



# DONALDSON COAL MINE AND ABEL UNDERGROUND COAL MINE

## FLORA AND FAUNA MANAGEMENT PLAN

### CARE AND MAINTENANCE

#### Version 4

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| 1                            | 01.12.2000        | Original   | Original Flora and Fauna Management Plan for Donaldson Coal Mine                                       | Gunninah Environmental Consultants |
| 2                            | 01.03.2007        | All  | Review and update Donaldson Coal Mine Flora and Fauna Plan   | Ecobiological                      |
| 3                            | 1.10.2007         | Original   | Original Flora and Fauna Management Plan for the Abel Coal Mine  | Ecobiological                      |
| 4                            | 03.06.2019        | All  | New plan that covers Flora and Fauna for both Donaldson and Abel Mines for Care and Maintenance phase. | Donaldson Coal                     |
| <i>Document Owner (Role)</i> |                   | Environment and Community Relations Superintendent | <i>Document Approver (Role)</i>  | Operations Manager                 |
| <i>Document Owner (Name)</i> |                   | Phillip Brown                                      | <i>Document Approver (Name)</i>  | William Farnworth                  |

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## 1. Introduction

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### 1.1 Background

The Abel underground and Donaldson open cut coal mines are located in close proximity to each other and are currently managed as an amalgamated mining complex. Donaldson has ceased operations and the majority of land has been rehabilitated whilst Abel is in 'care and maintenance' with restricted activities occurring across the mining complex. Activities that currently occur include water management, rehabilitation maintenance, land management (including weed management etc), maintenance of mining infrastructure and environmental monitoring activities.

This Flora and Fauna Management Plan (F&FMP) serves to meet the requirements of both the Donaldson Development Consent and the Abel Project Approval. It is applicable whilst Abel is in Care and Maintenance and Donaldson in Mine Closure. A review and update to this F&FMP will be undertaken prior to mining operations recommencing at Abel.

Due to the limited activities at Abel and the rehabilitation of the Donaldson open cut area, flora and fauna monitoring during care and maintenance is proposed to be reduced to reflect the current state of operations.

The original F&FMP provided a comprehensive management program intended to manage the clearing of vegetation and potential impacts of mining on plant species, vegetation communities, fauna and fauna habitats. These impacts apply within the mine disturbance area and surrounding buffer lands.

The objectives of this revised F&FMP are:

- to manage the impacts on native and threatened flora and fauna species and their habitats associated with the Donaldson and Abel mines throughout care and maintenance by the implementation of a range of relevant measures;
- to ensure that standard practice flora and fauna management measures are applied;
- demonstrate that a reduction in flora and fauna monitoring is justified during care and maintenance;
- to review and revise the monitoring program that assesses the impacts on flora and fauna adjacent to or downstream of the mining areas during care and maintenance; and
- to fulfil the requirements of the Project Approval Conditions of Consent.

## 2. Project Location and Description

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Abel and Donaldson coal mines are located approximately 23km west of Newcastle. Other nearby towns include Beresfield, located 2km north-east, and Maitland located approximately 5km north east. The mines access, entries and primary surface facilities are located off John Renshaw Drive, Blackhill. Donaldson Coal Mine has been rehabilitated whilst the Abel coal mine has been in care and maintenance since May 2016.

Both mines now use the Abel surface facilities to operate administrative and care and maintenance activities.

Whilst in care and maintenance, the operation has minimal employees and is staffed 5 days a week on day shift only.

Flora and fauna management and monitoring have occurred at both Donaldson and Abel pre mining to generate baseline data. Baseline monitoring has been used to assess the impacts of the mining and post-mining to flora and fauna surrounding the operations.

### 3. Statutory Requirements

This F&FMP has been compiled to meet the requirements of both the Abel Coal Project Approval (05\_0136) and the Donaldson Coal Development Approvals (DA 98/01173 and DA 118/698/22). Both coal mines have a requirement to prepare and implement a management plan that describes how flora and fauna management will occur.

#### 3.1 Abel Coal Mine

The Abel Project Approval 05\_0136 was originally granted by the Minister on the 6<sup>th</sup> June 2007 and subsequently modified on three occasions for the installation of a downcast shaft, upcast shaft and facilities upgrade. The Extraction Plan required under PA 05\_0136 has a requirement to include a Biodiversity Management Plan. Schedule 3, Condition 4 (k) states the Extraction Plan must;

- (k) *include a Biodiversity Management Plan, which has been prepared in consultation with OEHL, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on aquatic and terrestrial flora and fauna, with a specific focus on threatened species, populations and their habitats; endangered ecological communities; and water dependent ecosystems;*

This condition has been satisfied by individual Biodiversity Management Plans for each Extraction Plan and not covered in this F&FMP.

Schedule 4, Condition 20 of PA 05\_0136 states;

| Condition |  |
|-----------|--|
| 20.       | <i>The Proponent shall prepare and implement a Biodiversity Management Plan for the project, for all areas that are not, or will not, be subject to condition 4 of schedule 3, to the satisfaction of the Director-General. This plan must:</i>  |
| (a)       | <i>be prepared in consultation with OEHL, and be approved by the Director-General prior to the commencement of construction of the coal conveyor;</i>  |
| (b)       | <i>establish baseline data for the existing habitat in the biodiversity offset area and on the site;</i>   |
| (c)       | <i>describe the short, medium, and long term measures that would be implemented to:</i><br><ul style="list-style-type: none"> <li>· <i>manage vegetation clearing;</i></li> <li>· <i>manage the remnant vegetation and habitat in the biodiversity offset area and on the site; and</i></li> <li>· <i>implement the biodiversity offset strategy, including detailed performance and completion criteria;</i></li> </ul> |
| (d)       | <i>include a program to monitor and report on the effectiveness of these measures, and progress against detailed performance and completion criteria;</i>  |
| (e)       | <i>identify the potential risks to the successful implementation of the Biodiversity Offset Strategy, and the contingency measures that would be implemented to mitigate these risks; and</i>  |
| (f)       | <i>include details of who would be responsible for monitoring, reviewing, and implementing the plan</i>  |

Table 3-1 Condition 20 of Abel Project Approval

Condition 20 is relevant to the construction and operation of a proposed coal conveyor from the Abel Mine to the Bloomfield Coal Handling Preparation Plant. This conveyor has not been constructed, therefore condition 20 above is yet to be triggered.

#### 3.2 Donaldson Coal Mine

The Donaldson Development Approval DA 98/01173 lodged with Maitland Council and DA 118/698/22 lodged with Cessnock Council was originally granted by the Minister on the 14th October 1999 and subsequently modified on two

occasions for an extension of the pit limits and extension to the mine life. This FFMP is required within the Donaldson Development Consent in Schedule 2, Conditions 76 to 79 which state;

| Condition   | Section              |
|---|----------------------|
| 76. <i>The Applicant shall prepare and implement a Flora and Fauna Management Plan for the mine site (in addition to the management plans for specific Conservation Areas), in consultation with NOW, OEH and Councils, and to the satisfaction of the Director-General, prior to the commencement of construction. The Applicant shall make copies of the Flora and Fauna Management Plan available to NOW, OEH, Councils and the Community Consultative Committee within 14 days of approval by the Director-General.</i> | <b>This Document</b> |
| 77. <i>The Flora and Fauna Management Plan shall include but not be limited to:</i>   |                      |
| (i) <i>additional surveys to more precisely identify the distribution of known and potential nest and roost trees for owl species. The surveys shall:</i>   | <b>4.23</b>          |
| (a) <i>be undertaken by a person experienced in the identification of owl nest and roost trees, approved by the Director-General; and</i>   | <b>4.23</b>          |
| (b) <i>record the location of known and potential nest and roost trees on the ground by marking the tree and by using either theodolite and electronic measuring equipment or differential GPS;</i>   | <b>4.23</b>          |
| (c) <i>a vegetation map delineating major vegetation communities, topographic features and the location of threatened species habitats, including potential and known owl nest and roost trees;</i>   | <b>Figure 4</b>      |
| (ii) <i>details of measures to manage the impacts of the development, including:</i>  |                      |
| (a) <i>restoration of degraded areas;</i>   | <b>4.13</b>          |
| (b) <i>management of invasive weed species and feral animals</i>  | <b>4.15 + 4.24</b>   |
| (c) <i>establishment of an appropriate hazard reduction regime which is in keeping with the ecological values of the area;</i>  | <b>4.25</b>          |
| (d) <i>revegetation and the provision of compensatory areas of equivalent ecological and habitat value where necessary; and</i>   | <b>4.13 + 4.12</b>   |
| (e) <i>strategies to provide increased security for existing habitats and communities;</i>  | <b>4.12</b>          |
| (iii) <i>details of measures to manage the impacts of environmental management on flora and fauna, including the impact of erosion and sediment control measures and hazard reduction burning;</i>  | <b>4.12, 4.15</b>    |
| (v) <i>priorities for action and a timetable for all works outlined in the Plan; and</i>  | <b>7</b>             |
| (vi) <i>a program to monitor flora and fauna impacts on undisturbed portions of the mining lease area and downstream environments (such as the Woodberry Swamp). The program shall extend for the life of the mine and for a period thereafter as approved by the Director-General, and include:</i>  | <b>5</b>             |
| (a) <i>justification for monitoring intervals and locations;</i>  | <b>5</b>             |
| (b) <i>monitoring of the presence and persistence of native flora and fauna species over time, particularly threatened species; and</i>   | <b>5</b>             |



If any threatened species of flora are found in the planned clearing areas the first step will be to consult with the site Environmental Officer to determine whether the cleared area can be adjusted in order to leave the plants *in situ*. If this is not feasible then the plants will be translocated to an area of similar habitat applying the best available knowledge about the ecology and translocation of the species. This translocation will occur within the local area in order to maintain any local genetic adaptations.

