

ASSESSMENT REPORT

BLOOMFIELD COLLIERY

Power Supply and Overburden Emplacement Modification (07_0087 MOD 1)

1. BACKGROUND

Bloomfield Collieries Pty Limited (Bloomfield) owns and operates the Bloomfield Colliery, an open cut coal mine located at Buttai, 8 kilometres (km) south of Maitland in the Cessnock local government area (see Figure 1).

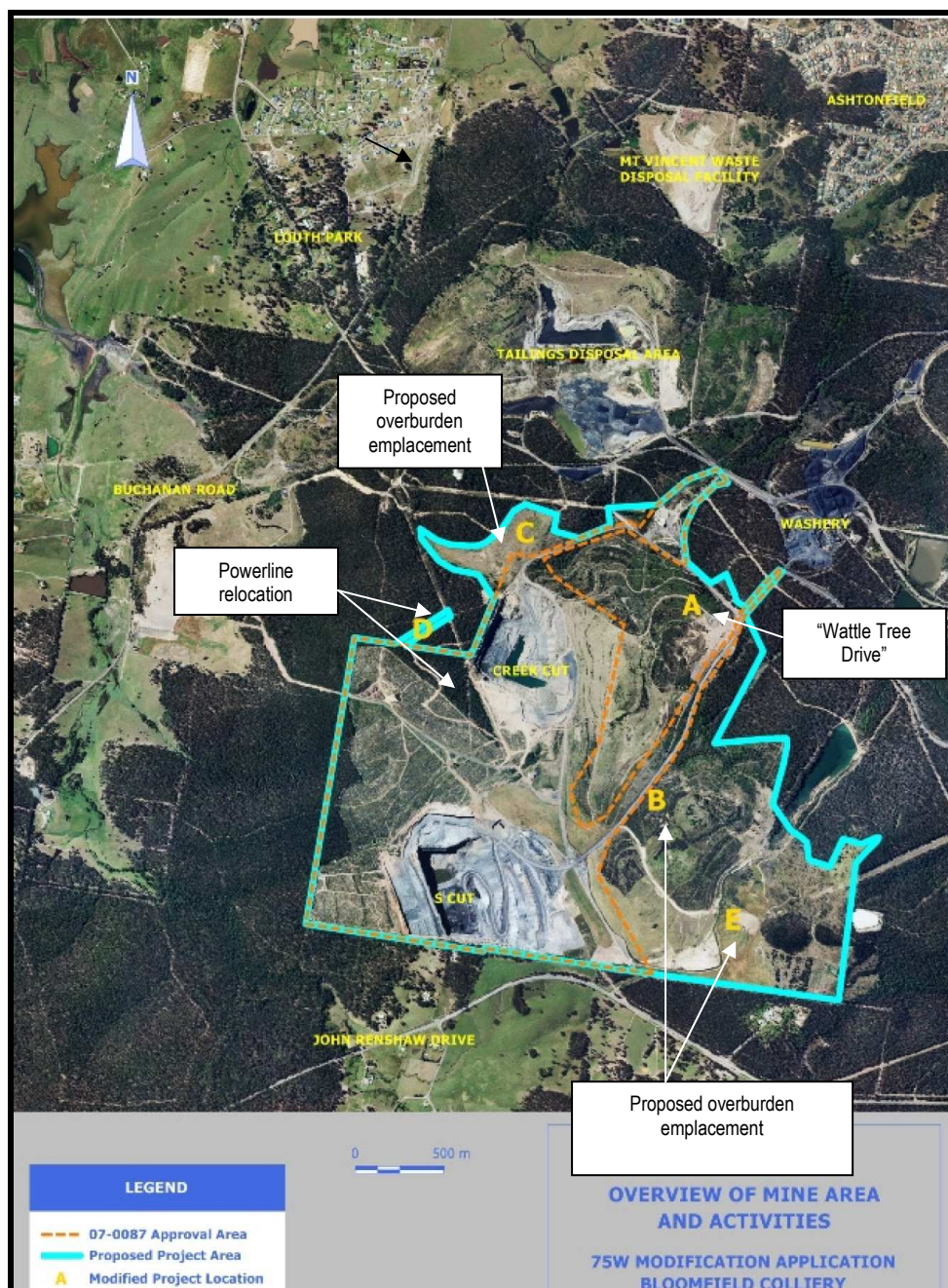


Figure 1: Bloomfield Colliery

Mining has been undertaken at Bloomfield Colliery for over 170 years by both underground and open cut mining methods. Underground mining operations concluded in 1992, and the colliery is now solely an open cut mining operation. The mine operates under a project approval (07_0087) granted under delegation from the Minister for Planning on 3 September 2009 (see Appendix A). The approval allows Bloomfield to:

