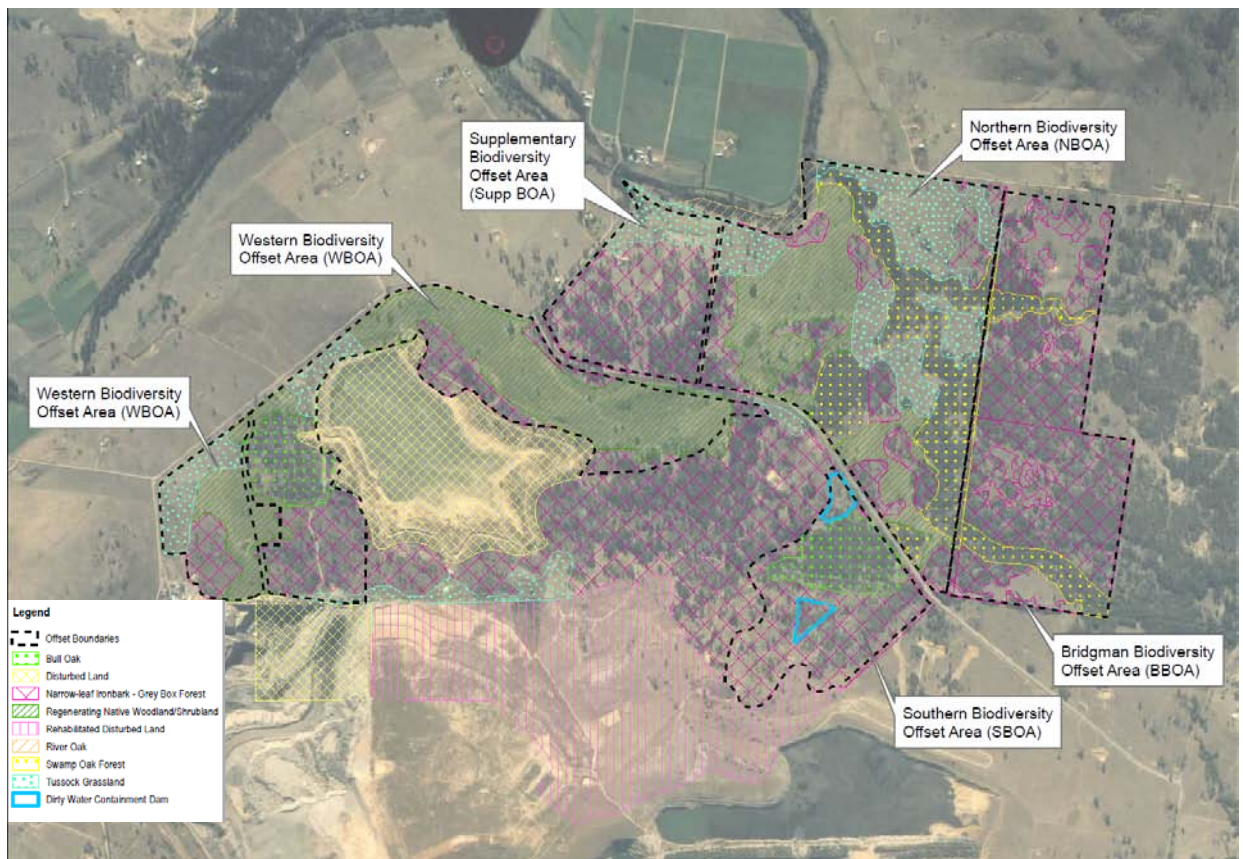


Figure 9: Biodiversity Offset Areas (BOAs)

Management of offset areas

During assessment of the Glennies Creek Open Cut project application, DECC noted that the vegetation in the proposed offset areas was generally in poor condition as a result of past clearing and grazing activities. The Department therefore required, as a condition of the 2008 approval, that Integra develop and implement a strategy for long term protection of the BOAs with particular focus on improving the quality of vegetation. In November 2009, Integra submitted a Landscape Management Plan describing how the offset areas for the North Open Cut would be managed. This plan described measures including fencing, weed and feral animal control, supplementary planting, threatened species habitat management and monitoring.