#### **4.12 Retaining Vegetation**

The unrestricted or uncontrolled access of the public and utility workers and the use of vehicles and machinery to these areas has the potential to impose an adverse impact on flora and fauna and their habitats by damaging or disturbing native vegetation, habitat features, soil surfaces, and potentially increasing weed invasion and soil erosion. Protective measures have been implemented in the Bushland Conservation Area (BCA), *Tetratheca juncea* Conservation Area (TjCA) and uncleared areas within the 'mine disturbance area' to minimise the potential for adverse impacts on these communities.

The management measures that will be implemented at Abel and Donaldson during care and maintenance to increase security for retained habitats and communities of flora and fauna include:

- fencing along John Renshaw Drive to prevent uncontrolled public access to the site. The fence is intended to eliminate environmental damage as a result of the illegal dumping of garden waste (a common source of weed infestations) and car bodies, and should reduce the frequency of deliberately lit fires;
- the erection of signs on boundary fencing to delineate areas of restricted access;
- the removal of rubbish, car bodies, and other urban refuse from the site, including the 'mine disturbance area', the BCA and the TjCA;
- the active management of invasive weeds to remove and control weeds which occur on site;
- the active control of feral animals which currently occur on site and that can have a detrimental impact on native fauna (wild dogs, foxes and cats) and cause degradation of the natural landscape, such as pigs and rabbits;
- pre-clearance surveys that must be conducted prior to any land disturbance or tree removal (if required);
- development and implementation of the *Tetratheca juncea* Management Plan TjMP for the population located in the south western corner of the subject site. The TjMP includes consideration of specific protocols for the management of potential impacts arising from mining operations and fire and for monitoring population health;
- protocols to prevent the discharge of oil, fuel and other possible contaminants from mine operations areas and vehicle maintenance sites. Such areas will be appropriately located and bunded to avoid the potential for discharge of contaminants into the surrounding environment; and
- the appropriate treatment, collection and disposal of rubbish and human waste to prevent their uncontrolled discharge into the natural environment.

The BCA is the area of land that is located between the property boundary and the mine disturbance area as shown in figure 4-1. The BCA is an area of land that will be conserved to ensure there is at least a 2:1 ratio of BCA to mine disturbance area as required under the Donaldson development consent. This will ensure that the BCA is a compensatory area to offset the short-term impacts of mining disturbance. The ecological value of the BCA has been assessed and is at least the equivalent ecological value to the mine disturbance area.

#### **4.13 Restoration and Revegetation**

During care and maintenance, it is not anticipated that any revegetation works will be required. All areas that are available for rehabilitation have been revegetated with only maintenance works required to manage weeds. The Square Pit and West Pit are currently still unrehabilitated and will be rehabilitated at the closure of the Abel mine. Both pits are currently in use by the Abel mine.

In the event that rehabilitation works are required during care and maintenance, these works will be conducted in accordance with the relevant Mining Operations Plan (Appendix 1).

Areas that have been identified as requiring restoration works will have site specific environmental management measures implemented that will include;

- identification and management of existing erosion and sediment issues;
- control and removal of weeds;
- revegetating with local native species; and
- implementing appropriate methods of containing contaminants or pollutants that may or do occur.

#### **4.14 Topsoil Management**

There is no topsoil stripping proposed during the care and maintenance period that this management plan applies to. However, in the event topsoil stripping occurs, topsoil management will be consistent with that during active mining.

The main aim of the management of the stockpiling or redistribution of topsoil is to ensure that topsoil from different topographical areas is stockpiled into separate piles (where possible), or is redistributed immediately to areas of similar topography in the already mined, and regraded, areas. The immediate redistribution of topsoil is preferable for several reasons:

- to avoid double-handling;
- to avoid the need for additional disturbed land for stockpiling;
- to limit the reduction in the quality (in terms of resilience) of the native seed bank present in the soil, which arises when topsoil is stockpiled; and
- To limit the impact on soil quality.

If required, topsoil will be removed and stockpiled, or redistributed, according to different topographical areas (including riparian, ridgetop, slope and highly weed infested), where practicable.

It is noted that topsoil will not be stripped when soil is too wet or too dry and where possible the stripping of topsoil will take place after the setting of seed.

Topsoil management will consider whether the topsoil has a large amount of weed seed in the soils seed bank. If the topsoil is deemed to carry a high proportion of weed seed, it will be preferable to manage this topsoil in an effort to reduce its weed propagule content and redistribute later.

The main approach to the management of topsoil on the 'mine disturbance area' is to maximise its re-use in the rehabilitation works. For the majority of the 'mine disturbance area', the re-use of topsoil will simply involve moving topsoil from one location to another. However, the management of weed-infested topsoil will be considered on a 'case-by-case' basis. There are several strategies in which to manage weed-infested topsoil, including:

- immediate distribution followed by the application of herbicide to germinating weeds. The benefit of this method is that the native seed source is retained and not affected by long term stockpiling. It is also beneficial as the mycorrhizal associations, which appear to assist in the development of native plant root systems, are retained. These mycorrhizal associations do not survive the stockpiling process. The negative aspect of this management approach is that it requires maintenance;
- the timing of spraying with herbicide is important and is determined by the season during which the topsoil was collected. Topsoil stockpiled during winter needs to be sprayed during the late spring, whereas topsoil stockpiled during summer needs to be sprayed during late autumn;
- stockpiling of weed-infested topsoil and cover with a layer of clean soil.
- Theoretically, the natural composting process will commence with seed propagules would be eradicated in the process. Potential problems with this method area the eradication of native plant seeds and mycorrhiza

and the possibility of the composting stockpile to cause a fire hazard risk, in terms of spontaneous combustion. The stockpiles would require careful and continuous monitoring to ensure their safety;

- stockpiling of weed-infested topsoil in rows no higher than 1m, then allowing weed propagules to re-sprout and then spraying with herbicide. The topsoil can then be redistributed. The benefit of having a low height stockpile is that most of the weed propagules within the stockpile have the opportunity of re-sprouting and the application of herbicide will result in the eradication of most of the weed propagules. The main problem with this method is that the mycorrhizal associations may be lost; or
- the application of a 'pre-emergent' herbicide to stockpiles of weed-infested soil, although this will also result in the eradication of native plant seed and the loss of most mycorrhizal associations.

#### **4.15 Weed Management**

Weed management during the care and maintenance period involves the:

- removal and disposal of weeds from the 'mine disturbance area' either off-site
- the control of vehicular access to parts of the site;
- the continued suppression of weeds occurring within the 'mine disturbance area' and on the other parts of the site;
- ensure that exposed areas are covered with mulch if they are to be exposed for lengthy periods; and
- washing down of machinery prior to their entry onto the mine site.

#### **4.16 Erosion and Sediment Control**

The detailed concepts and strategies for erosion and sediment control that will be implemented across the Abel and Donaldson sites during Care and Maintenance include:

- management and control of sediment discharge to protect vegetation adjacent to the 'mine disturbance area' and along creeklines;
- management of sediment control measures in place to prevent or minimise the discharge of sediment into adjacent vegetation communities and nearby creeklines, in accordance with Condition 77(iv);
- removal of temporary sediment filter fences, straw bale sediment filters and sediment control dams where no longer required;
- the implementation of dust control measures to protect vegetation adjacent to the mine disturbance area and to retain the value of habitats for native flora and fauna. Dust control measures will only be required if a dust generating project occurs and will primarily involve the watering of exposed dust-generating surfaces;
- the prevention of damage arising from the discharge of contaminants or pollutants into the environment, by appropriate management protocols and by the bunding of sites containing contaminants (to avoid the potential for discharge to the natural environment and the subsequent reduction in value of habitats for fauna and flora); and
- the maintenance of diversion banks, bund walls, drains and culverts to divert clean runoff around disturbed areas and to redirect contaminated runoff into the mine water system.