- extract up to 1.3 million tonnes (Mt) of run-of-mine coal per year for 10 years;
- transport this coal to the existing Bloomfield Coal Handling and Preparation Plant (CHPP); and
- progressively rehabilitate the site.

2. PROPOSED MODIFICATION

On 7 December 2009, Bloomfield lodged a modification application (07_0087 MOD 1) under section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The proposed modification involves augmenting the mine's power supply systems, upgrading and using an existing internal haul road and managing out-of-pit overburden emplacement. It would also lead to the incorporation of five large areas of the Bloomfield Colliery not currently included within the project approval area. These five areas are termed by Bloomfield as Areas A – E (see Figure 1) and are further discussed below.

To allow for the expansion of the mine's Creek Cut and S Cut pits, an existing powerline northwest of the pits is required to be relocated. A 330 metre (m) section of the powerline (Area D on Figure 1) would be relocated, and associated power supply infrastructure constructed to connect the mine's power supply to equipment at the site. The proposed relocation would require a 40 m corridor to be cleared, and the construction of power supply infrastructure which would remove approximately 11 hectares (ha) of vegetation. This area includes 7 ha of Lower Hunter Spotted Gum Ironbark Forest Endangered Ecological Community (LHSGIF EEC).

Bloomfield currently transports all extracted coal to the CHPP via its "Save-A-Mile Highway" internal haul road. Bloomfield has identified that it could reduce the distance required to transport coal from the northern area of the Creek Cut pit to the CHPP, by using the existing "Wattle Tree Drive" internal haul road (within Area A on Figure 1). Wattle Tree Drive is currently used only by light vehicles, and Bloomfield proposes to upgrade and use this road to haul coal to the CHPP. This upgrade would involve minor cut and fill, slope stabilisation and revegetation works.

Former overburden emplacement areas at the site (Areas B, C and E on Figure 1) have been rehabilitated, but now contain poor quality pastures and experience drainage problems. To assist with its out-of-pit overburden management and to improve rehabilitation outcomes in these areas, Bloomfield now proposes to emplace approximately 3 Mt of overburden in these areas, and subsequently recommence rehabilitation works. Emplacing overburden in these areas would allow safe working distances to be maintained in the open cut pits and would reduce the need for overburden to be double-handled within the pit areas. Emplacement would be conducted over a 12 week period in Area B (emplacing 2.7 Mt), and periodically over 6 months in Areas C and E (emplacing 0.15 Mt and 0.23 Mt respectively).

Bloomfield has also requested the incorporation of previously-rehabilitated areas at the mine into the project area, as depositing additional overburden in Areas B, C and E would also require an approval under the *Mining Act 1992*, for which a planning approval is a precedent requirement.

The proposed modification would not result in the extraction of any additional coal and would not alter any of the mine's other approved activities.

The proposed modification is explained in more detail in the attached Environmental Assessment (see Appendix B).

3. STATUTORY CONTEXT

3.1 Approval Authority

The Minister for Planning was the approval authority for the original project application, and is consequently the approval authority for this modification application. However, under the former Minister's delegation of 25 January 2010, the Deputy Director-General, Development Assessment and Systems Performance, may determine the application.

3.2 Section 75W

The proposed modification would not involve changes to any of the mine's key operating functions or activities. The Department is satisfied that the proposed modification falls within the scope of section 75W of the EP&A Act and consequently the modification request can be determined.

4. CONSULTATION

4.1 Exhibition and Agency Consultation

The Department placed the EA submitted in support of the modification application on public exhibition from 5 to 19 October 2010 at the Department's Information Centre, Cessnock City Council (Council), the Nature Conservation Council and on the Department's website. The Department also notified relevant State government authorities and Council by letter and advertised the exhibition in the *Newcastle Herald* on 2 October 2010.

