TASMAN EXTENSION PROJECT

ENVIRONMENTAL IMPACT STATEMENT

RESPONSE TO SUBMISSIONS

DONALDSONCOAL
Part of the Yancoal Australia Group

SEPTEMBER 2012
Project No. DCL-09-01
Document No. 00474740

RESPONSE TO SUBMISSIONS

Newcastle Coal Company Pty Ltd, a wholly owned subsidiary of Donaldson Coal Pty Limited (Donaldson Coal), prepared the *Tasman Extension Project Environmental Impact Statement* (EIS) to support a Development Application for the Tasman Extension Project (the Project) (SSD-4962) under Division 4.1 of Part 4 (State Significant Development) of the New South Wales (NSW) *Environmental Planning and Assessment Act, 1979* (EP&A Act).

The EIS was placed on public exhibition by the NSW Department of Planning and Infrastructure (DP&I) from 3 July 2012 to 16 August 2012.

Table 1 provides a reconciliation of the submissions received from State and Local Government agencies. Table 2 provides a reconciliation of public submissions, including submissions from special interest groups.

Table 1
Reconciliation of Agency Submissions

Agency	Date
NSW Office of Environment and Heritage (OEH)	13 August 2012
Division of Resources and Energy (DRE) within the NSW Department of Trade and Investment, Regional Infrastructure and Services (NSW Trade & Investment)	21 August 2012
NSW Department of Primary Industries (DPI) (including NSW Office of Water [NOW])	22 August 2012
NSW Environment Protection Authority (EPA)	17 August 2012
Transport for NSW (TfNSW)	27 August 2012
NSW Roads and Maritime Services (RMS)	16 August 2012
NSW Mine Subsidence Board (MSB)	5 July 2012
Heritage Branch within OEH (as a delegate for the NSW Heritage Council)	12 July 2012
Catchment and Lands within DPI	16 August 2012
Hunter-Central Rivers Catchment Management Authority (CMA)	15 June 2012
NSW Rural Fire Service (RFS)	17 July 2012
Lake Macquarie City Council (LMCC)	14 August 2012
Cessnock City Council (CCC)	20 August 2012

Table 2
Reconciliation of Public Submissions

Name	Date	Nature of Submission
Awabakal Descendents Traditional Owners Aboriginal Corporation	14 August 2012	Objection
Construction Forestry Mining and Energy Union (Mining and Energy Division) Northern District Branch	August 2012	Support
Economists at Large	August 2012	Concerns Raised
Hon M Morris	7 August 2012	Support
Mr K Sweeney	August 2012, 11 August 2012, 14 August 2012	Objection

In accordance with a request from the Director-General of the DP&I on 22 August 2012, Donaldson Coal has prepared a response to the issues raised in the submissions. Responses to submissions made by Government agencies and the public are provided in Tables 3 and 4, respectively.

Table 3
Response to Agency Submissions

Comment	Response
NSW Office of Environment and Heritage (OEH)	
In regard to the Aboriginal Cultural Heritage Assessment (ACHA) prepared for the Project, the OEH: • acknowledged that the ACHA has been undertaken in accordance with the OEH's Aboriginal cultural heritage assessment requirements; • acknowledged the results of the ACHA for the Project area; and • supported the specific recommendations provided in Section 4.10.3 of the Main Report of the EIS and Section 11 of the ACHA.	Noted.
The OEH recommended conditions of approval relating to ongoing consultation with all the registered local Aboriginal parties, the development of a Heritage Management Plan, response protocols in the event that a new Aboriginal object is identified, response protocols in the event that human remains are located and the requirement for construction staff/contractors to undertake an Aboriginal Cultural Heritage Education Program.	Noted. The Heritage Management Plan for the Project would be developed in consultation with registered local Aboriginal parties, and would detail ongoing consultation with the registered local Aboriginal parties, response protocols in the event that a new Aboriginal object is identified, response protocols in the event that human remains are located and the requirement for construction staff/contractors to undertake an Aboriginal Cultural Heritage Education Program.
In regard to the proposed biodiversity offset strategy, the OEH: • requested that full details of the offsetting measures are agreed prior to the impact occurring; • expressed concerns about the offset ratio; and • noted that the proposed translocation and research work planned for the Heath Wrinklewort may lead to a successful outcome, but requested that the biodiversity offset strategy include an extant population of the Heath Wrinklewort.	As described in Section 4.8.4 of the EIS, at the time the land was purchased by Newcastle Coal Company Pty Ltd, the Department of Environment and Conservation (DEC) (now OEH) indicated in a letter (dated 1 March 2007) that impacts associated with the new pit top facility would be offset in an appropriate manner should a set of actions relevant to the land and the new pit top facility be undertaken. These actions included: • Designing the new pit top to avoid impact on the threatened flora species Black-eyed Susan (*Tetratheca juncea*), including a 20 metre (m) buffer. This has been achieved in the design of the new pit top. • Designing the new pit top to avoiding clearance of the *Hunter Lowland Redgum Forest in the Sydney Basin and New South Wales North Coast Bioregions* Endangered Ecological Community (EEC). This has been achieved in the design of the new pit top. • Designing the new pit top to limit clearance of the *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC. This has been achieved in the design of the new pit top. • Transferring the land associated with the new pit top to OEH once mining and rehabilitation have been completed. This is a commitment made in the EIS. • Managing the existing Tasman Underground Mine compensatory habitat area to protect the area's biodiversity values in accordance with the existing Flora and Fauna Management Plan. This is currently occurring at the Tasman Underground Mine.

Comment	Response
NSW Office of Environment and Heritage (OEH) (Continued)	
	• Conserving a population of the threatened flora species Black-eyed Susan (*Tetratheca juncea*) located within the existing Tasman Underground Mine compensatory habitat area. This has occurred. • Consideration of transferring the existing Tasman Underground Mine compensatory habitat area to OEH once mining and rehabilitation are complete. The Project surface facilities require the clearance of approximately 417 individual Heath Wrinklewort plants from a local population of between approximately 4,198 and 11,273 individuals. Approximately 700 individual Heath Wrinklewort plants are located within Donaldson Coal owned land surrounding the proposed surface facilities. These plants would not be cleared as part of the Project and would be conserved in perpetuity when the land associated with the new pit top is transferred to OEH once mining and rehabilitation have been completed (as described above). In addition, Donaldson Coal would sponsor ecological initiatives aimed at better understanding and managing the local population of Heath Wrinklewort, including a research program to determine the level of genetic exchange between patches of Heath Wrinklewort across George Booth Drive, and a research program into translocation of the individuals located within the proposed disturbance area. The proposed biodiversity offset strategy for the Project includes a combination of the following: • management of the new pit top facility land in accordance with the previous correspondence with the OEH; • preservation of an extant population of Heath Wrinklewort surrounding the proposed surface facilities; • research and translocation commitments for the Heath Wrinklewort; • contribution of $25,000 per annum during mining in the Sugarloaf State Conservation Area for rehabilitation, revegetation and management works in the State Conservation Area; and • in addition to all of the above, a compensatory land package. The compensatory land package would comprise: • funding for costs associated with establishment of the compensatory habitat; • arrangements for suitable long-term protection of the compensatory habitat to the satisfaction of DP&I prior to the commencement of construction of the new pit top facility; and • funding for minor site improvement works if required. The location and particulars of the compensatory land package would be finalised to the satisfaction of DP&I prior to commencement of construction of the new pit top facility associated with the Project.

Comment	Response
NSW Office of Environment and Heritage (OEH) (Continued)	
	Donaldson Coal has identified land (Attachment 1) that could be provided as the compensatory land package, or an equivalent to the satisfaction of DP&I. The identified compensatory habitat has the following attributes: • ownership by Yancoal Australia Limited (Donaldson Coal is a wholly owned subsidiary of Yancoal Australia Limited); • 42 hectares of remnant vegetation including 20 hectares of the *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC; • adjacent to, and contiguous vegetation with, the Werakata State Conservation Area; • a large number and extent of Heath Wrinklewort plants found in two locations; • scattered occurrences of the vulnerable *Grevillea parviflora* subsp. *parviflora*; and • observations of usage by the vulnerable Little Lorriket. Conservation of the identified compensatory habitat (or equivalent) would include measures to enhance habitat, such as restriction of access for firewood collection. Donaldson Coal considers that the biodiversity offset strategy incorporating the additional compensatory land package, more than adequately offsets the potential impacts of the Project and would result in a net improvement in regional biodiversity values.
The OEH recommended that conditions of approval should include the requirement that the clearance of threatened species, populations or communities, or their habitats associated with the Project be offset in accordance with OEH offsetting policy; either the *Principles for the use of biodiversity offsets in NSW* or the *NSW OEH interim policy on assessing and offsetting biodiversity impacts of Part 3A, State significant development and State significant infrastructure projects*.	Attachment 2 provides a reconciliation of the proposed biodiversity offset strategy for the Project against the *Principles for the use of biodiversity offsets in NSW* (OEH, 2011a).
Division of Resources and Energy (DRE) (within NSW Trade & Investment)	
DRE noted the requirement for Donaldson Coal to submit a revised Mining Operations Plan (MOP) prior to commencement of any activities proposed as part of the Project.	Noted.
DRE recommended a condition is included in any Development Consent (if granted) requiring the preparation and implementation of a Rehabilitation Plan to the satisfaction of the Director-General of NSW Trade & Investment.	Noted. Donaldson Coal accepts this recommendation.
DRE noted that it is a requirement of the Tasman Underground Mine's mining title that a Subsidence Management Plan (SMP) is prepared prior to commencing any underground mining operations which would potentially lead to subsidence of the land surface.	Noted. Donaldson Coal would prepare any necessary documentation required under any Development Consent (if granted) and relevant mining titles.