## 4.2 Fauna

The pre-clearing survey that is required prior to the removal of any vegetation from the site also considers potential impact to fauna. These surveys enable any threatened fauna to be identified, options for the timing and method of removal considered, and the identification of habitat trees for fauna. Pre-clearing surveys also facilitate the ethical and appropriate treatment of animals during felling, and translocation post-felling if necessary.

These surveys will be conducted by a suitably qualified and experienced person approximately seven days prior to commencing tree felling activities. All native animals and plants, whether they are listed as threatened or not, are protected under the NSW *National Parks & Wildlife Act 1974* and require special consideration during tree clearing activities.

Although not proposed during care and maintenance, prior to any clearing, the area must be surveyed during the day to identify any hollow-bearing trees or trees otherwise supporting special habitat features (e.g. active nests). These trees are to be clearly marked.

If a Koala is detected in a tree, that tree and a 10 m buffer around it, is to be left uncleared and the animal left to vacate of its own accord. The tree will be checked daily to determine whether the Koala has left.

### 4.21 Protocol for clearing marked habitat trees

No habitat trees are proposed to be cleared during care and maintenance. If this situation was to occur, marked habitat trees will be cleared around and left standing for at least two nights to allow any fauna to relocate of their own accord. Marked habitat trees will be observed at dusk by a suitably qualified and experienced person a night before they need to be felled in order to determine whether any fauna are using the hollows; particularly bats.

Following completion of each pre-clearing inspection a report describing the process and findings is to be submitted to the Abel environmental officer.

### 4.22 Threatened species

Several threatened species have been recorded or considered to possibly be present across Abel and Donaldson sites. Two threatened plant species, *Tetratheca juncea* and *grevillia parviflora ssp parviflora*, have been recorded and monitored across the Donaldson site. The *Tetratheca juncea* Management Plan outlines the management strategies that have been put in place to manage the *Tj* species.

Several threatened fauna species have been recorded at Abel and Donaldson, including the area that has been mined, buffer lands and above approved future mining areas. These species include:

- the Powerful Owl;
- the Masked Owl;
- the Barking Owl;
- the Large-footed;
- the Little Bent-wing Bat;
- Eastern pygmy-possum;
- Grey-headed flying fox;
- Eastern pygmy-possum;
- Black-chinned honeyeater (eastern subspecies);
- Brown treecreeper (eastern subspecies), and
- Gang-gang cockatoo.

Several other threatened microchiropteran bats (the Eastern Freetail Bat, Eastern False Pipistrelle, Common Bent-wing Bat, Greater Broad-nosed Bat and Yellow-bellied Sheath-tail Bat) had also been tentatively recorded at Donaldson and Abel. The Glossy Black Cockatoo has also been considered to be a potential visitor to the site.

It is not foreseen that there will be any additional impacts to threatened species during care and maintenance.

#### **4.23 Targeted Owl investigation**

Condition 77(i) of the Conditions of Consent for the Donaldson Project requires the identification of known and potential owl nest and roost trees. This Condition also requires that the identification of owl nest and roost trees be undertaken by a relevantly experienced person who shall be approved by the Director-General. Dr Rod Kavanagh of NSW State Forests, who was recommended by the Department of Planning and Environment has previously conducted the survey work required.

A survey for "known and potential nest and roost trees for owl species" was conducted during September and October 2000. The survey involved the completion of an aerial survey to identify likely areas of habitat followed by walked surveys of areas of likely habitat. Relevant trees were marked with flagging tape, and their location recorded.

The owl habitat surveys of the Donaldson mine site located five known or potential owl roost and nest trees. The areas identified (Figure 4.3) were the most significant owl nest and roost features located on the site, but there are other areas of habitat that are not listed below which are potential habitat sites. The five areas located were:

- Powerful Owl roost tree located along Weakley's Flat Creek in the eastern part of the site, within the Bushland Conservation Area (BCA), located at (AMG 370893, 6368872);
- Powerful Owl potential roost and nest trees along Four Mile Creek on the northern side of John Renshaw Drive, within the BCA;
- Powerful Owl potential roost and nest trees along Four Mile Creek in the northern part of the site, within the BCA;
- Masked Owl potential roost tree along Four Mile Creek in the southern part of the southern BCA, located at (368350, 6366050); and
- Barking Owl potential roost and nest trees along a side gully branching off Weakley's Flat Creek.

Figure 4.1 is from the original 2000 Flora and Fauna Management Plan that shows the location of the five areas discussed above.

Following the completion of the owl habitat surveys, it was observed that the main areas of potential or known owl nest and roost trees were located within the established BCA.

Fauna monitoring conducted since the original targeted owl study have shown:

- No evidence of the Barking Owl;
- The Masked Owl has been present since 2009
- A Sooty Owl was present for 3 years up to 2005 and then in 2016;
- The Powerful Owls use the eastern side of the BCA as part of their foraging range.

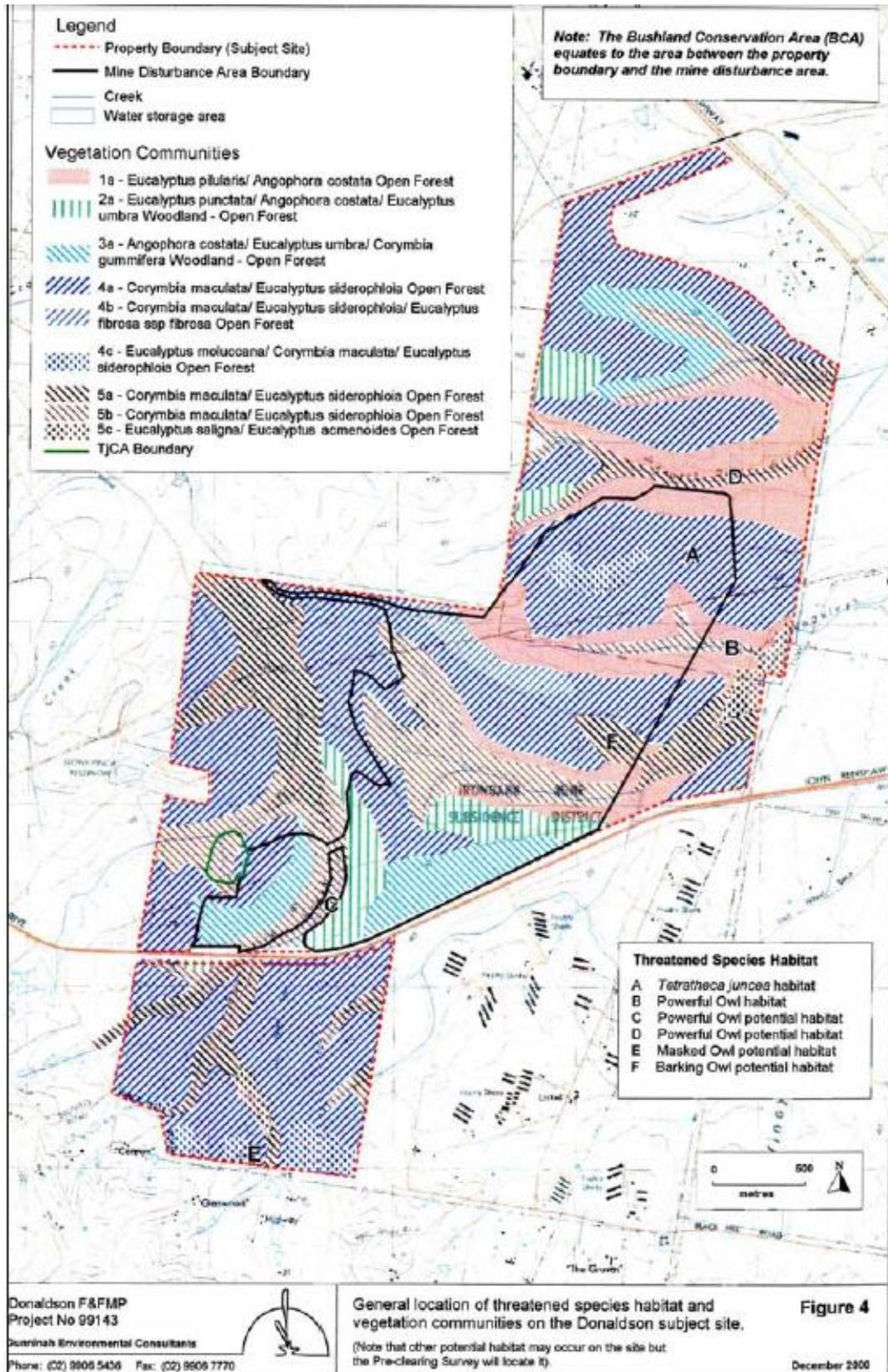


Figure 4-1- Figure 4 of the original Flora and Fauna Management Plan (2000)