The Department acknowledges that Integra has reported on some of these improvement works such as planting and weed removal within the Northern and Supplementary BOAs, installation of nest boxes, and the exclusion of livestock from all BOAs. However, the current vegetation condition within the BOAs is uncertain and it is unclear whether the performance monitoring described in the Landscape Management Plan has been undertaken. The Department and OEH also note that it appears that some clearing of native vegetation may have taken place within the southwestern fringe of the proposed Southern BOA since the 2007 survey of vegetation communities, based on a comparison of the aerial photograph basemap used in Figure 5 (part of the modification EA) and Figures 8 and 9 (from the 2007 Glennies Creek Open Cut EA).

In summary, the Department considers that more substantial measures could have been implemented by Integra to protect and manage the BOAs since they were first set aside in 2008.

Impacts and Recommendations

Whilst delaying the implementation of the biodiversity conditions by 15 months (condition 42) and 9 months (condition 43) is unlikely in itself to have significant impacts, the Department considers that it is very important that all of Integra's BOAs are appropriately managed in the interim, until such time as the formal offset strategy is finalised, approved and implemented. While accepting Integra's rationale to extend the deadlines for meeting conditions 42 and 43, the Department is proposing that Integra commission an independent audit of all the BOAs to:

- report on current baseline data on flora and fauna within the BOAs, including the condition of key vegetation communities;
- compare the current condition of the vegetation communities within the BOAs to that surveyed in 2007, including a report on any works and/or other disturbance that has taken place since those surveys;
- evaluate the effectiveness of management measures undertaken to date in improving the biodiversity value of the BOAs; and
- recommend any additional improvement works and provide a schedule for their implementation.

The recommended conditions require that this audit report must be provided to the Department by the end of July 2012, which would allow the audit report to be considered in conjunction with the revised offset strategy and proposed arrangements for long term security.

5.3 Extend Timeframe to Implement Conveyor Transport of Underground ROM Coal

Background

The proposal to use an overland conveyor to transport coal between the underground mine and the CHPP at the open cut mine was originally conceived in 2001, when the decision was made by the (then) operators of the mines to utilise the Camberwell CHPP to process all coal extracted from both mines. At the time, a staged approach to coal transportation was identified, with truck haulage proposed only for the short-term, as the overland conveyor route crossed land that was being used for overburden emplacement. A subsequent modification was approved in 2004 which deferred the need to install the conveyor until 31 December 2010, for both operational and economic reasons. The timeframe was further extended to 31 December 2011 in a subsequent modification.

In 2008, Integra commenced various feasibility studies into the viability of installing the overland conveyor with early estimates indicating a cost of \$95 million to design and build. Since then, Integra has carried out further detailed analysis of numerous options as well as cost reduction studies. The preferred option was estimated to cost between \$85-90 million. This is a very significant cost which primarily arises from geotechnical and engineering constraints associated with the unconsolidated nature of the overburden dumps and constructing the conveyor on land subject to subsidence. The conveyor would not be economically viable to build at costs of this magnitude. The continuation of truck haulage was estimated at a cost of \$66.6 million.

Integra has indicated that its preferred option is to continue truck haulage (along the internal haul road shown on Figure 5) and therefore remove condition 48, which requires installation of the overland conveyor, from the 2010 project approval.

However, an extension of time is required for Integra to complete the required assessment of noise, dust and greenhouse gas emissions associated with continuing truck haulage. Consequently, Integra has submitted a Preliminary EA for a subsequent modification that seeks to remove condition 48. Director-General's requirements were issued in December 2011 in respect of this proposed modification, which focus on assessing the impacts of continuing truck haulage for the remaining duration of the underground operations.

Impacts and Recommendations

Delaying the required implementation of the overland conveyor by a further nine months would not change existing impacts. Noise, dust and greenhouse gas emissions associated with continuing truck haulage would remain the same as for the currently approved operations. Therefore, the Department is satisfied that extending the timeframe to meet condition 48 would have minimal impacts in itself and recommends that the timeframe be extended to the end of September 2012. However, the Department is seeking to improve dust management at the mine (the primary impact associated with truck haulage) by amendments to the mine's air quality operating conditions (see section 5.1).