Comment	Response
NSW Department of Primary Industries (DPI) (including NSW Office of Water [NOW])	
The DPI advised that it had no objections to the Project from a fisheries conservation perspective on the basis that there is no key fish habitat directly impacted.	Noted.
The DPI stated that Donaldson Coal should consult with Forests NSW in respect to all future works likely to impact on Forests NSW land. The DPI also noted compliance with all permit conditions to date and a satisfactory level of ongoing liaison and reporting between Donaldson Coal and Forests NSW.	Noted. Donaldson Coal will continue to consult with Forests NSW in regard to works conducted in Heaton State Forest.
The DPI recommended that that the following be included as conditions of approval for the Project: 1. *The proponent consults with Lake Macquarie City Council (LMCC), as reserve trust manager, with regard to any works likely to impact on Lot 1 DP 338999, Lot 121 DP 755262, part lot 1 DP 551918, Lots 7022−7023 DP 1075973 and Lot 7021 DP 1075979 being Crown land Reserve 89127 for Public Recreation, Preservation of Native Flora and Fauna and Communication Facilities.* 2. *The proponent consults with Awabakal Local Aboriginal Land Council with regard to any works likely to impact on part Lot 2 DP 231108 being Crown land Reserve 755262 for Future Public Requirements and under Aboriginal Land Claim 23441 (lodged 9 December 2009) and on part Lot 1 DP 551918 being Crown land Reserve 89127 under Aboriginal Land Claim 6637 (lodged 7 December 2001).*	Noted. Donaldson Coal accepts this recommendation.
The NOW stated that baseline data on groundwater quality in the Project area must be collected prior to the commencement of mining operations.	Noted. Donaldson Coal will collect samples of groundwater quality in the West Borehole Seam prior to the commencement of mining in the West Borehole Seam for the Project.
The NOW stated that the proposed flow gauging station on Surveyors Creek should be established prior to the commencement of mining operations.	Noted. The proposed flow gauging station on Surveys Creek will be established prior to the commencement of mining operations.
The NOW recommended that the Project subsidence performance measures be included in conditions of approval.	Noted. Donaldson Coal accepts this recommendation.

Comment	Response
NSW Department of Primary Industries (DPI) (including NSW Office of Water [NOW]) (Continued)	
The NOW stated that mining under a watercourse should not commence until a stability assessment of the watercourse has been undertaken.	The geomorphological features, including stream stability, of the streams overlying the West Borehole Seam mining area were characterised by Fluvial Systems (2012) and presented in the Geomorphology Assessment prepared for the EIS (Appendix D of the EIS). Geomorphological features were characterised by walking the length of the streams recording and measuring data at regular intervals, and at significant features. In total, data were collected at 385 sites. All stream reaches assessed were determined to be in good (i.e. natural) geomorphic condition. The field observations suggested that while the streams were well vegetated and relatively stable, natural incision and erosion processes remain active. On this basis, Donaldson Coal considers that a stability assessment of the streams overlying the West Borehole Seam mining area has been conducted. Monitoring of the geomorphic condition of streams will be conducted during the life of the Project. This will include survey lines, permanent photographic reference points and repeating the geomorphic field survey (Section 4.5.3 of the EIS).
The NOW stated that, wherever possible, the separation and diversion of clean water runoff from disturbed areas and dirty water storage structure should be implemented, and where clean water diversion is not possible, clean water runoff captured by dirty water surface storages in excess of the *Maximum Harvestable Right Dam Capacity* must be authorised by a water access licence.	The surface water management system for the new pit top area has been designed to separate runoff from 'clean' and 'dirty' areas. As described in Section 2.9.2 of the EIS, runoff from rainfall at the new pit top facility would either be: • directed off-site (untreated) for runoff from undisturbed areas; • directed off-site via sediment traps/bio-retention systems for runoff from areas where handling of coal and/or hydrocarbons does not occur (e.g. administration office area); or • directed to an on-site surface runoff storage dam via sediment traps and/or sumps for runoff from areas where the handling of coal and/or hydrocarbons would occur. On this basis, it is not considered that water access licences will be required for the new pit top facility, as no clean water runoff is proposed to be captured in dirty water storages (i.e. the Project water storages would be relevant excluded works under Schedule 1 of the *Water Management (General) Regulation, 2011* as described in Attachment 6 of the EIS). Figures showing catchment areas and the water management schematic at the new pit top facility are provided in the Surface Water Assessment prepared for the EIS (refer to Figures 16 and 17 of Appendix C).
The NOW recommended that the requirement for a Water Management Plan (including a Site Water Balance, Groundwater Monitoring Program, Surface Water Monitoring Program, Erosion and Sediment Control Plan and Surface and Groundwater Response Plan) be included in conditions of approval.	Noted. Donaldson Coal accepts these recommendations.

Comment	Response
NSW Environment Protection Authority (EPA)	
The EPA recommended that: • Existing noise limits for West Wallsend residences remain as 38 dBA $L_{Aeq,15\ minute}$ until the closure of the existing pit top. • Noise limits for West Wallsend residences are 35 dBA $L_{Aeq,15\ minute}$ following the closure of the existing pit top. • Noise limits for residences on George Booth Drive are 36 dBA $L_{Aeq,15\ minute}$, consistent with the maximum noise level predicted in the EIS. • Noise limits for all other residential receivers are 35 dBA $L_{Aeq,15\ minute}$. • The night-time $L_{A1,\ 1\ minute}$ noise limit at all residential receivers is 45 dBA.	Noted. Donaldson Coal accepts these recommendations.
The EPA recommended that a traffic noise management strategy be implemented.	Noted. Donaldson Coal accepts this recommendation.
The EPA noted that air quality impacts associated with the Project are predicted to be well below relevant EPA air quality criteria at relevant receivers.	Noted.
The EPA noted that excess dirty water runoff and mine water is not proposed to be discharged off-site to the surrounding creek system, rather it would be transferred to historic underground workings. The EPA also noted that Donaldson Coal would not apply for additional discharge points for any Environment Protection Licence (EPL) for the Project.	As noted by the EPA, the surface water management system at the new pit top facility has been designed to avoid any discharge of excess dirty water runoff (e.g. from areas where the handling of coal and/or hydrocarbons occurs) or mine water to the surrounding creek system. However, as described in Section 2.9.2 of the EIS, stormwater runoff from areas where the handling of coal and/or hydrocarbons would not occur (e.g. administration office area) would drain off-site, subject to compliance with any EPL for the Project and to the satisfaction of the EPA. In addition, the effluent treatment and disposal system at the new pit top facility would include a spray irrigation system (Section 2.11 and Appendix C of the EIS). The effluent irrigation area would be located within the powerline easement adjacent to the new pit top facility, and would be designed and operated in accordance with the requirements of *Use of Effluent by Irrigation* (DEC, 2004a). It is expected that the effluent disposal system would be licensed as part of any EPL for the Project. Donaldson Coal will apply for a revision of EPL 12483 and/or granting of a new EPL for the Project (Section 6.3.1 of the EIS).
The EPA recommended noise limits and noise operating, monitoring and reporting conditions of approval for the Project.	Noted. Donaldson Coal accepts these recommendations.

Comment	Response
Transport for NSW (TfNSW)	
TfNSW noted that the Project does not seek approval for the increased receipt, internal transport, handling, processing and rail loadout of coal associated with the Project at the Abel Underground Mine/Bloomfield Coal Handling and Preparation Plan (CHPP), or the associated increase in rail movements. However, TfNSW stated that it is not demonstrated that the Project could operate in the absence of such an approval being established.	In December 2011, Donaldson Coal lodged an application for the Abel Upgrade Modification with the DP&I (05_0136 Mod 3). As a component of the Abel Upgrade Modification, Donaldson Coal is seeking approval for the receipt, internal transport, handling, processing and rail loadout of coal from the Project. Potential impacts associated with the increased internal transport, handling, processing and rail loadout of coal from the Project, as well as increased rail movements on the public railway, will be assessed for the Abel Upgrade Modification. Until approval for the Abel Upgrade Modification is granted, there will be no increase in the amount of run-of-mine (ROM) coal currently approved (under Project Approval 05_0136) to be processed at the Bloomfield CHPP (6.5 million tonnes per annum) or the amount of product coal approved to be transported off-site by rail (5 million tonnes per annum).
TfNSW stated that the assessment of traffic impacts provided in Appendix H (Road Transport Assessment) does not address the potential contribution of mining inputs (e.g. fuel and explosives) on the capacity, efficiency and safety of the road network.	Halcrow (2012) assessed the potential impacts associated with vehicle trips generated by deliveries and visitors to the existing and new pit top facilities in the Road Transport Assessment prepared for the Project (Appendix H of the EIS). These vehicle trips, estimated to be up to 180 per day, were included to address the contribution of mining inputs (e.g. fuel). As such, the conclusions of Halcrow (2012) regarding the capacity, efficiency and safety of the road network are inclusive of vehicle trips generated by deliveries and visitors, as well as other Project related traffic movements (e.g. ROM coal haulage and employees).
NSW Roads and Maritime Services (RMS)	
The RMS has no objection to the Project, provided the following matters are addressed and included in the conditions of any Development Consent: • The proposed roundabout at the intersection of George Booth Drive, the Daracon access road and the new Project access road is designed and constructed in accordance with the Austroads *Guide to Road Design 2009* (with RMS supplements), relevant RMS guidelines and Australian Standards. • The proposed roundabout is designed to accommodate the largest design vehicle, provision is made for on-road cyclists and street lighting is provided to the relevant Australian Standard, or as determined by RMS. • All works associated with the roundabout are at full cost to Donaldson Coal and at no cost to RMS or Council. • Donaldson Coal enters into a Works Authorisation Deed (WAD) with RMS.	Noted. Donaldson Coal accepts these recommendations.
The RMS advised that the daily traffic volumes on George Booth Drive are anticipated to reduce significantly when the Hunter Expressway project (currently under construction) is open to traffic (target opening date is the end of 2013).	Noted (as described in Section 4.12 and Appendix H of the EIS).

Comment	Response
NSW Mine Subsidence Board (MSB)	
The MSB noted no objection to the Project. The MSB requested Donaldson Coal advise the MSB prior to undermining improvements, with advanced lead times are required for undermining the fibre optic cables and transmission towers.	Noted. Donaldson Coal would consult with the MSB regarding undermining improvements as part of the Extraction Plan process.
Heritage Branch (within OEH) (as a delegate for the NSW Heritage Council)	
The Heritage Branch recommended that the mitigation measures in the Non-Aboriginal Heritage Assessment are included as conditions in any Development Consent.	Noted. Donaldson Coal accepts this recommendation.
Catchment and Lands (within DPI)	
Catchment and Lands noted that the Project would have minimal above-ground effect on the Crown land parcels at Mount Sugarloaf. Catchment and Lands considered that the EIS is adequate to protect the Crown interest in these lands.	Noted.
Hunter-Central Rivers Catchment Management Authority (CMA)	
The CMA stated it was not satisfied with the proposed offset ratio of 2:1. In addition, the CMA stated that the offset land must be identified 'up front', and that the EIS does not contain adequate details of specific offset areas, including the total amount of like for like native vegetation.	The proposed biodiversity offset strategy for the Project includes a combination of the following: • management of the new pit top facility land in accordance with correspondence with the OEH (as described in Section 4.8.4 of the EIS); • preservation of an extant population of Heath Wrinklewort surrounding the proposed surface facilities; • research and translocation commitments for the Heath Wrinklewort; • contribution of $25,000 per annum during mining in the Sugarloaf State Conservation Area for rehabilitation, revegetation and management works in the State Conservation Area; and • in addition to all of the above, a compensatory land package. The compensatory land package would comprise: • funding for costs associated with establishment of the compensatory habitat; • arrangements for suitable long-term protection of the compensatory habitat to the satisfaction of DP&I prior to the commencement of construction of the new pit top facility; and • funding for minor site improvement works if required. The location and particulars of the compensatory land package would be finalised to the satisfaction of DP&I prior to commencement of construction of the new pit top facility associated with the Project.