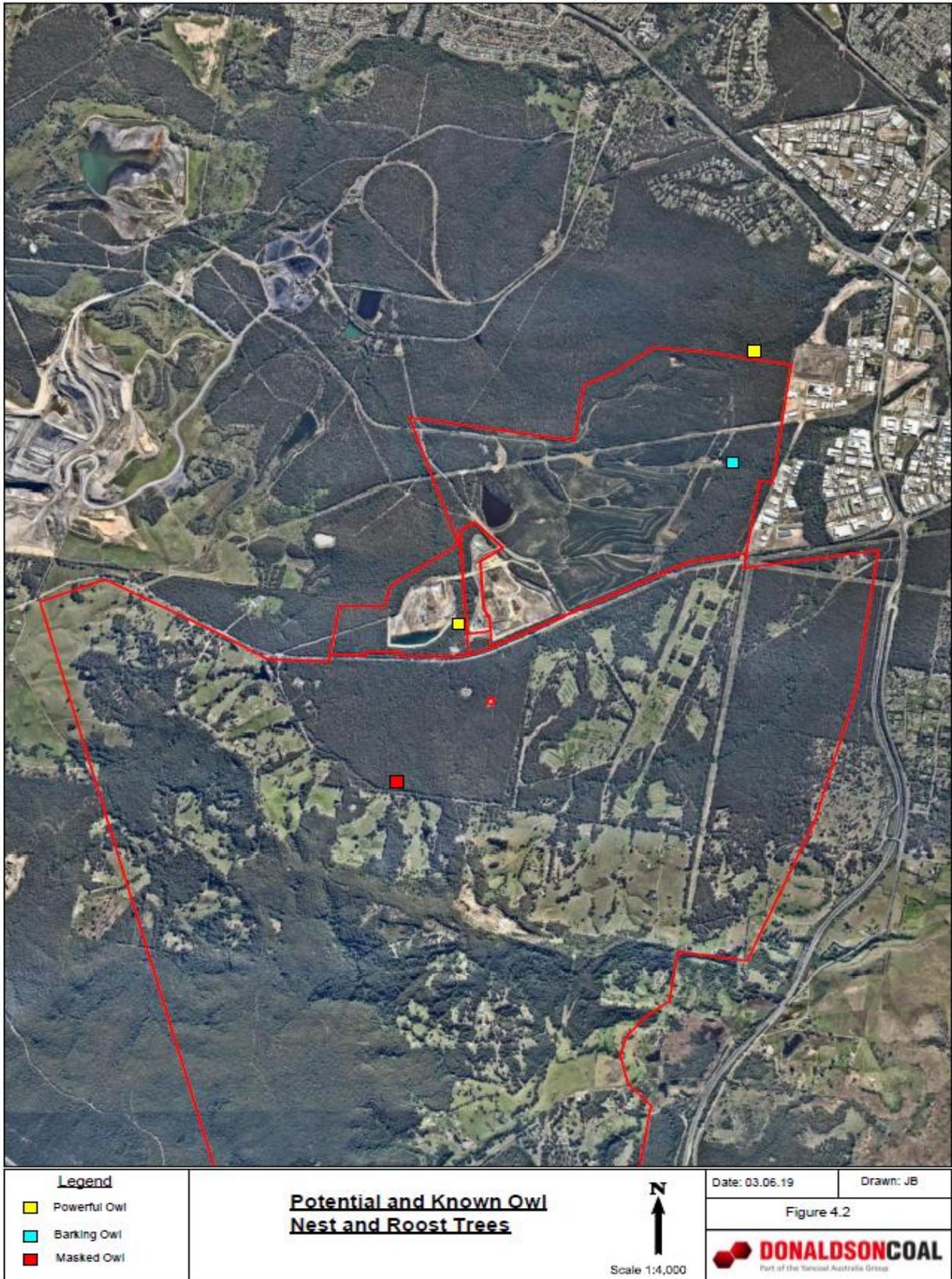


Figure 4-2 Known and Potential Owl Roost Trees and Nest

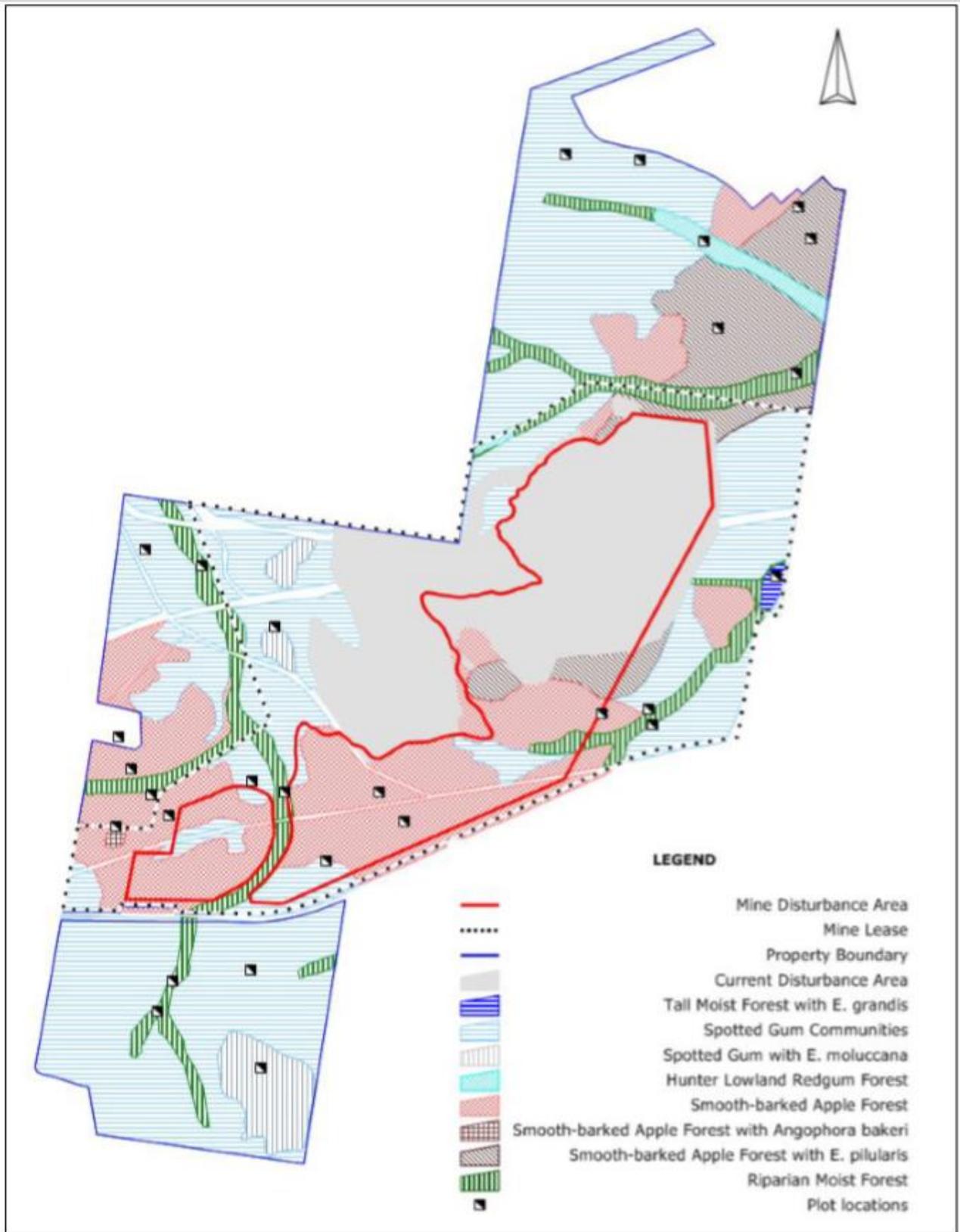


Figure 4-3 Major Vegetation Communities at Donaldson Coal - 2018

#### **4.24 Feral Animal Control**

A strategy to manage feral animals is conducted annually on Donaldson owned lands to minimise the impact of feral species on the native flora and fauna. Feral animals to be managed on the Abel and Donaldson sites and adjacent lands include the fox, feral cat, pig and wild dog.

The primary objective of feral animal management on Donaldson owned land will be to control the number of feral animals. The total eradication of feral species from the site is not considered a feasible option given the likely immigration of individuals from neighbouring areas, especially wild dogs as these are known to be transient animals.