4.2 Submissions

During the exhibition period the Department received five submissions, comprising three from public authorities, one from a special interest group and one from a community member. The submissions, and Bloomfield's responses to the submissions are attached (see Appendices C and D).

Public Authorities

Office of Environment and Heritage (OEH) (formerly the Department of Environment, Climate Change and Water) initially stated it was unable to recommend modified conditions of approval, as Bloomfield did not offer a substantial offset for the proposed vegetation clearing. OEH also made the following comments:

- Bloomfield's biodiversity assessment and level of ecological survey was inadequate; and
- a biodiversity offset package should be developed, to offset the impacts of the proposed clearing of LHSGIF EEC.

Bloomfield subsequently submitted its proposed Biodiversity Offset Strategy (BOS, see Section 5.1 and Appendix E), which OEH found to be adequate to offset the proposed clearing.

NSW Office of Water (NOW) (formerly within the Department of Environment, Climate Change and Water, but now part of the Department of Primary Industries) did not object to the proposed modification. NOW noted that no water monitoring sites would be affected by the modification.

Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS) (formerly the Department of Industry & Investment) supports the proposed modification and recommended that Bloomfield be required to update its Rehabilitation Plan.

Special Interest Groups and the General Public

The Construction, Forestry, Mining and Energy Union supported the proposed modification, based on its potential economic and social benefits.

One community member made a submission which raised the following concerns:

- impacts to regional biodiversity values from the proposed vegetation clearing;
- height and slope of the modified overburden emplacement areas would be incompatible with local topography and visually intrusive; and
- potential for increased air quality impacts at nearby residences.

5. ASSESSMENT OF ENVIRONMENTAL IMPACTS

5.1 Biodiversity

The proposed modification would impact local and regional biodiversity values, due to the:

- proposed clearing of almost 11 ha of native vegetation to construct a powerline and electrical infrastructure, including 7 ha of LHSGIF EEC;
- disturbance of vegetation at the previously rehabilitated areas (marked B, C and E on Figure 1), through the emplacement of additional overburden; and
- removal of vegetation in order to upgrade the "Wattle Tree Drive" internal haul road.

The impacts from these proposed activities were assessed by Hunter Eco, using survey data and the findings from the biodiversity impact assessment for the original project application in 2007. Additional surveys of the previously rehabilitated areas were conducted following a request from OEH.

There are approximately 145 ha of LHSGIF EEC in the immediate vicinity of the area proposed to be cleared for the relocated powerline and associated infrastructure. The assessment found that the area proposed to be cleared contains suitable habitat for seven threatened bird species, one marsupial and nine bat species.

Biodiversity Offset Strategy (BOS)

Bloomfield subsequently submitted a BOS, which outlined the measures it would take to offset the proposed clearing of LHSGIF EEC (see Appendix E).

The proposed BOS is directed towards the protection of an area of land which contains the same EEC but has a higher ratio of this EEC than that proposed to be cleared, and the provision of funding for a local conservation project. Bloomfield has purchased a 40 ha parcel of land adjacent to the Watagan State Forest at Congewai, also in the Cessnock local government area (see Figure 2). This offset site includes 19.6 ha of LHSGIF EEC. This represents an offset ratio of 2.9:1 overall and 3:1 for the EEC.