Comment	Response
Hunter-Central Rivers Catchment Management Authority (CMA) (Continued)	
	Donaldson Coal has identified land (Attachment 1) that could be provided as the compensatory land package, or an equivalent to the satisfaction of DP&I. The identified compensatory habitat has the following attributes: • ownership by Yancoal Australia Limited (Donaldson Coal is a wholly owned subsidiary of Yancoal Australia Limited); • 42 hectares of remnant vegetation including 20 hectares of the *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC; • adjacent to, and contiguous vegetation with, the Werakata State Conservation Area; • a large number and extent of Heath Wrinklewort plants found in two locations; • scattered occurrences of the vulnerable *Grevillea parviflora* subsp. *parviflora*; and • observations of usage by the vulnerable Little Lorriket. Donaldson Coal considers that the biodiversity offset strategy incorporating the additional compensatory land package, more than adequately offsets the potential impacts of the Project and would result in a net improvement in regional biodiversity values.
The CMA noted the Hunter-Central Rivers Catchment Action Plan (CAP).	A description of the CAP, and reasons why the Project is considered to be generally consistent with the relevant guiding principles of the Hunter-Central Rivers CAP, are provided in Section A3.5.5 of Attachment 3 of the EIS.
The CMA recommended that every precaution be taken to ensure that surface water flows are not lost or diverted due to subsidence or geological cracking caused by extraction, and where surface water is lost or diverted, offsets or mitigating actions should be provided.	Donaldson Coal will adopt the following subsidence performance measures for streams overlying the West Borehole Seam mining area (Section 2.6.3 of the EIS): • Negligible connective cracking to underground workings. • Not more than minor environmental consequences for 1st and 2nd order streams. • Negligible environmental consequences (that is, negligible diversion of flows and negligible change in the natural drainage behaviour of pools) for 3rd order streams or above. These performance measures will be achieved by implementing the following subsidence control zones: • Partial extraction with stable remnant pillars resulting in less than 300 millimetres (mm) of subsidence where the depth of cover to the stream is less than 80 m for 1st and 2nd order streams. • First workings only within 26.5° angle of draw resulting in less than 20 mm subsidence at the edge of the bank for 3rd order streams or above. This means that Donaldson Coal will reduce potential coal recovery in order to meet Project subsidence control outcomes for streams, i.e. the maintenance of stream water quality, geomorphic character, flows and ecological function.

Comment	Response
Hunter-Central Rivers Catchment Management Authority (CMA) (Continued)	
	Potential subsidence impacts associated with the Project were predicted by Ditton Geotechnical Services Pty Ltd (DgS) (2012), including the potential for surface cracking, changes in stream bed gradient and ponding and changes in stream alignment. Potential subsidence impacts were predicted, inclusive of the implementation of the subsidence control zones described above. Evans & Peck (2012) concluded that potential subsidence impacts would not have any significant effect on the surface water flow characteristics of the streams in the West Borehole seam mining area, and there would be no significant change to the amount of water stored in pools (i.e. due to changes to seepage and evaporation losses). In addition, RPS Aquaterra (2012) predicted negligible changes in baseflow associated with underground mining to/from these streams, when compared to average runoff. Therefore, Evans & Peck (2012) predicted no measurable effect on the surface water flow characteristics of the streams in the West Borehole Seam mining area. As total losses from baseflow are predicted to be negligible (i.e. less than 3 megalitres per year) it is not anticipated that these potential impacts would require licensing under the *Water Management Act, 2000*, consist with recent NSW Government draft policy documentation and press releases that indicate that only activities involving extraction of more than 3 megalitres of water per year will require licences. Notwithstanding, Donaldson Coal will hold unregulated river access licences for baseflow losses if required. In addition, a flow gauging station will be established on Surveyors Creek to monitor any potential changes to surface water flow characteristics, and subsidence monitoring (e.g. survey lines and visual inspections) will be conducted to identify any potential subsidence impacts to streams. Should monitoring indicate impacts due to the Project, appropriate remediation works would be conducted in consultation with relevant stakeholders.
The CMA stated that the EIS needs to address the cumulative impacts on local and regional aquifers and river system health.	Donaldson Coal considers that the EIS has assessed potential cumulative impacts to surface water. Potential subsidence impacts and changes in groundwater levels were predicted in consideration of proposed mining operations in the West Borehole Seam, cumulatively with other relevant approved and proposed mining operations (including approved operations in the Fassifern Seam). On this basis, potential impacts (associated with subsidence and changes in groundwater levels) to the surface water flow characteristics and water quality of streams in the West Borehole Seam mining area have been predicted in consideration of the potential cumulative impacts from the other relevant approved and proposed mining operations. No material impacts to surface water characteristics or water quality of streams in the West Borehole Seam mining area were predicted by Evans & Peck (2012) during the life of the Project. Given this, the Project would not result in additional surface water impacts in any area when considered cumulatively with other relevant mining operations.
The CMA stated that mining operations should not commence until a life of mine Water Management Plan is completed and approved.	Water Management Plans would be prepared for the Project as part of the Extraction Plan process (i.e. Extraction Plans would be prepared prior to the commencement of mining in each area). Mining operations would not commence until the relevant Extraction Plan is approved.

Comment	Response
NSW Rural Fire Service (RFS)	
The RFS recommended the following bush fire protection measures: • The surface building such as the administration facilities, workers amenities, store buildings and the like shall comply with Australian Standard (AS) 3959-2009 *Construction of buildings in bushfire-prone areas*. • A Bush Fire Emergency Plan is prepared in accordance with the RFS document, *Guide for Developing a Bush Fire Emergency Plan.*	Noted. Donaldson Coal accepts these recommendations.
Lake Macquarie City Council (LMCC)	
The LMCC recommended that additional surveys for owl roost and nest trees should be considered, and that the fauna assessment does not adequately demonstrate that roost and nest trees for these species are absent from the proposed clearance surveys.	The fauna survey design was consistent with the *Threatened Species Survey and Assessment: Guidelines for Developments and Activities* Working Draft (DEC, 2004b). The OEH (letter dated 14 June 2012) acknowledged that the Project fauna surveys had been conducted in accordance with the OEH survey guidelines. A total of 12 systematic survey sites and 26 targeted survey sites were surveyed for the Project, including sites at the new pit top facility (Appendix G of the EIS). Specific owl surveys were conducted for the Project. Owl calls were broadcast over two nights at each owl survey site for the: Southern Boobook (*Ninox novaeseelandiae*), Powerful Owl (*Ninox strenua*), Sooty Owl (*Tyto tenebricosa*), Barking Owl (*Ninox connivens*), Masked Owl (*Tyto novaehollandiae*) and Barn Owl (*Tyto alba*). The Barn Owl was recorded at survey site OP9 located near the entrance to the new pit top facility. No owl roost or nest trees were identified during the surveys, however, a roost tree for the Yellow-bellied Glider (*Petaurus australis*) was recorded in the vicinity of the new pit top facility, and as a result the new pit top facility was redesigned to avoid disturbance of this tree (Section 4.9.2 of the EIS). Notwithstanding the above, vegetation clearance strategies will be implemented during the clearance activities associated with developing the new pit top facility to minimise and ameliorate any impacts on fauna and flora. These will include pre-clearance surveys, salvaging habitat features for use in rehabilitation, minimisation of the area cleared and timing the vegetation clearance in consideration of breeding and hibernation periods (Section 4.9.3 of the EIS).

Comment	Response
Lake Macquarie City Council (LMCC) (Continued)	
The LMCC recommended further consideration is given to modifying the surface facility footprint so that disturbance to the identified *Rutidosis heterogama* population, *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC and Yellow-bellied Glider habitat is minimised.	The new pit top facility has been designed to minimise vegetation clearance as far as practicable. The extent of surface disturbance for the new pit top facility has been designed to avoid the occurrence of Black-eyed Susan (*Tetratheca juncea*) (including a 20 m buffer), *Hunter Lowland Redgum Forest in the Sydney Basin and New South Wales North Coast Bioregions* EEC and the majority of the occurrence of the Heath Wrinklewort (*Rutidosis heterogama*) (Section 4.8.2 of the EIS). The new pit top facility has also been designed to limit clearing of the *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC. A roost tree for the Yellow-bellied Glider (*Petaurus australis*) was recorded in the vicinity of the new pit top facility, and as a result the new pit top facility was redesigned to avoid disturbance of this tree. Approximately 700 individual Heath Wrinklewort plants are located within Donaldson Coal owned land surrounding the proposed surface facilities. These plants would not be cleared as part of the Project. In addition, Donaldson Coal will sponsor the following ecological initiatives aimed at better understanding and managing the local population of *Rutidosis heterogama*: • A research program to determine the level of genetic exchange between patches of *Rutidosis heterogama* across George Booth Drive. • A research program into translocation of the individuals located within the proposed disturbance area. The target area for translocation would be the closest existing patch on Donaldson Coal owned land (located approximately 70 m to the south). This area would be conserved in perpetuity. The program would include both translocation of as many of the plants as can readily be retrieved, and collection and planting of available seed. Any such program would be prepared for approval by the OEH prior to any work commencing.
The LMCC stated that the required offset should be substantially increased and preferable include more like for like habitat, particularly *Rutidosis heterogama* and *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC.	The proposed biodiversity offset strategy for the Project includes a combination of the following: • management of the new pit top facility land in accordance with correspondence with the OEH (as described in Section 4.8.4 of the EIS); • preservation of an extant population of Heath Wrinklewort surrounding the proposed surface facilities; • research and translocation commitments for the Heath Wrinklewort; • contribution of $25,000 per annum during mining in the Sugarloaf State Conservation Area for rehabilitation, revegetation and management works in the State Conservation Area; and • in addition to all of the above, a compensatory land package.