A Wild Dog and Fox control program will be conducted on an annual basis, typically during spring or at an alternative time that is recommended by the Local Land Services. The program will be in coordination with nearby land managers to achieve the best results. A summary of the results of this control program will be provided in the Abel and Donaldson Annual Reviews.

#### **4.25 Bushfire and Hazard Reduction Burning**

##### **4.251 Bushfire**

Land owned by the Company is managed in a way that minimise the risk of bushfire as far as is practicable, and reduces the risk of fire originating on Donaldson Coal land spreading to adjacent properties

Numerous tracks traverse the property, however the width of some tracks is not sufficient to act as a firebreak in the event of a major bushfire.

The management regime will be progressively developed for the Donaldson site and will take into consideration the requirement for hazard reduction burns, natural fire regime and the need to maintain the ecological value of the site for flora and fauna.

Ensuring the continued maintenance of all fire trails will allow fuel reduction burning to be staggered over the life of the project within the landholding boundaries.

The purpose of firebreaks is to provide a physical break in the vegetation with the aim of preventing spread of fire. Firebreaks also double as roadways for fire fighting equipment. On the Donaldson Property, firebreaks also feature as transmission easements and pipeline easements of the Hunter Water Corporation.

The location of firebreaks is strategic in effectively fighting a fire. They will be located in the following locations:

- Along internal fences
- Along boundaries with adjacent neighbouring properties not owned by Donaldson Coal
- Around surface structures including the fuel farms and Offices/workshops.
- Beneath power lines

In addition there has been illegal fires burn through the property. Such fires are large in scale and are not easily managed. Such large-scale burnings do not allow for the protection of the flora/fauna of the site.

##### **4.252 Hazard Reduction Burning**

Hazard reduction burning will be undertaken in consultation and agreement with the NSW Rural Fire Service. A mosaic pattern for hazard reduction burning will be used as there are several ecological advantages. These include;

- reducing the fuel load of an area which will reduce the intensity and speed of a fire though the area;
- ability for local fauna to move into unburned areas in close proximity to burnt areas; and
- greater control over fire intensities

Conducting hazard reduction burning will also provide better control over fire frequencies which is important for the survival of juvenile plants. If the fire intervals are too close, many juvenile plants will not survive, impacting the regeneration of an area.

A number of flora species are reliant on fire to reproduce with fire intensity a key parameter in ensuring reproduction. Fires of low intensity may not be hot enough to trigger seed dispersal whereas fires of high intensity can do irreparable damage to many flora species.

It is intended to undertake hazard reduction burning of the various mosaic areas after receiving approval from The NSW Rural Fire Service (RFS). A hazard reduction certificate is required from the RFS who will also conduct any hazard reduction burning to ensure that the burn off is undertaken in an organized and professional manner. The involvement of the RFS will also provide them with site knowledge and history should they be called to any unauthorized fires on site.

## 5. Flora and Fauna Monitoring Program

Monitoring programs for undisturbed portions of the mining lease areas including the Bushland Conservation Area and the Tetratheca juncea Conservation Area are presented in the relevant Management Plans for these areas. The effectiveness and success of the rehabilitation of mined areas is addressed in the monitoring section of the Abel and Donaldson Mining Operation Plans.

Flora and Fauna Monitoring will be conducted annually and aims to monitor the effectiveness of the conservation and mitigation measures applied to the operation of the mine. Evaluation of the impacts of mining activities across the site first requires a baseline flora and fauna study, and then monitoring surveys thereafter. Baseline surveys were completed prior to mine disturbance in the area. Data from the baseline surveys provide a benchmark against which subsequent survey data can be compared.

Flora and fauna monitoring also targets the invasion of weed species in the bushland surrounding the mining areas and that the habitat along the local creeks does not deteriorate as a consequence of the adjoining mine infrastructure.

Nine quadrats have been established for the Monitoring Program for the Donaldson Project. Figure 5.1 shows the locations of the quadrats in relation to the mine disturbance areas. The nine locations are:

- Q1- Along Four Mile Creek downstream of the mining operation, beyond the junction of the northern and southern arms of the creek (within the BCA);
- Q2 - Along Four Mile Creek, between the Square Pit and the West Pit (within the BCA);
- Q3 - Northern arm of Four Mile Creek, downstream of the population of Tetratheca juncea in the south western portion of the site (within the BCA);
- Q4- The south western most tributary of Weakley's Flat Creek, within the BCA, which is a control for other quadrats located along this creek;
- Q5 - Tributary of Weakley's Flat Creek, adjacent and downstream of the 'mine disturbance area' (within the BCA);
- Q6 - Main body of Weakley's Flat Creek, in close proximity to the 132kV electricity line;
- Q7 -Southern arm of Scotch Dairy Creek. The quadrat is located along the creek line;
- Q8 - Control quadrat along the most northern arm of Scotch Dairy Creek (within the BCA); and
- Q9 - Within the mine lease area. As the other eight locations are all in drainage lines this location was selected to provide data from dry elevated forest.

Monitoring has occurred in these quadrats since 2001 except for Q9 which was added in 2003.

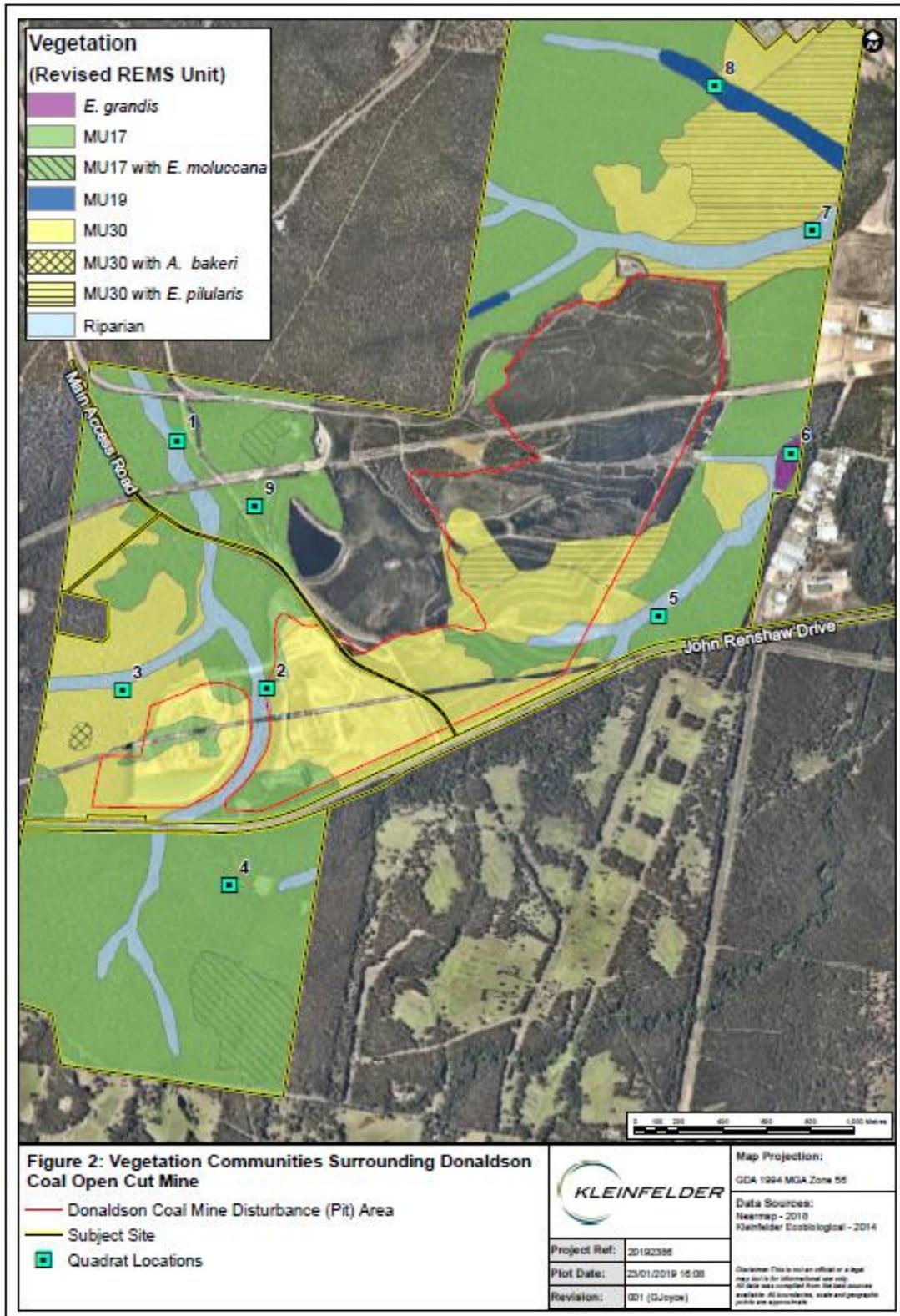


Figure 5-1 Donaldson Vegetation Communities and Monitoring Quadrats (Source: Kleinfelder 2018)

## 5.1 Flora Monitoring

The flora quadrats are 20m x 20m and have been marked with star pickets for long term identification of sites. The parameters that are measured for vegetation monitoring include:

- Total Foliage Projective Cover of all structural layers of vegetation: ground, shrubs, overstorey and emergents.
- Tree height and basal area
- Total floristic content within the bounds of each quadrat.