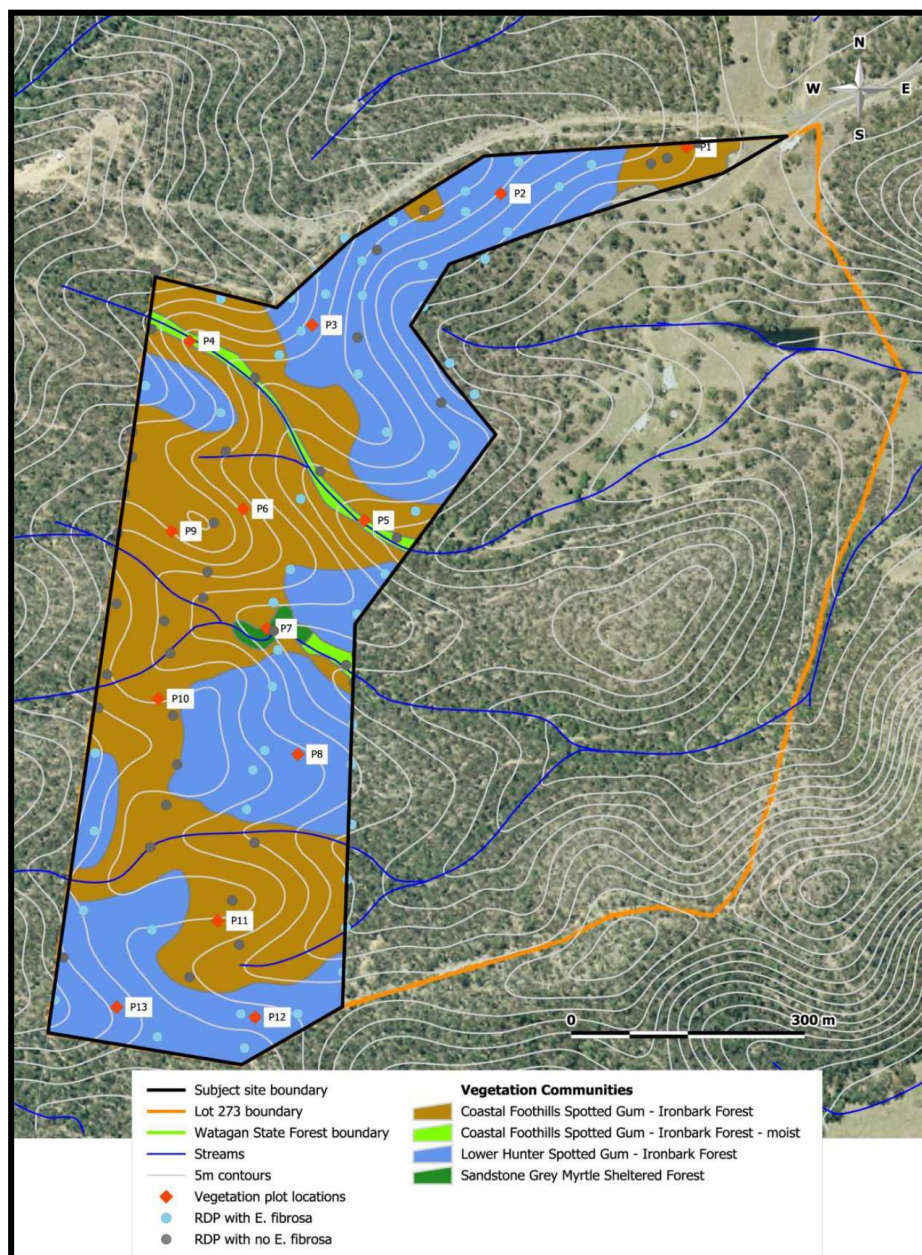


Figure 2: Proposed offset site at Congewai

Bloomfield stated that a conservative approach was taken in mapping the boundaries of the EEC at the offset site, and that there may be up to an additional 20% of the EEC at the site. The Department also notes that the site represents the known western limit of the EEC, and, as it adjoins the Watagan State Forest, the connectivity of the EEC at this site with that in the State forest would be retained.

The ecological assessment found that, despite being previously logged, the vegetation at the offset site is in good condition. The site contains a high number of habitat trees, including habitat for threatened species such as the Glossy Black-Cockatoo. The site would be protected by a covenant on its title, which would prevent the site from being developed in future.

The Department and OEH both consider that the offset site contains similar biodiversity values to those which Bloomfield proposes to clear, and that the proposed offset ratios are adequate. The Department also believes that the level of impact to LHSIGF EEC at the site Bloomfield proposes to clear would be limited, since a large amount (145 ha) of similar habitat exists in the immediate vicinity.

Conservation Funding

Bloomfield has also offered to provide \$20,000 to assist with a local conservation project. Under the existing project approval, Bloomfield has already provided \$20,000 for a local conservation project. This funding was provided to the Land and Property Management Authority, which is undertaking a rehabilitation project on a 253 ha site at Stanford Merthyr, consisting mostly of LHSIGF EEC. The Department considers that the additional funding would be able to be applied to the conservation of this same block of LHSIGF. OEH also supports Bloomfield's proposal to provide additional funding to this conservation project.