6 RECOMMENDED CONDITIONS

The Department has drafted the attached notice of modification to the project approval (see **Appendix A**). The recommended conditions address the impacts of the modification, including:

- additional noise mitigation offered to a further 4 residences;
- acquisition upon request offered to 1 residence;
- updated operating conditions for noise and air quality management; and
- an independent audit of the biodiversity offset areas.

The Department will also use the provisions of the existing conditions of approval to require Integra to review its Noise Management Plan, Air Quality Management Plan and Rehabilitation Management Plan to reflect both the modification itself and also the changes to noise and air quality operating conditions.

Integra has reviewed and accepted the recommended conditions. The notice of modification would vary the existing approval to the form shown in **Appendix B** (the "consolidated project approval").

7 CONCLUSION

The Department has assessed the modification application, EA, submissions and Integra's response to submissions in accordance with the relevant requirements of the EP&A Act, including the objects of the EP&A Act and the principles of ecologically sustainable development. It has also had consideration to the EAs for the 2006 Glennies Creek Open Cut Project and the 2008 Integra Open Cut Project.

The assessment has found that the proposed modification would:

- lead to minor additional dust impacts for residences, with levels remaining below relevant criteria; and
- result in a slight increase in noise levels which are unlikely to lead to perceivable differences at any receiver, notwithstanding the existing limited number of exceedances of noise criteria at the mine.

The Department has recommended a number of additional conditions to minimise noise impacts and to manage dust emissions from the mine complex. With the implementation of these conditions, the Department is satisfied that the impacts of the proposed modification would be adequately minimised and/or managed, and that noise and dust emissions from the modified project would be reduced from current levels.

Whilst the Department considers that extending the timeframe to meet the biodiversity conditions would have a negligible impact, conditions are recommended to ensure that the biodiversity offset areas are more effectively managed during the interim.


The extension of time to install the overland conveyor would not change impacts from those currently approved.

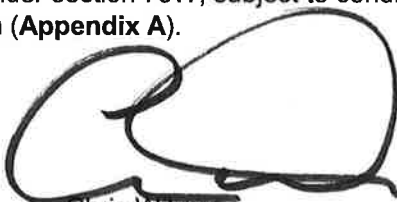
The Department considers that the modification would enable continued operation of the North Open Cut at the Integra Mine Complex with minimal environmental impacts. The Department considers that the benefits of the modification sufficiently outweigh its costs; and that the proposed modification is in the public interest and should be approved subject to conditions.

8 RECOMMENDATION

It is recommended that the Executive Director, Major Projects Assessments, as delegate of the Minister:

- **consider** the findings and recommendations of this report;
- **determine** that the proposed modification is within the scope of section 75W of the EP&A Act;
- **approve** the modification application under section 75W, subject to conditions; and
- **sign** the attached notice of modification (**Appendix A**).


Howard Reed
A/Director 7.3.12
Mining and Industry Projects

 14.3.12
Chris Wilson
Executive Director
Major Projects Assessments

APPENDIX A: NOTICE OF MODIFICATION

See separate document titled *Notice of Modification*.

APPENDIX B: CONSOLIDATED PROJECT APPROVAL

See separate document titled *Consolidated Project Approval*.

APPENDIX C: RESPONSE TO SUBMISSIONS

See separate document titled *Response to Submissions Final 080212*.

APPENDIX D: SUBMISSIONS

See separate files titled:

- Agency.pdf
- Public.pdf
- Special Interest Group.pdf

APPENDIX E: ENVIRONMENTAL ASSESSMENT

See separate files titled:

- Environmental Assessment Main Text.pdf
- Environmental Assessment Appendices.pdf

APPENDIX F: 2008 INTEGRA OPEN CUT PROJECT ENVIRONMENTAL ASSESSMENT
(MP 08 0101)

See separate files saved under Integra Open Cut Project.

**APPENDIX G: 2006 GLENNIES CREEK OPEN CUT PROJECT ENVIRONMENTAL
ASSESSMENT (MP 06 0073)**

Separate files available on request.