Comment	Response
Lake Macquarie City Council (LMCC) (Continued)	
	The compensatory land package would comprise: • funding for costs associated with establishment of the compensatory habitat; • arrangements for suitable long-term protection of the compensatory habitat to the satisfaction of DP&I prior to the commencement of construction of the new pit top facility; and • funding for minor site improvement works if required. The location and particulars of the compensatory land package would be finalised to the satisfaction of DP&I prior to commencement of construction of the new pit top facility associated with the Project. Donaldson Coal has identified land (Attachment 1) that could be provided as the compensatory land package, or an equivalent to the satisfaction of DP&I. The identified compensatory habitat has the following attributes: • ownership by Yancoal Australia Limited (Donaldson Coal is a wholly owned subsidiary of Yancoal Australia Limited); • 42 hectares of remnant vegetation including 20 hectares of the *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC; • adjacent to, and contiguous vegetation with, the Werakata State Conservation Area; • a large number of Heath Wrinklewort plants found in two locations; • scattered occurrences of the vulnerable *Grevillea parviflora* subsp. *parviflora*; and • observations of usage by the vulnerable Little Lorriket. Donaldson Coal considers that the biodiversity offset strategy incorporating the additional compensatory land package, more than adequately offsets the potential impacts of the Project and would result in a net improvement in regional biodiversity values.
The LMCC recommended that the offset be agreed upon prior to the impact occurring.	Noted. Donaldson Coal accepts this recommendation.
The LMCC recommended that conditions of consent should specify the funding responsibilities, sign off arrangements, the schedule of works/requirements and the expected rehabilitation and maintenance duration/timeframe.	A Mine Closure Plan will be developed in consultation with relevant authorities and stakeholders (Section 5.6 of the EIS). The Mine Closure Plan will document the final mine closure process, final rehabilitation works, and post-closure maintenance and monitoring requirements appropriate to agreed completion criteria.
The LMCC recommended that conditions of consent should specify that the flora and fauna management plan for the Project include monitoring site locations, a monitoring schedule, the monitoring timeframe and monitoring goals, and objectives specifically targeting detection of impacts to vegetation associated with subsidence.	Noted. Donaldson Coal accepts this recommendation. Biodiversity Management Plans would be developed as part of the Extraction Plan process to monitor and manage potential impacts on flora as a result of subsidence.

Comment	Response
Lake Macquarie City Council (LMCC) (Continued)	
The LMCC recommended that the traffic noise mitigation measures detailed in the Noise and Vibration Impact Assessment prepared for the Project should be included as conditions of consent.	Noted. Donaldson Coal accepts this recommendation.
The LMCC stated that a road maintenance contribution agreement will be calculated by the LMCC for the section of ROM coal haulage route on George Booth Drive within the LMCC region, and recommended that the amount payable (based on the tonnage of coal transported) be agreed prior to any DA approval.	Noted. Donaldson Coal will correspond with the LMCC regarding road maintenance contributions.
The LMCC recommended that all variables and constants required for deriving air quality emissions estimates be provided, in particular, the total annual kilometres travelled by ROM coal haulage trucks within the pit top facility areas.	The variables and constants used to derive estimated emissions of total suspended particulates (TSP) are provided in the tables provided on page B-4 of Appendix B of the Air Quality and Greenhouse Gas Assessment (Appendix J of the EIS), under the column headings *Intensity*, *Variable 1*, *Variable 2*, *Variable 3*, *Variable 4*, *Variable 5* and *Variable 6*. While the total annual kilometres travelled by ROM coal haulage trucks within the pit top facility areas is not specifically stated, this value can be derived based on the information in these tables. For example, the total annual kilometres travelled by ROM coal haulage trucks within the new pit top facility area is estimated to be: $\frac{1{,}500{,}000 \text{ tonnes ROM coal}}{\text{annum}} \times \frac{1 \text{ trip}}{40 \text{ tonnes transported}} \times \frac{0.7 \text{ km}}{\text{trip}} = \frac{26{,}250 \text{ km}}{\text{annum}}$ Following from this, the estimated TSP emissions for the source *CL – Hauling ROM from new Pit Top off-site (unsealed)* (12,899 kg/annum, for Scenario 2) can be derived as follows: $\frac{26{,}250 \text{ km}}{\text{annum}} \times \frac{0.49139 \text{ (rounded to 0.49 in the report) kgTSP}}{\text{vehicle kilometre travelled[VKT]}} = \frac{12{,}899 \text{kgTSP}}{\text{annum}}$
The LMCC stated that the air quality control factors used in dispersion modelling should be described in any air quality management plan for the Project, and that the control measures should be consistent with the measures prescribed in the *National Pollution Inventory – Emissions Estimation Technique Manual for Mining* or other EPA endorsed standard.	Noted. Air quality controls implemented for the Project will be consistent with relevant measures identified in the EPA best practice document *NSW Coal Mining Benchmarking Study: International Best Practice Measure to Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining* (Katestone, 2011). The *Abel Underground Coal (Integrated with Donaldson Open Cut, Tasman Underground and Bloomfield Open Cut Coal Mines) Integrated Environmental Monitoring Program* will be updated to detail air quality monitoring and controls for the Project.

Comment	Response
Lake Macquarie City Council (LMCC) (Continued)	
The LMCC noted that exceedances of the PM_{10} concentration criteria (50 µg/m³) extend beyond the site boundary, and that no exceedances are predicted at sensitive receivers. The LMCC recommended that the potential for future sensitive receivers in the exceedance area should be considered.	In accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*, the Air Quality and Greenhouse Gas Assessment prepared for the Project (PAEHolmes, 2012) has considered known or likely sensitive receivers locations. Searches were conducted of recent development applications and approvals within the vicinity to identify potential future dwelling locations on vacant properties, and these potential locations were included as sensitive receivers. As noted by the LMCC, no exceedances of the PM_{10} concentration criteria are predicted at sensitive receivers. Exceedances of the PM_{10} concentration criteria are predicted to extend slightly beyond the site boundary onto adjacent land owned by industrial facilities (i.e. either Newcastle Coal Company Pty Ltd [Donaldson Coal], Coal and Allied Operations Pty Limited or Orica Australia Pty Limited). On this basis, no future sensitive receivers are expected to be impacted by the predicted exceedances beyond the site boundary.
The LMCC stated that the effectiveness of remediation strategies on affected streambeds is unclear, given issues with accessing the streams, the potential for further damage while accessing the stream and the success of the remediation methods. The LMCC stated that scientific rationale or case studies of similar mining operations that have successfully remediated creek impacts should be provided, or that buffer zones be established around all creeklines regardless of their stream order.	The implementation of the subsidence control zones will greatly reduce potential impacts to streams in the Project area. As noted by the LMCC, should remediation strategies be required to be implemented, there is the potential that accessing the stream (e.g. with machinery) would result in further damage. As such, the methodology for any erosion and sediment control and remediation techniques would be determined, in consultation with relevant stakeholders, in consideration of (Section 4.3.3 of the EIS): • potential impacts when unmitigated, including potential risks to public safety and the potential for self-healing or long-term degradation; and • potential impacts of the control/remediation technique, including site accessibility. Control and remediation measures to limit erosion and sediment migration as a result of subsidence may include (Section 5.3.6 of the EIS): • filling of cracks and minor erosion holes; • installation of sediment fences downslope of subsidence induced erosion areas; • stabilisation of erosion areas using rock or other appropriate materials; and • revegetation using brush matting, seeding or tubestock.

Comment	Response
Lake Macquarie City Council (LMCC) (Continued)	
	Fluvial Systems (2012) identified that the key subsidence-related process that could impact the transport of sediment of streams in the Project area is the development, and upward migration, of knickpoints, and recommended the following mitigation measures with reference to Brooks *et al*. (2006) (Section 5.3 of Appendix D of the EIS): *If significant development of knickpoints is observed, these should be professionally assessed in order to determine the most appropriate control measure. In general, on streams of this size and grade, easily degraded materials that cannot be securely fixed to the bed (e.g. coir logs) are unsuitable. The most commonly used, and reliable, approach to knickpoint control is rock grade control structures. These can be expensive to build, especially if the site has poor access for trucks and heavy equipment. Also, heavy equipment can inadvertently cause damage to the vegetation and bank material in riparian zones. For streams in the Project area, large wood structures could be the most appropriate method of treating knickpoints.* *Brooks et al. (2006) noted the difficulty of controlling bed degradation using woodbased strategies alone, but described some examples of this approach being successfully trialed in streams in the Hunter Valley and northern NSW. The most appropriate of these approaches for vulnerable streams in the Project area are log sills.* *Log sills are buried, multi-log structures, using logs without rootwads for the cross spanning logs to ensure a snug fit, keyed well into both banks. Geo-fabric is used in the sub-surface portion of the log sill to reduce the risk of undercutting. These structures are generally built as a full channel spanning structure across small sandbed streams (Brooks et al., 2006, p. 71). The log sills are stabilized using log pins driven vertically into the bed of the stream.*
The LMCC recommended that, in order to meet *Lake Macquarie Local Environmental Plan 2004* clause 50(4), the consent authority consults with the Local Aboriginal Land Council (LALC) and takes into consideration all comments received.	Donaldson Coal notes that this comment is directed to the DP&I. Donaldson Coal provided copies of the EIS to the Awabakal LALC and the Mindaribba LALC on 29 June 2012 on behalf of the DP&I.
Cessnock City Council (CCC)	
The CCC stated that increased coal transportation along George Booth Drive and John Renshaw Drive has the potential for amenity impacts, such as dust, noise and vibration.	PAEHolmes (2012) has assessed potential dust impacts associated with the transportation of ROM coal along public roads in the Air Quality and Greenhouse Gas Assessment prepared for the Project (Appendix J of the EIS), as follows: *All road vehicles have the potential to generate PM emissions (e.g. through wheel generated dust and exhaust emissions). To prevent dirt track out from the pit top areas, and mitigate the potential for additional wheel generated dust on public roads (from all vehicles), there is a wheel wash installed at the existing pit top area, and there would be a wheel wash installed at the new pit top area.*