Bloomfield's assessment of the biodiversity values of the previously rehabilitated areas and Wattle Tree Drive did not locate any remnant vegetation or habitat for threatened species. The Department and OEH both considered that, as the vegetation quality in these areas is poor and no habitat hollows or nesting trees are present, the impacts of the proposed modification to biodiversity in these areas would not be significant. The Department considered that Bloomfield's proposed rehabilitation works in would improve biodiversity values these areas (see below).

Overall, the Department considers that impacts from clearing for the proposed powerline relocation would not be significant, and believes that Bloomfield's BOS would adequately offset that clearing, in that it would provide for the maintenance and improvement of biodiversity values and would protect a significant amount of LHSIGF EEC. The Department also considers that the additional conservation funding would assist in protecting the LHSIGF at the Stanford Merthyr site. The Department has recommended a substantial suite of new conditions to manage the proposed BOS. These conditions require Bloomfield to provide for the long-term security of the proposed biodiversity offset site and prepare a Biodiversity Management Plan, which includes detailed performance and completion criteria for the implementation of the BOS.

5.2 Rehabilitation and Final Landform

Rehabilitation of the emplacement areas would be undertaken progressively as each overburden emplacement area reaches its capacity. In general, Bloomfield's rehabilitation program is based on its existing Landscape and Rehabilitation Management Strategy, prepared as part of its Mining Operations Plan. Bloomfield has prepared a draft Landscape Management Plan (comprising a Rehabilitation Management Plan, Final Void Management Plan and Mine Closure Plan) under its project approval, and would also have to conduct rehabilitation in accordance with this plan once approved. Rehabilitation would continue to involve the creation of suitable landforms, planting vegetation to create habitat, and monitoring and maintenance of rehabilitated areas to ensure long term objectives are met. These objectives include:

- rehabilitating the site to relevant standards and to minimise off-site impacts;
- effective removal of all Bloomfield's infrastructure;
- rehabilitating land so that no greater management input is necessary than on similar surrounding land; and
- rehabilitating the site to promote compatibility with its proposed end land use.

Bloomfield proposed in its original project application that post-mining land uses should take into account the requirements of the landowner and the objectives of the Lower Hunter Regional Strategy (LHRS), which indicates the site's potential future use for employment lands. Bloomfield continues to maintain that the land should be rehabilitated to support a variety of future land uses, including the retention of habitat areas. Bloomfield would rehabilitate the overburden emplacement areas to create

a stable, undulating landscape with a mix of pasture and tree areas suitable for grazing and general habitat. Following the emplacement of overburden, Areas B, C and E would be capped with topsoil material and sown with pasture or tree seed mix to create a stable landscape with the potential for light grazing. Trees would be planted to create habitat linkage and reduce overall visual impacts. The updated conceptual final rehabilitated landform is shown in Figure 3.

The Department considers that Bloomfield's continued rehabilitation proposals are appropriate, and that progressively rehabilitating Areas B, C and E would allow these areas to be integrated with surrounding rural land uses. As can be seen from Figure 3, the proposed final landform is well-integrated within the surrounding topography, with the exception of a relatively small final void. No significant change to existing conditions relating to rehabilitation are proposed.