### 5.11 Floristic Identification and Biomass Measurements

Vegetation communities within and surrounding the nine (9) quadrats have been mapped previously with Figure 5.1 showing vegetation community boundaries.

The vegetative structure will be monitored by measuring the spread, height and layers of the foliage present as well as stem size and stem location within each quadrat. Structural classification of vegetative communities will be conducted as described by Specht and Specht (1999) and is acceptance amongst Australian ecologists as providing a reproducible basis for describing and comparing plant communities. If a species cannot be identified during field work, a sample will be taken for further identification analysis.

Foliage Projective Cover (FPC) will be measured to determine the spread of foliage and is measured for each significant individual species or group of plants (such as for ground cover). FPC is the outline boundary of the horizontal spread of foliage (ignoring leaf density). In order to determine the horizontal structure of the vegetation in the quadrats measurements will be taken using a one metre by one metre grid. The vegetation layers measured during monitoring will include; ground cover, shrubs up to two metres high, over storey and emergent trees. All vegetation covering the quadrat will be measured including portions of tree crowns over the quadrat from trees with stems located outside of the quadrat.

The location of the individual stems of shrub and tree species will be recorded on the grid. For trees taller than two metres, the Diameter at Breast Height (DBH) will be measured. The Breast Height used for this monitoring will be 1.4m above surface. At this height the girth of the tree (including bark) will be recorded and the DBH then calculated. This reduced error originating from the fact that most tree stems are not truly cylindrical. Trees over 2 meters will also have their height measured using a hypsometer (or equivalent).

The Basal Area (BA) of trees over two meters will be determined. The total basal area and stand volume will also be calculated.

### 5.12 Invasive Plant Monitoring

Inspections for invasive plants (weeds) will be conducted by the Environmental Officer throughout the year during area inspections of the mine site.

Any weed outbreaks will be eradicated using the most appropriate methods, particularly ensuring that there is no damage to surrounding vegetation.

Weed management, involving active control and monitoring, will be conducted to control and prevent the spread of invasive weeds on the sites and to avoid the introduction and establishment of new weeds. Weed control and monitoring will be of particular concern on the Donaldson mine rehabilitation sites and in the Bushland Conservation Area.

Specific measures to be implemented to manage invasive weeds during care and maintenance include:

- dedicated weed control and monitoring to be implemented along access roads, where there is the potential for the transport and establishment of weed propagules currently present on site and the introduction of new weed species;
- the application of measures to minimise the transportation and spread of weeds through the landscape, in particular to prevent the introduction of novel weeds into the BCA, TjCA and rehabilitation areas on site, including the cleaning of vehicles and equipment to remove weed material and propagules;
- the avoidance of the use of known invasive garden species in landscaping schemes on the site. Ideally, locally endemic plant species currently occurring on the site will be used in any landscaping programs; and
- restricting access to the Donaldson mine area through the erection of fencing and locked gates to eliminate the illegal dumping of garden refuse in areas of native bushland, and by the use of signage.

## 5.2 Fauna Monitoring

Fauna will be monitored in an area of approximately 300m radius of each permanent quadrat. This monitoring consists of:

- Terrestrial trapping of small to medium mammals using Elliott A, Elliott B and Cage traps. Trapping will occur over 4 nights. When deployed, traps will be checked each morning;
- Arboreal trapping using Elliott B traps. Traps will be set 2 meters above the ground ;
- Harp trapping of Microchiropteran bats;
- Anabat call-recording of bats;
- Targeted amphibian and reptile searches;
- Spotlighting for nocturnal fauna for a period of 1 hour;
- Targeted search for large forest owls using owl call playback;
- Diurnal bird surveys for 30 minutes during the morning period;
- Nest boxes are inspected to identify evidence of usage.

### 5.21 Catastrophic events

It is possible that events will occur over time that will have an impact on the habitat above and beyond any impact caused by the original clearing and subsequent use of the cleared areas. The most likely event will be bushfire. The bushfire management plan for the area will ensure that the monitored areas are not burned for at least 5 years. If a fire or some other unforeseen event occurs, monitoring will continue as prescribed.

## 6. Reduced Flora and Fauna Monitoring

As the Donaldson Coal Mine is has ceased and majority rehabilitated and the Abel Mine is in 'Care and Maintenance', several monitoring programs that were conducted during operations are now proposed to be reduced or suspended until operations resume.

### 6.11 Reduced Monitoring during Care and Maintenance

The monitoring program for Abel and Donaldson has been reviewed to reflect the current situation across the complex. Since mining began at Donaldson in 2001, flora and fauna monitoring has focused on assessing the impacts of active mining on the surrounding environment.

Mining ceased at Donaldson in April 2013 and rehabilitation works were completed in March 2014. There has now been 5 years of post-mining flora and fauna monitoring for the Donaldson site. Results of post mining monitoring indicate that there are no detrimental impacts on biodiversity within the Bushland Conservation Area that can be attributed to the Donaldson Coal Mine. Donaldson flora and fauna monitoring will continue on an annual basis.

The Abel underground operation ceased mining in April 2016 and entered a period of care and maintenance in May 2016. There is no mining planned in the near future. Flora and fauna monitoring to date for Abel mine has been baseline monitoring as specific monitoring areas are yet to be impacted by mining operations. The Abel flora and fauna monitoring will continue on an annual basis.

Monitoring that is proposed to be deferred until mining recommences includes:

#### 6.111 Pambalong Nature Reserve Monitoring

Pambalong Nature Reserve is 34 ha of freshwater wetland located on the western side of the F3 freeway, approximately 20 km north-west of Newcastle (Figures 5 & 6). The reserve was gazetted in December 2000 and is managed by the DECC National Parks and Wildlife Service (NPWS) to provide critical habitat for wader and water bird species. The reserve is part of a chain of protected wetlands (including Hexham Swamp Nature Reserve and Kooragang Nature Reserve) that form the internationally significant Ramsar-listed Hunter Estuary Wetlands (NPWS 2006).

The wetland depends on freshwater from Blue Gum Creek to maintain and replenish aquatic and terrestrial habitats in the reserve. Consequently any changes to the quantity and quality of water delivered from the Blue Gum Creek catchment arising from mining activities or subsidence could compromise the ecological integrity of the wetland. The Blue Gum Creek catchment extends to the south west and well outside of the Abel underground mining area. The catchment not only includes the Abel underground mining area but also Black Hill Quarry, Daracon Quarry and the fully rehabilitated Tasman Underground Mine. The Abel mining area is yet to extend into the catchment area of Pambalong Nature Reserve whereas the two quarries have been in operation in the catchment for several years.

Baseline monitoring on Pambalong Nature Reserve has now occurred for 11 years. Seasonal variations have been identified during this period and trends reviewed. It has been determined that Abel mine has had no impact on the Pambalong Nature reserve.

#### 6.112 Dam Monitoring and Management Plan

The Abel EA submission notes that there are 175 farm dams above the underground mining area and that most of these will be vulnerable to subsidence impacts such as cracking or tilting with significant water loss resulting. The Dam Monitoring and Management Strategy (DMMP) developed a baseline set of data for these dams focusing on threatened flora and fauna. The baseline data is then be available to inform the Subsidence Management Plans for the area containing these dams.

Since this monitoring began in 2008, the number of dams being surveyed have decreased significantly as access to properties to monitor dams continues to be restricted by new owners.

Throughout the surveys conducted on the Abel Dams, there has been no impacts identified to any threatened flora or fauna.

### 6.113 Sub-tropical Rainforest Monitoring Plan

Monitoring of the sub-tropical rainforest has been directed at assessing the stability of the rain forest to dry forest interface as well as floristic and faunal diversity in the rainforest proper. Approximately eleven (11) years of pre-mining baseline data is available to compare any post-subsidence changes against. While there are several areas of rainforest within the Abel mining lease, the most extensive and best developed lies in the Long Gully system and this is the area that the rainforest monitoring has been located. This area also lies where subsidence could have the largest impact if mining ever occurs in this area.

Throughout the surveys conducted on the sub-tropical rainforest to date, there has been no impacts identified due to the Abel mining operations. Mining is yet to occur in this area.

## 7. Roles and Responsibilities

Flora and fauna management roles and responsibilities are listed in Table 7-1.