Comment	Response
Cessnock City Council (CCC) (Continued)	
	Coal haulage trucks also have the potential to generate fugitive coal dust emissions (e.g. through wind erosion of exposed coal if the truck load is uncovered). All trucks transporting ROM coal along public roads from the existing Tasman Underground Mine to the Bloomfield CHPP cover their loads, in accordance with the existing Development Consent (DA 274-9-2002) and Road Transport Protocol for Coal haulage from the Tasman Mine to the Bloomfield Coal Receival. Coal haulage trucks for the Project would continue to cover their loads. *The Environmental Evaluation of Fugitive Coal Dust Emissions from Coal Trains, Final Report, Queensland Rail Limited (Connell Hatch, 2008) states that covering the loads of coal wagons would reduce emissions by 99% (in comparison with uncovered wagons), and therefore, covering the loads of coal haulage trucks would also be expected to reduce emissions by 99%. As such, the covering of the loads of coal haulage trucks effectively prevents fugitive coal dust emissions during transportation.* SLR Consulting (2012) has assessed potential noise and vibration impacts associated with the transportation of ROM coal along public roads in the Noise and Vibration Assessment prepared for the Project (Appendix I of the EIS), and concluded that: • Following the commissioning of the Hunter Expressway, there is predicted to be a significant reduction (i.e. greater than 6 dBA) in total noise from traffic on George Booth Drive experienced by receivers along George Booth Drive. • In Project Year 5 (i.e. following the commissioning of the Hunter Expressway), Project related traffic was predicted to result in barely perceptible increases to total road traffic noise of up to 0.5 dBA at the closest receivers along John Renshaw Drive. • Trucks hauling coal from the Project to the Bloomfield CHPP are not expected to exceed the damage or annoyance vibration criteria at receivers located along George Booth Drive or John Renshaw Drive.
The CCC stated that impacts resulting from subsidence on all manmade, natural surface and subsurface features within the area to be mined must be minimised, and that detailed SMPs must be implemented prior to the commencement of mining. In particular the CCC raised concerns for residents within the area to be mined whose residential buildings and associated structure may be impacted upon and whose livelihoods may be affected as a result of subsidence impacts on dams, natural watercourses and agriculture, as well as potential impacts to public and private infrastructure.	Donaldson Coal commits to restricting extraction to non-subsiding first workings only under principal residences (unless agreed otherwise with the landholder) (Section 4.2.5 of the EIS). Once the mining layout has been finalised, Extraction Plans would be developed progressively over the life of the Project and will include (Section 4.2.6 of the EIS): • Specific subsidence assessment for principal residences and residential structures on properties potentially impacted by the Project. • Consultation with owners and/or occupiers of properties, including provision of detailed subsidence assessments and the opportunity for individual discussions with Donaldson Coal.

Comment	Response
Cessnock City Council (CCC) (Continued)	
	• Pre-mining inspections of the property by Donaldson Coal and the MSB (with the approval of the landholder/occupier) to: – undertake a structural assessment to determine tolerable limits for subsidence to the principal residence in consideration of the dwelling construction, size, footings and surface conditions; – identify and record the pre-existing condition of the structure; and – identify and discuss any areas of concern to the landholder/occupier. • Development of a mining layout that maintains subsidence parameters within tolerable limits for a principal residence. • Using the information gathered above, development of a Built Features Management Plan for each property. DgS (2012) predicted that other residential structures that are located further away from the principal residence (e.g. fences and driveways) are likely to be impacted by mine subsidence. Any damage to these structures or principal residences would be fully repaired or compensated. Donaldson Coal will adopt the following subsidence performance measures for key infrastructure overlying the West Borehole Seam mining area: • Maintain safety and serviceability. • No damage to structures or loss of service for communication towers on Mount Sugarloaf. • Damage must be fully repaired or compensated for fibre optic cables and TransGrid and Ausgrid towers. Extraction Plans will be prepared prior to the commencement of mining in each area to demonstrate that the subsidence performance measures can be achieved. Subsidence monitoring will be conducted to determine any impacts to key infrastructure due to the Project. Donaldson Coal has conducted ongoing consultation with landholders and residents within the underground mining area as outlined in Section 3.1.6 of the EIS.

Comment	Response
Cessnock City Council (CCC) (Continued)	
The CCC raised concerns regarding the potential impacts of the Project to dams and natural creek systems, and that continual monitoring will be required during the life to ensure water volumes and quality do not deteriorate.	There are no known farm dams overlying the West Borehole Seam mining area (Appendix A of the EIS). This notwithstanding, a farm dam may be constructed prior to mining occurring, and should any damage from subsidence occur, the dam will be repaired as soon as possible, with an alternative water supply provided in the interim. Evans & Peck (2012) predicted that there would be no material impacts to surface water characteristics or water quality of streams during the life of the Project. Donaldson Coal currently operates a network of water quality monitoring sites in the Project area. An additional three water quality monitoring sites will be installed for the Project, as well as a flow gauge (Section 4.6.3 of the EIS). The results of this monitoring will be reported in the Annual Environmental Management Reports for the Project. Should water quality monitoring show significant changes to water quality, an investigation of the cause would be conducted, and if required, appropriate remediation would be identified and implemented.
The CCC stated that the fauna assessment does not adequately demonstrate whether specific habitat for threatened species is absent from the area to be cleared.	The fauna survey design was consistent with the *Threatened Species Survey and Assessment: Guidelines for Developments and Activities* Working Draft (DEC, 2004b). The OEH (letter dated 14 June 2012) acknowledged that the Project fauna surveys had been conducted in accordance with the OEH survey guidelines. A total of 12 systematic survey sites and 26 targeted survey sites were surveyed for the Project, including sites at the new pit top facility (Appendix G of the EIS). The Yellow-bellied Glider (*Petaurus australis)* was the only threatened fauna species recorded in the vicinity of the new pit top facility during the Project surveys. The roost tree in which the Yellow-bellied Glider was recorded was identified, and the new pit top facility was redesigned to avoid this tree (Section 4.9.2 of the EIS). The area cleared for the new pit top facility would potentially provide habitat for other fauna species. However, the area of proposed vegetation clearance for the new pit top facility is minor compared to the vegetation adjacent to the new pit top facility. Given this, Biosphere Environmental Consultants (2012) considers that the Project is unlikely to significantly reduce the quality or availability of suitable habitat for the recorded threatened species or other local terrestrial fauna, and is unlikely to result in the fragmentation or isolation of suitable habitat (Appendix G of the EIS). Vegetation clearance strategies will implemented during the clearance activities associated with developing the new pit top facility to minimise and ameliorate any impacts on fauna and flora. These will include the minimisation of the area cleared, the timing of the vegetation clearance in consideration of breeding and hibernation periods, pre-clearance surveys and salvaging habitat features for use in rehabilitation (Section 4.9.3 of the EIS).

Comment	Response
Cessnock City Council (CCC) (Continued)	
The CCC recommended that if consent for the Project is issued, further information on the rehabilitation of the site be provided, including funding responsibilities, a schedule of works and any maintenance periods required.	A Mine Closure Plan will be developed in consultation with relevant authorities and stakeholders (Section 5.6 of the EIS). The Mine Closure Plan will document the final mine close process, final rehabilitation works, and post-closure maintenance and monitoring requirements appropriate to agreed completion criteria.
The CCC recommended that all mine related lighting be positioned to minimise light spill and glare if it is able to be viewed from external vantage points.	Potential impacts of night-lighting are expected to be minimal at private residences, given the distance away from the pit top areas and the intervening topography and vegetation (Section 4.19.2 of the EIS). Lighting will not be directed towards George Booth Drive to avoid potential visual impacts and glare (Section 4.19.3 of the EIS).
The CCC recommended that if consent for the Project is issued, a condition should be included that enables the registered Aboriginal parties to have an opportunity to engage in the development and implementation of monitoring systems for Aboriginal cultural heritage within the mining area.	A Heritage Management Plan will be developed for the project in consultation with the registered Aboriginal stakeholders. The Heritage Management Plan will include a protocol for the involvement of registered Aboriginal stakeholders in future investigations, salvage and monitoring, as well as an access protocol to allow registered Aboriginal stakeholders access to identified sites or specific areas within Donaldson Coal owned land for cultural practices, in accordance with occupational health and safety requirements (Section 4.10.3 of the EIS).

Table 4
Response to Public Submissions

Name	Comment	Response
Awabakal Descendents Traditional Owners Aboriginal Corporation	Noted that the Awabakal People are Registered Native Title Claimants over Mining Lease Application (MLA) 416. Asserted that "Donaldson Coal has an obligation under the law to only deal with those people who are Claimants under the Native Title Act".	The ACHA for the Project (Appendix K of the EIS) was conducted in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (Department of Environment, Climate Change and Water [DECCW], 2010). This involved a process to identify, notify and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the Project area. Through this process 15 registered Aboriginal stakeholders were identified for the Project. It is noted that DECCW (2010) prescribes: *Proponents are not required to comply with the requirements of steps 4.1.2 to 4.1.7 where there is an approved determination of native title that native title exists in relation to the proposed project area. In this circumstance, proponents need only consult with the native title holders…* *Where native title is determined to exist over part of the proposed project area, proponents are required to comply with the requirements of steps 4.1.2 to 4.1.7 in relation to the area not covered by the native title determination.* Donaldson Coal recognises that the Native Title Claim of the Awabakal People relating to MLA 416 was registered on 2 August 2012 pursuant to section 63 of the Commonwealth *Native Title Act, 1993* (Tribunal File No. NC12/3, Federal Court File No. NSD951/12). However, the Native Title Claim is not yet an "approved determination" as defined under section 13 of the Commonwealth *Native Title Act, 1993*. Therefore, Donaldson Coal must consult with all registered Aboriginal stakeholders with respect of the MLA 416 area prior to any approved determination. In addition, Donaldson Coal notes that the Development Application area for the Project includes lands outside the area the Awabakal People's Native Title Claim over MLA 416, including Mining Lease (ML) 1555 and MLA 426. The areas outside MLA 416 include (amongst others) the surface disturbance for the new pit top facility and some of the particular cultural features. Therefore, Donaldson Coal is required to consult with the other registered Aboriginal stakeholders with respect to the Project areas outside MLA 416 (regardless of whether an approved determination is made).