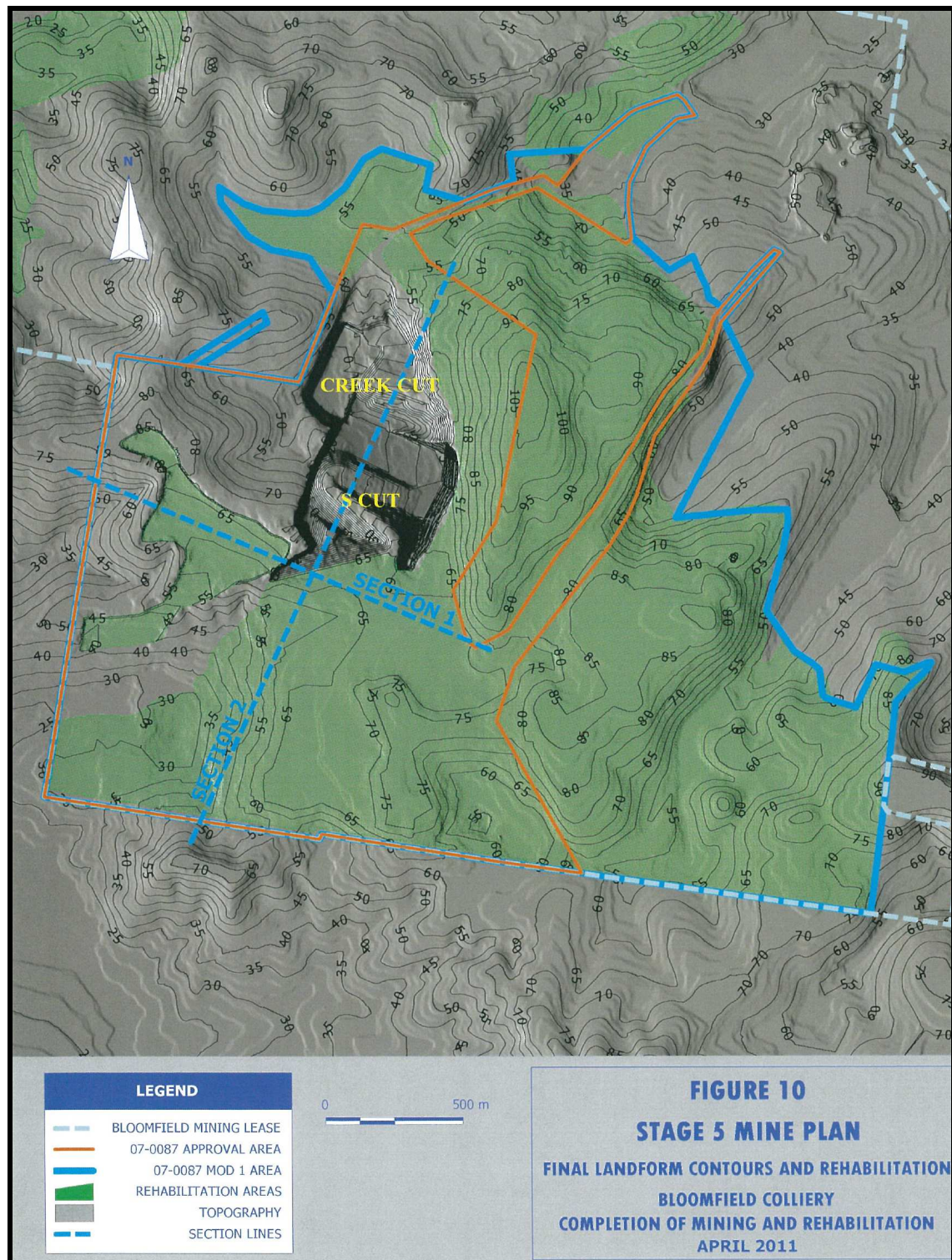


Figure 3: Final rehabilitation landform

5.3 Noise

The noise assessment for the proposed modification found that overburden emplacement in Area B and Area E would lead to exceedences of approved day-time noise limits of up to 7 dB(A) at location M and up to 6 dB(A) at locations E and F (see Figure 4 for receptor locations). Minor exceedences (up to 2 dB(A)) at E and F are also predicted during the morning shoulder period (6 am to 7 am) under prevailing northwest wind conditions. Exceedences of up to 4 dB(A) for the approved evening period limit are also predicted at location L under southeast wind conditions. No exceedences are predicted to occur during emplacement in Area C.