Table 7-1 Roles and Responsibilities

| Role   | Responsibility   |
|--|--|
| Manager of Mining Engineering                      | <p>Provide sufficient resources to manage flora and fauna related risks and progress opportunities for improvement.</p> <p>Identify and allocate sufficient resources to manage flora and fauna related risks by supporting the F&amp;FMP implementation.</p>  |
| Environment and Community Relations Superintendent | <p>Oversee the implementation, monitoring and review of the F&amp;FMP in accordance with applicable requirements and scheduled actions in Table 7.2.</p> <p>Record, investigate and respond to flora or fauna related incidents and complaints in accordance with complaint and incident management procedures.</p> <p>Periodically assess flora and fauna management performance.</p> <p>Implement, monitor and review programs, systems and procedures linked to the F&amp;FMP.</p> <p>Monitor and review data collected as part of flora and fauna monitoring program and assess compliance.</p> <p>Conduct or delegate weed inspections to assess weed spread and scale.</p> |
| Employees  | <p>Conduct work activities in a manner that reduces impacts to flora and fauna.</p> <p>Report impacts or incidents that relate to flora and fauna to appropriate supervisor.</p>   |

During care and maintenance, actions identified in Table 7.2 will be implemented.

Table 7-2 Action timetable during Care and Maintenance

| Action                                   | Summary   | When                                |
|--|---|-------------------------------------|
| Weed Spraying                            | Conduct spraying of noxious weeds using approved herbicides that have been identified across the complex.   | Biannually – June and December      |
| Inspect structures                       | ESC<br>Inspect erosion and sediment control structures on an annual basis to assess the operational status of dams, drains and sediment structures. | Annually or after Event (75mm/24hr) |
| Feral Animal Control                     | Conduct wild dog and fox baiting in consultation with the Local Land Services and neighbouring property owners                                      | Annually - September                |
| Restricted Access Inspection             | Inspect perimeter fencing and locked gates to maintain restricted access to bushland and rehabilitation areas.                                      | Weekly                              |
| Bushfire and Hazard Reduction Inspection | Conduct bushfire hazard and proposed hazard reduction inspection with NSW Rural Fire Service staff to identify required actions.                    | Annually - September                |
| Nestbox Monitoring                       | Conduct inspections of nestbox utilisation and develop an annual report   | Annually - December                 |

|                            |  |                     |
|----------------------------|--|---------------------|
| Rehabilitation Monitoring  | Conduct flora and fauna monitoring within the Donaldson rehabilitated areas and prepare annual report.                           | Annually - December |
| Flora and Fauna Monitoring | Conduct flora and fauna monitoring in identified transects (figure 5.1) surrounding the Abel mine and prepare and annual report. | Annually - December |

## 8. Review Procedure

The performance of this F&FMP will be reviewed at least every 3 years, after a flora or fauna related incident or as requested by the Secretary. The review will include:

- A review of the monitoring results of the development over the preceding 3 years;
- Identification of any failure to meet performance measures over the preceding 3 years, and a description of what actions were (or are being) taken to ensure these are met; and,
- A description of what measures will be implemented over the coming 3 years to improve the performance of flora and fauna management onsite.

The F&FMP will be reviewed within three months of the submission of a 3 year independent review and updated to the satisfaction of the Secretary where necessary. The F&FMP will also be reviewed prior to the resumption of mining operations at Abel or within three months of any flora or fauna reportable incident.

Any major amendments to the F&FMP that affect its application will be undertaken in consultation with the appropriate regulatory authorities and stakeholders. Minor changes such as formatting edits will be made with version control.

The F&FMP will also be revised due to:

- Deficiencies being identified;
- Introduction of additional mitigation measures or controls;
- Poor results from the monitoring and review program;
- Recommendations resulting from the monitoring and review program;
- Changing environmental requirements;
- Improvements in knowledge or technology becoming available;
- Changes in legislation;
- Identification of a requirement to alter the F&FMP following a risk assessment.

This management plan will be reviewed and updated in consultation with the Secretary prior to the operation changing from 'care and maintenance' to 'operational'.

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## 9. Evaluating and Reporting

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The Abel/Donaldson Mine will adhere to the environmental management procedures, reporting and auditing requirements in accordance with each Project Approval.

Flora and fauna monitoring data will be reviewed at the time of report writing with a discussion section in the report that evaluates the monitoring data and any trends that are occurring.

An annual review will be prepared each year to review the environmental performance of the operation and include a review of flora and fauna monitoring results, complaints, trends, identification of discrepancies between the predicted and actual flora and fauna impacts of the project and describe measures taken to improve environmental performance.

This F&FMP will be provided on the Donaldson Coal website in accordance with the requirements of the Project Approval.

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## 10. References

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### 10.1 Legislation

*Protection of the Environment Legislation Amendment Act 2011*

*Protection of the Environment Operations Act 1997 (POEO)*

*Protection of the Environment Operations (General) Regulation 2009*

*Coal Mine Health and Safety Act 2002*

*Coal Mine Health and Safety Regulation 2006*

*Donaldson*

### 10.2 Licences

Abel Coal Project Approval (05\_0136)

Donaldson Coal Development Approval for DA 98/01173 and DA118/698/22

### 10.3 Management Plans

Bushland Conservation Management Plan

Tetratheca juncea Management Plan

Bushfire Management Plan

Rehabilitation Management Plan

## Appendix 1

### Rehabilitation Management Plan

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## Appendix 2

### Consultation Correspondence



SITE: 1132 John Renshaw Drive Black Hill 2322  
 POSTAL: PO Box 2216 Greenhills 2323  
 PHONE: +61 2 4015 1100  
 WEBSITE: www.doncoal.com.au  
 ABN 27 073 088 945

30<sup>th</sup> April 2019

Mr. Jack Murphy  
 Environmental Assessment Officer  
 Resource Assessments, Planning Services  
 Department of Planning & Environment  
 GPO Box 39  
 SYDNEY NSW 2001

Dear Jack,

**Re: Submission of Donaldson / Abel Draft Management Plans**

Further to the Department's correspondence dated 6<sup>th</sup> December 2018 regarding the above, we advise that the Abel Coal Mine submitted the Independent Environmental Audit (IEA) Report on 11<sup>th</sup> February 2019 to the Department's Singleton Compliance Unit.

The 2018 Abel IEA triggered the revision of several management plans that are attached with this correspondence in draft format for the Department's review. Donaldson Coal has also sought comment from relevant Agencies and interested parties. Several of the Management Plans required under both PA 05\_0136 (Abel Underground Mine) and DAs 118/698/22 and 98/01173 (Donaldson Open Cut) have been integrated as the relevant management actions and mitigation measures are consistent across both projects. All Management Plans have been reviewed and those listed below have been updated to reflect the current status of the operations during care and maintenance.

Below is a list of submitted management plans, together with the relevant agency that has been asked to comment.

| Management Plan                                | Relevant Agency                        |
|--|--|
| Air Quality and Greenhouse Gas Management Plan | EPA                                    |
| Noise Management Plan                          | EPA, OEH                               |
| Flora and Fauna Management Plan                | NRAR, OEH, Councils                    |
| Waste Management Plan                          | OEH, DoP-RR                            |
| Tetratheca juncea Management Plan              | OEH                                    |
| Water Management Plan                          | EPA, NRAR                              |
| Rehabilitation Management Plan                 | DoP-RR, OEH, NRAR and Councils         |
| Aboriginal Management Plan                     | Aboriginal Community, Councils and OEH |

Please note that Management Plans required under Schedule 3 of PA 05\_0136 relevant to the Extraction Plan are current and have not been revised.

The Blast Management Plan required under the Donaldson Open Cut Consent (DAs 118/698/22 and 98/01173) has not been revised as there is no longer a requirement to conduct any future blasting at the rehabilitated Donaldson Open Cut Mine.

The submitted Management Plans cover the current period of Care and Maintenance and may be updated where required prior to the recommencement of operations at the Abel Mine.

Upon receiving feedback from DP&E and relevant agencies, Donaldson Coal will review comments received and resubmit these management plans for approval.

We would appreciate if you would provide feedback on these Management Plans by the 31<sup>st</sup> of May 2019.

If you have any questions or would like to discuss these management plans, please don't hesitate to contact the undersigned on 0439 909 952.

Yours sincerely



Phillip Brown  
**Environment & Community Relations Superintendent**  
Donaldson Coal Pty Ltd



SITE: 1132 John Renshaw Drive Black Hill 2322  
POSTAL: PO Box 2216 Greenhills 2323  
PHONE: +61 2 4015 1100  
WEBSITE: [www.doncoal.com.au](http://www.doncoal.com.au)  
ABN 27 073 082 945

30<sup>th</sup> April 2019

General Manager  
Maitland Council  
PO Box 220  
Maitland, NSW, 2320

*via email: [info@maitland.nsw.gov.au](mailto:info@maitland.nsw.gov.au)*

Dear Sir,

**Re: Donaldson / Abel Draft Management Plan Submission**

Donaldson Coal Pty Limited have recently reviewed a number of environmental management plans for the Donaldson Open Cut Mine and Abel Underground coal mines. Donaldson coal mine ceased mining operations in 2013 and Abel coal mine has been in care and maintenance since 2016, with limited activities now occurring across either site.