Name	Comment	Response
Awabakal Descendents Traditional Owners Aboriginal Corporation	Raised concerns regarding the consultation process and the involvement of other Aboriginal parties.	The ACHA for the Project (Appendix K of the EIS) was conducted in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010). This is recognised by the OEH (letter dated 13 August 2012): *OEH acknowledges that the Aboriginal cultural heritage assessment has been undertaken in accordance with OEH's Aboriginal cultural heritage assessment requirements.* The consultation process for the ACHA included: • Engagement of representatives from every registered party that responded to the selection criteria and provided evidence of insurance, for paid participation in the field survey on a roster system. The Awabakal Descendants Traditional Owners Aboriginal Corporation was involved in the majority of the five week survey period. • Two day-long meetings with the Aboriginal stakeholders to workshop the assessment (27 January 2012 and 22 March 2012) and an offer for additional individual meetings, if requested. The Awabakal Descendants Traditional Owners Aboriginal Corporation did not respond to Donaldson Coal's offer for additional meetings. • A 42 day period for Aboriginal stakeholders to provide comment on the draft ACHA.
Awabakal Descendents Traditional Owners Aboriginal Corporation	Raised concerns that too much detail had been provided about the Aboriginal Heritage Management Plan (AHMP) prior to determination of the Project.	In accordance with DECCW (2010) and OEH (2011b), the ACHA included a number of management recommendations for the Project, including recommendations for the content of the AHMP that would be prepared for the Project, should it be approved. These recommendations were included in the draft ACHA that was provided to the registered Aboriginal stakeholders for comment. In addition, it is noted that the OEH stated (letter dated 13 August 2012): *OEH supports the specific recommendations provided in Section 4.10.3 of the EIS and the recommendations in Section 11.0 of the 'Aboriginal Cultural Heritage Assessment' to manage any Aboriginal cultural heritage values associated within the project area.*

Name	Comment	Response
Awabakal Descendents Traditional Owners Aboriginal Corporation	Raised concerns regarding consideration of inter generational equity and offsets for impacts to Aboriginal cultural heritage.	The principle of intergenerational equity is discussed in Section 8.2 of the ACHA (Appendix K of the EIS). Section 9.3 of the ACHA (Appendix K of the EIS) concludes: *The Project is not inconsistent with the principle of intergenerational equity as outlined in Section 8.2. With the implementation of the mitigation measures as outlined in Sections 10 and 11, the Project would not cause, within a regional context, a loss of heritage resource that could be viewed as being rare or unique or unlikely to exist elsewhere.* The potential impacts of the Project to Aboriginal sites and cultural areas have been significantly reduced by the implementation of subsidence control zones, to achieve the various Project subsidence performance measures (Section 4.10.2 of the EIS). In addition, many of the most significant cultural areas (i.e. the Men's Area, Grinding Groove Area, Sugarloaf Pathways and Keepa Keepa Pathways Areas) are located within the proposed subsidence control zones and potential subsidence impacts would be minimised in these areas. The ACHA concluded that the implementation of mitigation measures, particularly the subsidence control zones, reduced the impacts of the Project on Aboriginal heritage from high to low within a local context and from moderate to very low within a regional context (Section 9.3 of Appendix K of the EIS). In addition, Donaldson Coal has committed to implementing the following offset measures for the Project (Section 4.10.3 of the EIS): • A program for the further investigation of select grinding groove sites, including a residue and use-wear analysis, which would further the knowledge of Aboriginal occupation for present and future generations. • A program for undertaking an Aboriginal cultural heritage educational documentation program specific to the Mount Sugarloaf area and for use as an education tool/resource by the Aboriginal community for present and future generations.

Name	Comment	Response
Awabakal Descendents Traditional Owners Aboriginal Corporation	Raised concerns regarding the level of cultural significance assessment in the ACHA.	As described in the ACHA (Appendix K of the EIS), every effort was made during the consultation period for the Project to involve the Aboriginal community in the Project, identify cultural values and cultural significance, and seek input into the heritage assessment and heritage management strategies. This included making verbal and written requests for comment or information regarding cultural values, history and significance as part of the registration process, initial Project briefing on-site, methodology review, five week field survey program, review of the draft ACHA report, and during the workshop to discuss the draft ACHA report. Consultation and cultural values are documented in the ACHA, particularly in Sections 3.2, 3.3, 4, 5.2, 6, 7, 10.2 and 11, and Appendix 6 of Appendix K of the EIS. This notwithstanding, in order to further address this issue, Donaldson Coal has agreed to facilitate and fund further documentation of the cultural values of the Project area by the registered parties (Section 4.10.3 of the EIS). This recommendation has been supported by a number of the registered Aboriginal parties, including Lower Hunter Wonnarua Council, Tocomwall Pty Ltd and Wonn1 Consulting (Appendix K of the EIS). It is also noted that a number of Aboriginal stakeholders requested that their cultural knowledge was not disclosed in the ACHA report (or withheld their advice on the basis that other Aboriginal stakeholders may incorrectly use this knowledge).
Awabakal Descendents Traditional Owners Aboriginal Corporation	Questioned whether the Native Title Tribunal had been contacted to confirm the existing Native Title agreement with respect of ML 1555.	The Wonnarua People made a Native Title Claim with respect to the existing Tasman Underground Mine ML 1555 (formerly MLA 186). This is recorded within the National Native Title Register (Tribunal File No. NC02/07, Federal Court File No. NSD6008/02). An agreement was reached with the Wonnarua People with respect to this claim.
Awabakal Descendents Traditional Owners Aboriginal Corporation	Raised concerns regarding reference to the 'Keepa Keepa Pathways Area' as not being applicable to the Project Area.	Keepa Keepa Elders Corporation, a registered Aboriginal stakeholder, has expressed the cultural significance of this area to its people on multiple occasions. Based on this consultation, the cultural significance of this area has been recognised in the ACHA (Sections 5.20, 5.2.4 and 6 of Appendix K of the EIS).
Construction Forestry Mining and Energy Union (Mining and Energy Division) Northern District Branch	Noted support on balance for the Project, in consideration of environmental, social and economic impacts. Noted that the impacts of subsidence had been addressed through subsidence control zones.	Noted.

Name	Comment	Response
Economists at Large	Requested that the Socio-Economic Assessment include detailed information on the calculation of foreign ownership, royalties and tax revenue.	The information used in the Socio-Economic Assessment (Appendix M of the EIS) includes commercially sensitive information. Donaldson Coal considers that the Socio-Economic Assessment includes sufficient information to assess the merits of the Project.
Economists at Large	Raised concerns that the Socio-Economic Assessment did not consider the costs of greenhouse gas emissions associated with the end use of the product coal.	Gillespie Economics considers that it is a reasonable approach to exclude the costs of greenhouse gas emissions associated with the end use of the product coal as: • Costs are valued at the national boundary, for example coal is valued at the Newcastle Port (free-on-board), and costs up to and including loading the coal at Newcastle Port are included. • After coal leaves Australia, it becomes an input into a different production process which may have additional costs and benefits (not just greenhouse gas emissions). • This production process is not is not subject to the NSW development approval process and decisions by the NSW Government.
Economists at Large	Raised concerns regarding the inclusion of non-market benefits of employment.	Gillespie Economics considers that it is reasonable to include the non-market benefits of employment. The Socio-Economic Assessment notes that there may be some contention about the inclusion of this value, particularly as it requires benefit transfer from a study of a mining operation in another region of NSW, and consequently, sensitivity testing that excludes this value has also been undertaken.
Economists at Large	Stated that, while predicted levels associated with Project comply with relevant guidelines, feedback from the community regarding potential noise, air quality, vibration and amenity impacts should be considered in the cost benefit analysis.	As noted by Economists at Large, the Project is predicted to comply with relevant operational noise, air quality and vibration guideline/criteria levels. These guideline/criteria levels are determined for the protection of human health and amenity. It follows that compliance with the relevant guideline/criteria levels is the most appropriate way of predicting whether the Project will impact the community. Given compliance with the relevant guideline/criteria levels is predicted, Gillespie Economics considers that it is appropriate to assume that the costs associated with noise, air quality and vibration are negligible. Furthermore, community consultation was conducted by Donaldson Coal during the preparation of the EIS. This included two community information sessions held on1-2 February 2012 and 26-27 February 2012. The key potential impact raised by the community was potential safety impacts of ROM coal haulage along George Booth Drive. While the Road Transport Assessment prepared for the Project concluded that no significant impacts on the performance and safety of George Booth Drive would be expected to arise as a result of the Project, following the feedback from the community regarding road safety, Donaldson Coal committed to driveway entrance upgrade works on George Booth Drive between Richmond Vale Road and John Renshaw Drive and the costs for these works have been included in the Project capital costs.

Name	Comment	Response
Economists at Large	Stated that the debate between ecologists regarding the ability of offset programmes to achieve their aims had not been considered in the Socio-Economic Assessment.	The biodiversity offset strategy for the Project will be consistent with the OEH's biodiversity offset principles, as per the *Principles for the use of biodiversity offsets in NSW*. As such, the biodiversity offset strategy for the Project will aim to result in a net improvement in biodiversity over time, and will be enduring (i.e. it will offset the impact of the development for the period that the impact occurs). Gillespie Economics considers that it is appropriate to assume that there would be no loss in biodiversity values on the basis that the biodiversity offset strategy for the Project (including compensatory measures and offset land) compensates for the values of the lost ecology in accordance with the OEH's biodiversity offset principles. Land opportunity costs associated with an offset area, and the cost of compensatory measures have been included in the Benefit Cost Analysis.
Economists at Large	Raised concerns regarding the use of input-output modelling.	Gillespie Economics considers input-output modelling to be appropriate for estimating the potential impacts of the economic effects of the Project on the Newcastle and NSW economies. This methodology has been used widely for mining projects in NSW for the assessment of potential economic impacts on their respective regional economies. The assumptions and limitations of the input-output modelling are detailed in Section 3 and Appendix 3 of the Socio-Economic Assessment prepared for the Project (Appendix M of the EIS), and it is noted that the input-output method results in estimated impacts being an upper bound impact estimate.
Hon M Morris	Noted support for the Project on the basis that the Project would provided ongoing local employment opportunities and Donaldson Coal has responded to local feedback.	Noted.
Mr K Sweeney	Raised concerns regarding the number of haulage trucks along George Booth Drive.	Total public road haulage for the Project would be capped at the existing approved maximum (4,000 tonnes of ROM coal per day) prior to commissioning of the Hunter Expressway. Following commissioning of the Hunter Expressway, transport of up to 6,200 tonnes per day would be undertaken (Section 2.7 of the EIS). In addition, annual ROM coal transport would be capped at 1.5 million tonnes. These haulage limits could not be altered without a modification to any Development Consent (if granted). Movement of ROM coal would be restricted to 7.00 am to 10.00 pm Monday to Friday and 7.00 am to 6.00 pm Saturday, except in the case of exceptional circumstances. Exceptional circumstances are defined in the EIS as unexpected events such as a significant disruption to the haulage route (Section 2.7 of the EIS). The opening of the Hunter Expressway is expected to result in a decrease in traffic of over 90% on George Booth Drive. This was also noted in the submission by the RMS on the Project (dated 16 August 2012).