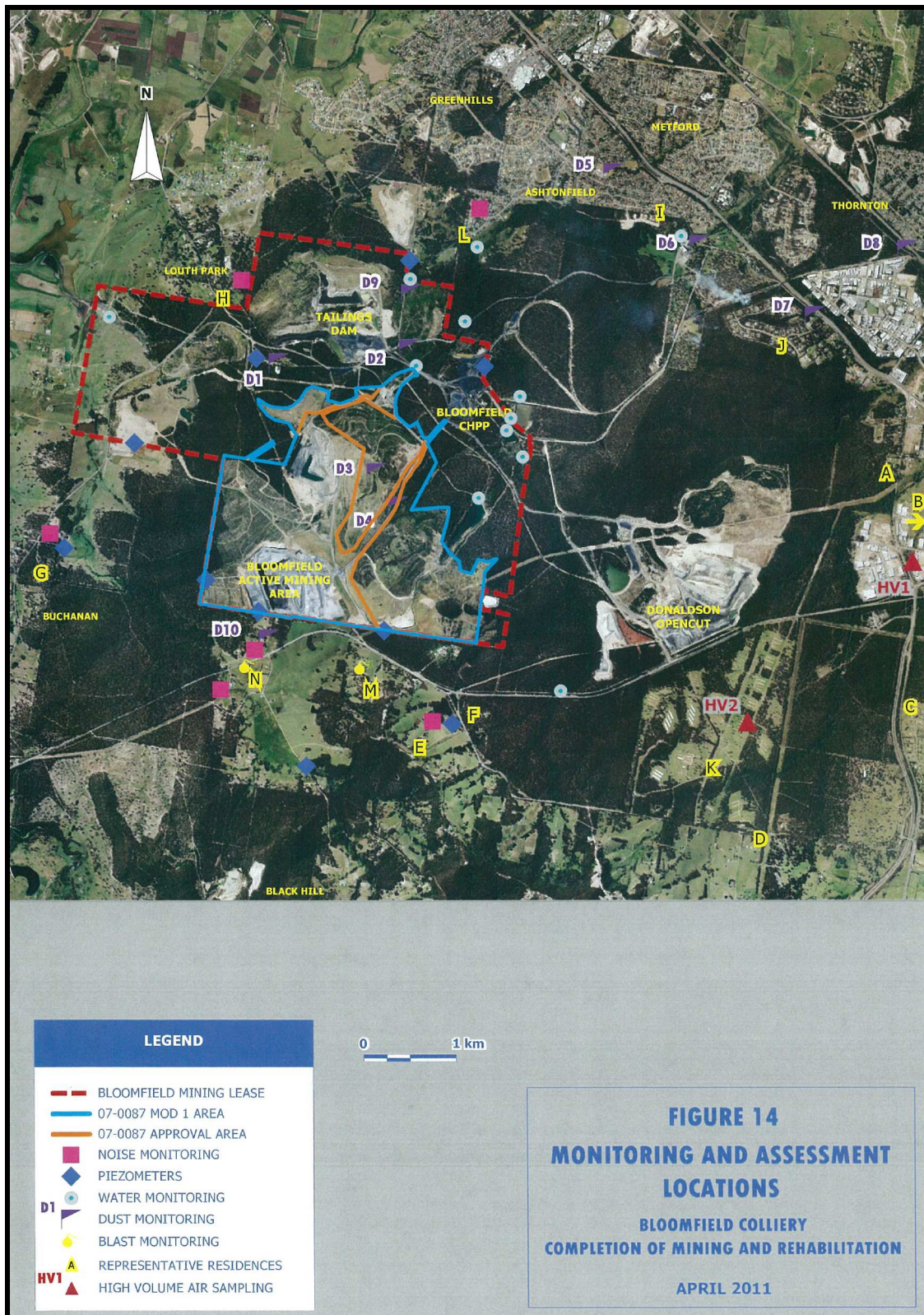


Figure 4: Noise receptors

Under normal circumstances, these predicted exceedences would be considered to be significant. However, the Department accepts that, due to the short timeframes for overburden emplacement activities (three months in Area B, periodically over six months in the other emplacement areas), the impacts would not be sustained over a significant time period. Bloomfield would also program and manage its emplacement activities to reduce the potential for nuisance to local residents. Bloomfield's Noise Management Plan includes a protocol for dealing with noise complaints, and this protocol would continue to be applied to the mine's operations during the proposed modification.

Bloomfield also assessed the noise impacts from relocating the powerline and from upgrading Wattle Tree Drive. Noise from these activities would comfortably comply with the relevant construction noise limits as prescribed under the OEH's *Interim Construction Noise Guideline*.