Several Management Plans required under both PA 05\_0136 (Abel Underground Mine) and DAs 118/698/22 and 98/01173 (Donaldson Open Cut) have been integrated as relevant management actions and mitigation measures are consistent across both projects.

As the risk associated with operational mining has now been minimised, management plans have been updated to reflect the current non-operational status of the sites.

Donaldson Coal are seeking comments from Maitland Council for the following management plans (attached):

- Waste Management Plan
- Water Management Plan
- Flora and Fauna Management Plan
- Aboriginal Management Plan
- Rehabilitation Management Plan

We would appreciate the provision of comments and feedback on these management plans by the 31<sup>st</sup> May 2019 to meet statutory reporting requirements under project approvals.

If you have any questions or would like to discuss these management plans, please don't hesitate to contact the undersigned on 0439 909 952.

Yours sincerely,



Phillip Brown  
Environment & Community Relations Superintendent  
Donaldson Coal Pty Ltd



Our Ref: (2019/148415)

Phone Enquiries: 4934 9700  
Michael Tinlin

31/05/2019

Phillip Brown  
Donaldson Coal Pty Limited  
PO Box 2216  
GREEN HILLS NSW 2323

Delivered electronically to: [Phillip.Brown@yancoal.com.au](mailto:Phillip.Brown@yancoal.com.au)  
Cc: [James.Benson@yancoal.com.au](mailto:James.Benson@yancoal.com.au)

Dear sir

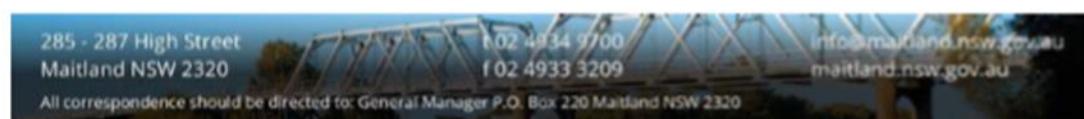
**Re: Donaldson / Abel Draft Management Plan submission**

I have examined the recently reviewed environmental management plans for the Donaldson Open Cut Mine and Abel Underground Coal Mines and find they satisfy the consent conditions.

Yours sincerely

Michael Tinlin  
Environmental Programs Officer

*This document is not signed as it has been delivered electronically.*





SITE: 1132 John Renshaw Drive Black Hill 2322  
POSTAL: PO Box 2216 Greenhills 2323  
PHONE: +61 2 4015 1100  
WEBSITE: [www.doncoal.com.au](http://www.doncoal.com.au)  
ABN 87 073 082 945

30<sup>th</sup> April 2019

Natural Resources Access Regulator  
Department of Industry | Lands & Water  
Locked Bag 5123  
PARRAMATTA NSW 2124

Via email: [water.referrals@nrar.nsw.gov.au](mailto:water.referrals@nrar.nsw.gov.au)

Dear Sir,

**Re: Submission of Donaldson / Abel Draft Management Plans**

Donaldson Coal Pty Limited have recently reviewed a number of environmental management plans for the Donaldson Open Cut Mine and Abel Underground coal mines. Donaldson coal mine ceased mining operations in 2013 and Abel coal mine has been in care and maintenance since 2016, with limited activities now occurring across either site.

Several Management Plans required under both PA 05\_0136 (Abel Underground Mine) and DAs 118/698/22 and 98/01173 (Donaldson Open Cut) have been integrated as relevant management actions and mitigation measures are consistent across both projects.

As the risk associated with operational mining has now been minimised, management plans have been updated to reflect the current non-operational status of the sites.

Donaldson Coal are seeking comments from NRAR for the following management plans (attached):

- Flora and Fauna Management Plan
- Rehabilitation Management Plan
- Water Management Plan

Please note that Management Plans required under Schedule 3 of PA 05\_0136 relevant to the Abel Extraction Plan are current and have not been revised.

We would appreciate the provision of comments and feedback on these management plans by the 31<sup>st</sup> May 2019 to meet statutory reporting requirements under project approvals.

If you have any questions or would like to discuss these management plans, please don't hesitate to contact the undersigned on 0439 909 952.

Yours sincerely,



Phillip Brown  
Environment & Community Relations Superintendent  
Donaldson Coal Pty Ltd  
Enc. Management Plans

30<sup>th</sup> April 2019

Manager Planning & Aboriginal Heritage  
Office of Environment and Heritage  
PO Box 488G  
Newcastle NSW 2300

via email: *OEH ROD Hunter Central Coast Mailbox (rog.hcc@environment.nsw.gov.au)*

Dear Sir/Madam,

**Re: Donaldson / Abel Draft Management Plan Submission**

Donaldson Coal Pty Limited have recently reviewed a number of environmental management plans for the Donaldson Open Cut Mine and Abel Underground coal mines. Donaldson coal mine ceased mining operations in 2013 and Abel coal mine has been in care and maintenance since 2016, with limited activities now occurring across either site.

Several Management Plans required under both PA 05\_0136 (Abel Underground Mine) and DAs 118/698/22 and 98/01173 (Donaldson Open Cut) have been integrated as relevant management actions and mitigation measures are consistent across both projects.

As the risk associated with operational mining has now been minimised, management plans have been updated to reflect the current non-operational status of the sites.

Donaldson Coal are seeking comments from OEH for the following management plans (attached):

- Flora and Fauna Management Plan
- Noise Management Plan
- Tetratheca juncea Management Plan
- Aboriginal Management Plan
- Waste Management Plan
- Rehabilitation Management Plan
- Water Management Plan

We would appreciate the provision of comments and feedback on these management plans by the 31<sup>st</sup> May 2019 to meet statutory reporting requirements under project approvals.

If you have any questions or would like to discuss these management plans, please don't hesitate to contact the undersigned on 0439 909 952.

Yours sincerely,



Phillip Brown  
Environment & Community Relations Superintendent  
Donaldson Coal Pty Ltd

*Enc: management plans*

---

**Phillip Brown**

---

**From:** Steven Cox <Steven.Cox@environment.nsw.gov.au>  
**Sent:** Thursday, 2 May 2019 2:54 PM  
**To:** Phillip Brown  
**Cc:** Robert Gibson  
**Subject:** RE: Management Plan Review  
**Attachments:** Donaldson Coal - Abel Underground mine and Donaldson Open Cut Coal mine - Management Plan Review.tr5

Hi Phillip,

Thank you for providing OEH with the opportunity to comment on the various Able Underground Mine and Donaldson Open Cut Coal Mine management plans. However, OEH is currently unable to provide comment on the plans.

Please provide copies of the plans to the Department of Planning and Environment without comment from OEH.

Regards  
Steven

**Steven Cox**  
Senior Team Leader Planning  
Hunter Central Coast Branch  
Conservation and Regional Delivery Division  
Office of Environment & Heritage  
Level 4/26 Honeysuckle Drive Newcastle NSW 2300  
Locked Bag 1002 Dangar NSW 2309  
T 02 4927 3140  
M 0472 800 088

The OEH Hunter Central Coast Branch Planning Team has a group email address: [rog.hcc@environment.nsw.gov.au](mailto:rog.hcc@environment.nsw.gov.au). Please address all further email correspondence in relation to Planning and Aboriginal cultural heritage regulation matters to this address. If appropriate, emails can be marked to the attention of your usual contact in the team.

---

**From:** Phillip Brown <Phillip.Brown@yancoal.com.au>  
**Sent:** Tuesday, 30 April 2019 2:27 PM  
**To:** OEH ROD Hunter Central Coast Mailbox <rog.hcc@environment.nsw.gov.au>  
**Cc:** James Benson <James.Benson@yancoal.com.au>  
**Subject:** Management Plan Review

Please find enclosed correspondence relating to the above.

**Phillip Brown** | ENVIRONMENT & COMMUNITY RELATIONS SUPERINTENDENT

**Ashton Coal Operations Pty Ltd**  
**Donaldson Coal Pty Limited**

SITE: Glennies Creek Road, Camberwell NSW 2330  
POSTAL: PO Box 699 Singleton NSW 2330 Australia  
PHONE: +61 2 6570 9219  
MOBILE: 0439 909 952  
EMAIL: [Phillip.Brown@yancoal.com.au](mailto:Phillip.Brown@yancoal.com.au)

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