Name	Comment	Response
Mr K Sweeney (Continued)		The Road Transport Assessment concluded that the Project's contribution to overall traffic conditions on George Booth Drive and John Renshaw Drive would be such that no significant impacts on the performance, capacity, efficiency and safety of the road network are expected to arise as a direct result of the Project (Appendix H of the EIS). In particular, estimated cumulative two way weekday traffic on George Booth Drive (including the Project) is predicted to fall significantly with approximately 1,482 vehicles in 2029 (assuming maximum haulage) compared to 10,265 in 2013 (prior to commissioning of the Hunter Expressway) (Table 4-17 of the EIS). In addition, following the commissioning of the Hunter Expressway, there is predicted to be a significant reduction (i.e. greater than 6 dBA) in total noise from traffic on George Booth Drive experienced by receivers along George Booth Drive (Appendix I of the EIS). It is also noted that the location of the new pit top facility would result in a reduction in the public road trucking distance to the Bloomfield CHPP (i.e. a reduction of 6 kilometres [km] per return trip) in comparison to the existing pit top facility location (Section 6.7.2 of the EIS).
Mr K Sweeney	Raised concerns that the Project should be considered as a 'new mine application'.	Donaldson Coal considers that it is reasonable to describe the Project as an extension and continuation of the Tasman Underground Mine, as the Project would involve the same workforce and mining equipment and would involve some mining within the existing Tasman Underground Mine ML 1555. Notwithstanding, the Project is being assessed and determined as a State Significant Development under Division 4.1, Part 4 of the EP&A Act. Approval for the Project (if granted) would be in the form of a new Development Consent. Donaldson Coal has requested that the new Development Consent for the Project (if granted) would consolidate and replace the existing Development Consent (DA 274-9-2002) for the Tasman Underground Mine (Section 2 of the EIS). However, this is ultimately at the discretion of the consent authority for the Project.
Mr K Sweeney	Raised concerns regarding the ongoing maintenance of George Booth Drive.	The RMS is currently responsible for maintenance of George Booth Drive. Funding for maintenance of roads is recovered through vehicle registration, with higher registration fees imposed on heavy vehicles. As described in Appendix M of the EIS, the cost benefit analysis for road transport of ROM coal included consideration of heavy vehicle registration fees (as part of haulage contractor costs). Heavy vehicle registration fees would continue to be paid for Project haulage vehicles. It is noted that all, or a portion, of the responsibility for maintenance of George Booth Drive may be transferred to the local councils following the commissioning of the Hunter Expressway. As noted in Section 6.2.8 of the EIS, the consent authority may grant Development Consent for the Project subject to a condition requiring contributions under either section 94 or section 94A of the EP&A Act or requiring the negotiation of a Voluntary Planning Agreement.

Name	Comment	Response
Mr K Sweeney	Raised concerns regarding recent installation of new speed limit signs on George Booth Drive.	Donaldson Coal has no control over the posting of speed limits on public roads, including George Booth Drive. The RMS, as the responsible authority for the road, has advised that 60 kilometre per hour speed limit signs have been temporarily located near the Daracon access road while guard rails are repaired/replaced.
Mr K Sweeney	Raised concerns regarding ongoing maintenance of private driveways along George Booth Drive.	Donaldson Coal undertook upgrade works at a number of private driveways located on George Booth Drive between Richmond Vale Road and John Renshaw Drive including road shoulder widening and sealing as a component of the road upgrades for the existing Tasman Underground Mine. The Road Transport Assessment concluded that the Project's contribution to overall traffic conditions on George Booth Drive and John Renshaw Drive would be such that no significant impacts on the performance, capacity, efficiency and safety of the road network are expected to arise as a direct result of the Project (Appendix H of the EIS). Notwithstanding, Donaldson Coal would implement the private driveway/George Booth Drive safety improvement works identified in Section 4.12.3 of the EIS.
Mr K Sweeney	Recommended the use of an overland conveyor or private haulage road for coal transportation for the Project.	In accordance with the Director-General's Requirements (DGRs), an assessment of the costs and benefits of alternative transport methods for ROM coal was conducted by Gillespie Economics (Appendix M of the EIS). This included consideration of the construction and use of an overland conveyor. The use of an overland conveyor for coal transportation (or private haulage road) would result in additional disturbance of vegetation and fauna habitat, potential disturbance to heritage sites and amenity impacts (noise, air quality and visual).

REFERENCES

Biosphere Environmental Consultants (2012) *Tasman Extension Project Terrestrial Fauna Assessment.* Report prepared for Donaldson Coal Pty Limited.

Brooks, A.P., Abbe, T., Cohen, T., Marsh, N., Mika, S., Boulton, A., Broderick, T., Borg, D and Rutherfurd, I. (2006) *Design guideline for the reintroduction of wood into Australian streams, Land & Water Australia*, Canberra.
Website: http://lwa.gov.au/files/products/river-landscapes/px061171/px061171.pdf
Date Accessed: March 2012.

Department of Environment and Conservation (2004a) *Use of Effluent by Irrigation.*

Department of Environment and Conservation (2004b) *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities, Working Draft.*

Department of Environment, Climate Change and Water (2009) *Lower Hunter Regional Conservation Plan.*

Department of Environment, Climate Change and Water (2010) *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010.*

Ditton Geotechnical Services Pty Ltd (2012) *Subsidence Predictions and General Impact Assessment for the Tasman Extension Project.* Report prepared for Donaldson Coal Pty Limited.

Evans & Peck (2012) *Tasman Extension Project Surface Water Assessment.* Report prepared for Donaldson Coal Pty Limited.

Fluvial Systems (2012) *Tasman Extension Project Stream Risk and Impact Assessment: Fluvial Geomorphology.* Report prepared for Donaldson Coal Pty Limited.

Halcrow (2012) *Tasman Extension Project Road Transport Assessment.* Report prepared for Donaldson Coal Pty Limited.

Katestone Environmental Pty Ltd (2011) *NSW Coal Mining Bench Marking Study: International Best Practice Measures to Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining.* Report prepared for Office of Environment and Heritage.

Office of Environment and Heritage (2011a) *Principles for the Use of Biodiversity Offsets in NSW.*
Website: http://www.environment.nsw.gov.au/biocertification/offsets.htm
Date Accessed: September 2012.

Office of Environment and Heritage (2011b) *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*.

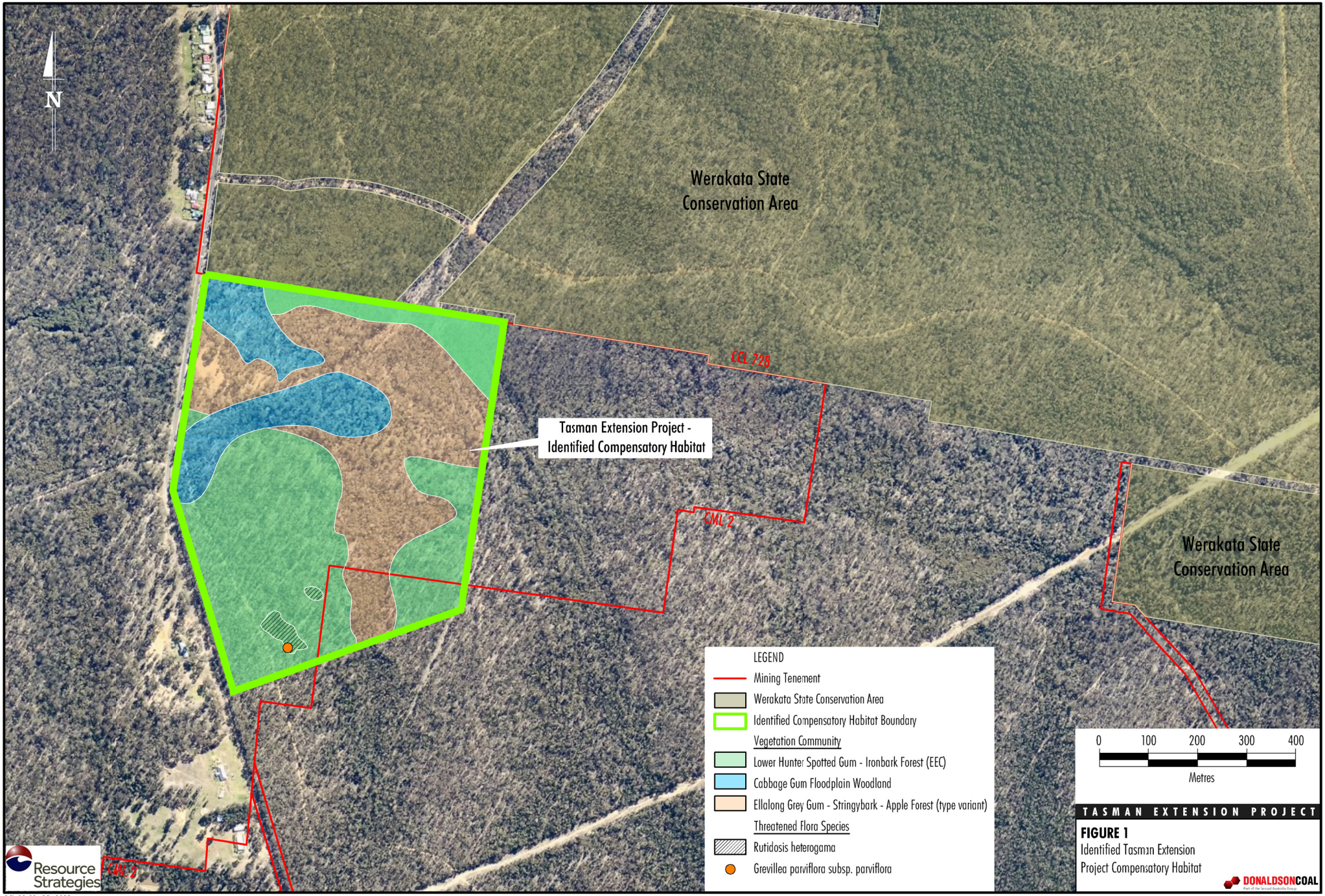
PAEHolmes (2012) *Tasman Extension Project Air Quality and Greenhouse Gas Assessment.* Report prepared for Donaldson Coal Pty Limited.

RPS Aquaterra (2012) *Tasman Extension Project Groundwater Assessment.* Report prepared for Donaldson Coal Pty Limited.

SLR Consulting (2012) *Tasman Extension Project Noise and Vibration Impact Assessment*. Report prepared for Donaldson Coal Pty Limited.