To ensure noise impacts from the proposed modification do not become significant, Bloomfield has proposed the following avoidance and mitigation measures:

- limiting the final height of the Area B overburden emplacement to 100 m AHD;
- restricting emplacement in the southern part of Area B to the day-time period only;
- operating equipment only in a shielded location during the morning shoulder and evening periods;
- not transporting coal from the S Cut pit during the morning shoulder period;
- constructing an 80 m long noise bund to a minimum height of 80 m AHD on the southern side of the "Save-A-Mile Highway" haul road;
- restricting emplacement in Areas C and E to the day-time period only;
- restricting the duration of dumping activities at Area E to a maximum of 70 hours of work; and
- replacing the dozer with a front-end loader at Area E once the height reaches 52 m AHD.

The Department considers that the application of these measures would assist in managing noise impacts whilst the proposed modification activities are undertaken. The Department is satisfied that noise impacts from the proposed modification are unlikely to be significant overall and that no additional conditions of approval relating to noise are required.

5.4 Other Impacts

The Department also assessed other potential impacts of the proposed modification. These impacts are considered in Table 1, below.

Table 1: Other Impacts

Issue	Consideration and Conclusion
Visual	The powerline corridor is located in a forested area remote from external viewpoints. Overburden emplacement in Areas C and E would be shielded from public view by topography and existing vegetation. The Wattle Tree Drive haul road is located at a high point of the site and has the potential to be viewed from some residences in the Ashtonfield area. However, Bloomfield would construct an earth bund north of the haul road and would stabilise and revegetate its northern batter to reduce visual impacts. Overall, the Department considers that the visual impact of the proposed modification would not be significant, and the current conditions of approval are adequate to manage visual impacts.
Air Quality	Air quality impacts would remain well-within approved criteria for all activities associated with the proposed modification. Scope 1 greenhouse gas emissions would be reduced, due to the shorter coal haulage distances. The Department considers that no additional conditions of approval relating to air quality are necessary.
Water Management	The proposed modification would have no additional impact on surface water or groundwater resources. Bloomfield's existing Site Water Management Plan would continue to be applied to the proposed modification. The Department considers that no additional conditions of approval relating to water management are necessary.
Heritage	No Aboriginal or European heritage sites were recorded within the study area for the proposed modification. Bloomfield's Aboriginal Heritage Management Plan would continue to apply to the proposed modification. The Department is satisfied that the proposed modification would not have a significant impact

	upon heritage values and the current conditions of approval would adequately manage any additional impacts.
Socio-Economic and Community	Bloomfield would continue to provide royalty and tax income to the State. Bloomfield's proposed BOS includes the provision of funding for a local conservation project. The Department considers that no additional conditions of approval are necessary.

6. RECOMMENDED CONDITIONS

The Department has recommended modified conditions for the operations at Bloomfield Colliery. The Department has also taken the opportunity to make minor administrative changes to update the project approval. Bloomfield has reviewed and accepts these conditions.

7. CONCLUSION

Bloomfield has applied to modify its project approval to:

- relocate its power supply infrastructure and so allow its approved pit expansion to occur;
- establish a new haul road to improve efficiency in its on-site coal haulage; and
- manage its out-of-pit overburden emplacement requirements and improve its on-site rehabilitation outcomes.

The Department has considered the modification application, the EA, submissions on the EA, Bloomfield's response to submissions and its proposed BOS. Overall, the Department is satisfied that the impacts from the proposed modification would not be significant. The Department and OEH both consider that Bloomfield's proposed BOS would adequately compensate for the proposed clearing of LHSGIF EEC. The Department also believes that Bloomfield's proposed rehabilitation of its expanded overburden emplacement areas is likely to improve overall revegetation and biodiversity outcomes at the site.


The Department accepts that, whilst the proposed modification is likely to lead to exceedences of approved noise criteria, any such exceedences would only occur over a short period and that therefore the resulting impacts would not be significant.


Consequently, the Department is satisfied that the proposal is generally in the public interest, and should be approved, subject to conditions.

8. RECOMMENDATION

It is recommended that the Deputy Director-General, Development Assessment and Systems Performance, exercise the powers and functions delegated to him in the Instrument of Delegation from the former Minister for Planning, dated 25 January 2010, and:

- **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, subject to conditions, under section 75W of the *Environmental Planning and Assessment Act 1979*; and
- **sign** the attached notice of modification (Tagged A).


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