ATTACHMENT 1

LOCATION OF INDENTIFIED COMPENSATORY HABITAT



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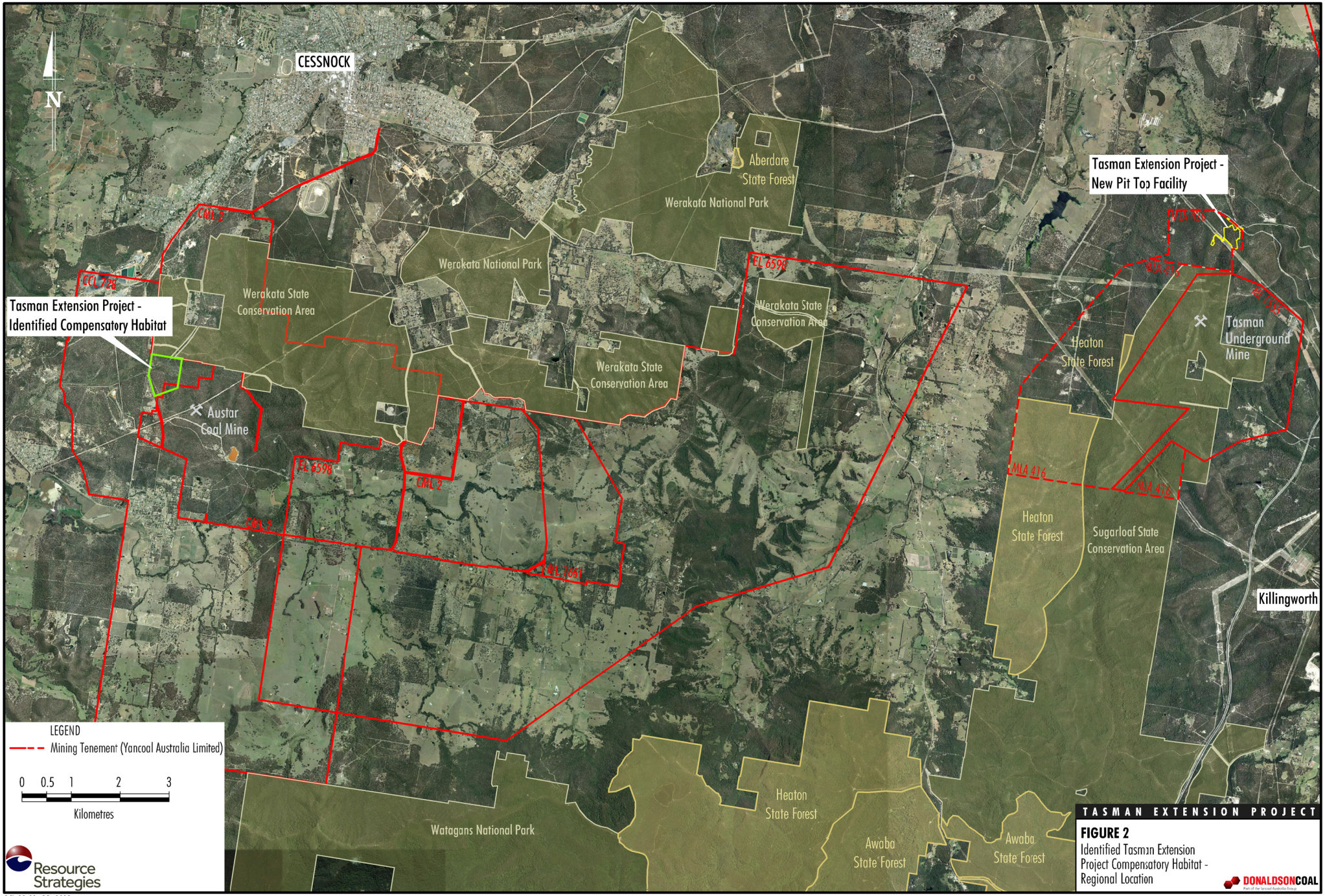

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ATTACHMENT 2

RECONCILIATION OF THE PROPOSED BIODIVERSITY OFFSET STRATEGY AGAINST OEH OFFSET PRINCIPLES

OEH Offset Principles (OEH, 2011a)	Description of How the Proposed Biodiversity Offset Strategy Addresses the OEH Offset Principles
Impacts must be avoided first by using prevention and mitigation measures.	The new pit top facility for the Project has been designed to achieve a number of environmental outcomes, including: • Limiting vegetation clearance as far as practicable. The property boundary is approximately 24 hectares and the disturbance for the new pit top facility and upcast ventilation shaft has been limited to 11.2 hectares. • Avoiding clearance of the *Hunter Lowland Redgum Forest in the Sydney Basin and New South Wales North Coast Bioregions* EEC. • Avoidance of a known roost tree for the threatened fauna species Yellow-bellied Glider (*Petaurus australis*) recorded within the initial disturbance footprint of the new pit top facility. • Avoiding clearance of the threatened flora species Black-eyed Susan (*Tetratheca juncea*), including a 20 m buffer. • Limiting clearance of the *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC as far as practicable. • Limiting clearance of the threatened flora species Heath Wrinklewort (*Rutidosis heterogama*) as far as practicable. Additional measures that would be implemented to avoid and mitigate Project impacts on flora are described in Section 4.8.3, and fauna in Section 4.9.3 of the EIS. The proposed biodiversity offset strategy is proposed to address residual impacts.
All regulatory requirements must be met.	Donaldson Coal is required to meet all statutory requirements. The proposed biodiversity offset strategy is not proposed to substitute other licence/approval requirements. The biodiversity offset strategy includes management of the new pit top facility land in accordance with correspondence with the OEH (as described in Section 4.8.4 of the EIS).
Offsets must never reward ongoing poor performance.	The biodiversity offset strategy is proposed to address residual impacts associated with the Project only.
Offsets will complement other government programmes.	The biodiversity offset strategy includes contribution of $25,000 per annum during mining in the Sugarloaf State Conservation Area for rehabilitation, revegetation and management works in the State Conservation Area. Donaldson Coal would also sponsor ecological initiatives aimed at better understanding and managing the local population of Heath Wrinklewort. Donaldson Coal has identified land (Attachment 1) that could be provided as the compensatory land package, or an equivalent to the satisfaction of DP&I. The identified compensatory habitat is located adjacent to the Werakata State Conservation Area. In addition the identified compensatory habitat is located within an area recognised as a Regional Conservation Priority for *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC and threatened woodland birds in the *Lower Hunter Regional Conservation Plan* (DECCW, 2009). The identified compensatory habitat includes 20 hectares of the *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC and observations of usage by the vulnerable Little Lorriket.
Offsets must be underpinned by sound ecological principles.	The biodiversity offset strategy is underpinned by sound ecological principles such as: • enhancement of biodiversity at a range of scales through a number of proposed management measures; • consideration of appropriate ecological initiatives aimed at better understanding and managing the local population of Heath Wrinklewort, including a research program to determine the level of genetic exchange between patches of Heath Wrinklewort across George Booth Drive, and a research program into translocation of the individuals located within the proposed disturbance area; • measures to protect the long-term viability and functionality of biodiversity (e.g. enhancing the compensatory habitat by restricting access for firewood collection); and • identification of compensatory habitat within an area recognised as a Regional Conservation Priority for *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC in the *Lower Hunter Regional Conservation Plan* (DECCW, 2009).

OEH Offset Principles (OEH, 2011a)	Description of How the Proposed Biodiversity Offset Strategy Addresses the OEH Offset Principles
Offsets should aim to result in a net improvement in biodiversity over time.	A net improvement in flora and fauna abundance and diversity is likely because: • the land associated with the new pit top would be transferred to OEH once mining and rehabilitation have been completed; • approximately 700 individual Heath Wrinklewort plants located within Donaldson Coal owned land would be conserved in perpetuity when the land associated with the new pit top is transferred to OEH once mining and rehabilitation have been completed; • Donaldson Coal would sponsor ecological initiatives aimed at better understanding and managing the local population of Heath Wrinklewort; • Donaldson Coal would contribute $25,000 per annum during mining in the Sugarloaf State Conservation Area for rehabilitation, revegetation and management works in the State Conservation Area; • compensatory habitat would be protected and enhanced through conservation in perpetuity and other measures, such as restriction of access for firewood collection; • *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC would be enhanced and conserved as part of the compensatory land package; and • a Flora and Fauna Management Plan would be prepared for the Project that outlines monitoring, auditing and contingency measures for the biodiversity offset strategy.
Offsets must be enduring. They must offset the impact of the development for the period that the impact occurs.	Arrangements for suitable long-term protection of the compensatory habitat to the satisfaction of DP&I prior to the commencement of construction of the new pit top facility. If the identified compensatory habitat is adopted, it is proposed that it would be reserved as part of the adjoining Werakata State Conservation Area. In addition, the land associated with the new pit top would be transferred to OEH once mining and rehabilitation have been completed. This land includes approximately 700 individual Heath Wrinklewort plants that would not be disturbed by the Project.
Offsets should be agreed prior to the impact occurring.	The biodiversity offset strategy is proposed as part of the Project. The implementation of the biodiversity offset strategy is likely to be a condition of Development Consent.
Offsets must be quantifiable. The impacts and benefits must be reliably estimated.	The proposed disturbance area and identified compensatory habitat has been surveyed by Hunter Eco, including: • area of the proposed disturbance area and identified compensatory habitat; • communities/species present and their conservation status; and • connectivity and condition of habitat. The identified compensatory habitat has the following values: • the land has high conservation significance as the land is within an area recognised as a Regional Conservation Priority for *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC in the *Lower Hunter Regional Conservation Plan* (DECCW, 2009); • management actions have been identified that would enhance biodiversity, such as restricting access for firewood collection; • the area is not isolated or fragmented, as it is contiguous with the adjoining Werakata State Conservation Area; and • management of the compensatory land package would be in perpetuity.
Offsets must be targeted.	The biodiversity offset strategy has been targeted to offset impacts on the basis of a like-for-like or better conservation outcome. Donaldson Coal would sponsor ecological initiatives aimed at better understanding and managing the local population of Heath Wrinklewort. Donaldson Coal would also contribute $25,000 per annum during mining in the Sugarloaf State Conservation Area for rehabilitation, revegetation and management works in the State Conservation Area. The identified compensatory habitat includes 20 hectares of the *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC and a large number of Heath Wrinklewort plants found in two locations.

OEH Offset Principles (OEH, 2011a)	Description of How the Proposed Biodiversity Offset Strategy Addresses the OEH Offset Principles
Offsets must be located appropriately.	Land associated with the new pit top would be transferred to OEH once mining and rehabilitation have been completed. This land includes approximately 700 individual Heath Wrinklewort plants that would not be disturbed by the Project. The identified compensatory habitat is located within the same CMA region as the Project area (i.e. the Hunter-Central Rivers CMA region) and therefore has the capacity to benefit biodiversity values in the same region as the Project. The identified compensatory habitat has similar ecological characteristics as the new pit top area, as both areas include the *Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion* EEC and an extant population of Heath Wrinklewort.
Offsets must be supplementary.	The implementation of the biodiversity offset strategy is beyond existing requirements, in that the biodiversity offset areas is not subject to an existing conservation agreement.
Offsets and their actions must be enforceable through development consent conditions, licence conditions, conservation agreements or a contract.	The implementation of the biodiversity offset strategy is likely to be a condition of Development Consent.