

STATEMENT OF FACTS AND CONTENTIONS

COURT DETAILS

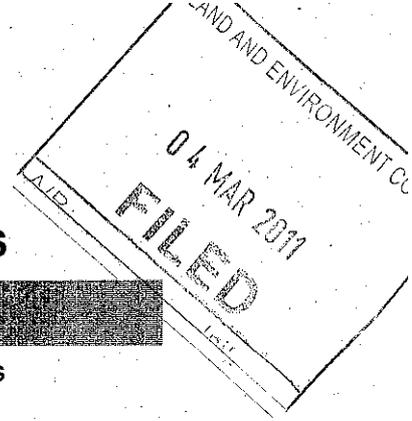
Court	Land and Environment Court of New South Wales
Class	1
Case number	10090 of 2011

TITLE OF PROCEEDINGS

Applicant	Ironstone Community Action Group Inc
First respondent	Minister for Planning
Second respondent	Duralie Coal Pty Ltd (ABN 81 070 318 259)

FILING DETAILS

Filed for	Ironstone Community Action Group Inc Applicant
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PART A: FACTS

The Project

1. Duralie Coal Pty Ltd (**DCPL**) carries out existing coal mining activities at the Duralie Coal Mine (**DCM**) which is located approximately 35 kilometres south of Gloucester, and approximately 10 kilometres north of Stroud in the Gloucester Valley in New South Wales. DCPL is a wholly owned subsidiary of Gloucester Coal Limited (**GCL**).
2. DCPL proposes to continue and extend its existing open pit mining operations at the DCM. DCPL submitted major project application number MP 08_0203 dated 13 October 2008 (**Project Application**), and a Project Description and Preliminary Assessment report dated October 2009, to the NSW Department of Planning (**Department**) under Part 3A of the *Environmental Planning and Assessment Act 1979* (NSW) (**EPA Act**).
3. The project is known as the Duralie Extension Project (**Project**), and includes:
 - a) continuation and extension of current open pit mining operations at the DCM;
 - b) extension of the life of the mine by approximately nine years;
 - c) production of approximately 3 million tonnes per annum (**Mtpa**) of run-of-mine (**ROM**) coal (from existing production of approximately 1.8 Mtpa);
 - d) approximately 114 million bank cubic metres (**Mbcm**) of additional waste rock (existing DCM allows 40 Mbcm);
 - e) increased transport of ROM coal to the Stratford Coal Mine by rail for processing;
 - f) developing a range of associated infrastructure including development of dewatering bores, pumps, dams, irrigation infrastructure, and new haul roads and internal roads;
 - g) the removal of aquatic habitat, including the diversion of a headwater section of Coal Shaft Creek to enable flows to the north to connect with the existing Coal Shaft Creek diversion and the removal of a headwater section of an unnamed tributary of Mammy Johnsons River;
 - h) mining extensions in the Coal Shaft Creek catchment area and in the catchment of an unnamed watercourse, that flows north and east into Mammy Johnsons River approximately four kilometres upstream of the Coal Shaft Creek confluence; and
 - i) progressive rehabilitation of disturbed areas.

4. On 5 November 2009, the Director-General of the Department (**Director-General**) issued modified environmental assessment requirements (**DGRs**) for the Project under s75F of the EPA Act.

Particulars:

- a) The DGRs required the proponent to provide a detailed description of the existing environment, using sufficient baseline data;
- b) The DGRs required the proponent to provide a detailed assessment of the staged and cumulative impacts associated with the concurrent operation of the Project with any other existing or approved mining operations in the region;
- c) The DGRs required the proponent to take into consideration any relevant policies, guidelines, plans and statutory provisions;
- d) The DGRs required the proponent to provide a detailed description of the measures that would be implemented to avoid, minimise, mitigate, rehabilitate/remediate, monitor and/or offset the potential impacts of the project, including detailed contingency plans for managing any significant risks to the environment;
- e) The DGRs required the proponent to provide a statement of commitments, outlining all the proposed environmental management and monitoring measures;
- f) The DGRs required the proponent to provide a conclusion justifying the project on economic, social and environmental grounds, taking into account consideration of whether the project is consistent with the objects of the EPA Act;
- g) The DGRs required the proponent to provide detailed modelling and quantitative assessment of specified key issues, including a detailed assessment of the surface and ground water impacts of the project, the impacts of dust on air quality and a detailed assessment of the impacts on terrestrial and aquatic threatened species, populations, ecological communities or their habitats;
- h) The DGRs required the proponent to provide a detailed description of the measures that would be implemented to maintain or improve the biodiversity values of the surrounding region in the medium to long term.

5. In accordance with s75H of the EPA Act, an Environmental Assessment (EA) dated 27 January 2010 was prepared on behalf of DCPL by Resource Strategies Pty Ltd. The EA details the Project, describes the environment within and surrounding the Project site, presents the mitigation measures DCPL intends to incorporate in the operation of the Project, and assesses potential impacts that the operation of the Project will have on the local environment. A copy of the EA document is attached to the Class 1 application.
6. The EA was placed on public exhibition from 8 February 2010 until 22 March 2010.
7. The Department received a total of 143 objections to the Project. The Applicant made a submission to the Department objecting to the Project. The Applicant's submission describes the following grounds for objection:
 - a) The negative impacts of the Project on the river system, the Karuah Catchment and the Port Stephens/Great Lakes Marine Park;
 - b) The negative effects of the Project on existing and future water quality of Mammy Johnsons River, its aquatic environment and ecosystem;
 - c) The negative effects of containment and use of toxic, contaminated and dirty water;
 - d) The negative effects of the Project on human health and safety;
 - e) The negative effects of increased salinity and increased risk of toxic spill;
 - f) The negative effects of diversion of Coal Shaft Creek and unnamed creek;
 - g) The negative impacts of dust and noise on residential amenity and the natural environment;
 - h) The destruction of habitat and displacement of threatened, vulnerable and endangered species and other wildlife; and
 - i) The cumulative impacts of all mining activities in the Gloucester Basin and the Mammy Johnsons/Karuah and Manning Catchments.
8. A *Response to Agency Submissions* was prepared by DCPL dated 25 May 2010. Separate responses were prepared by DCPL for the Department of Environment, Climate Change and Water (DECCW) dated 25 May 2010, and the NSW Office of Water (NOW) dated 20 May 2010. A response to submissions from the public was also prepared dated 12 July 2010, including to submissions made by the Applicant.
9. In November 2010, the Director-General issued an Environmental Assessment Report (EAR) under s75I of the EPA Act. The Director-General's EAR concluded:

On balance, the Department believes that the project represents a logical progression of operations at the Duralie Mine and is satisfied that its benefits sufficiently outweigh its costs and the project is able to be conducted in a manner that is consistent with the objects of the EP&A Act. Consequently, it believes the project is in the public interest and should be approved subject to conditions.

10. The Director-General's EAR recommended a number of conditions to offset and mitigate the impacts of the Project.
11. On 26 November 2010, the First Respondent determined to approve the Project under s75J of the EPA Act, subject to conditions (**Project Approval**).
12. On or about 10 January 2011, the Applicant was served with notification of the Project Approval in accordance with the notice provisions of the EPA Act and the Environmental Planning and Assessment Regulation 2000.

The Project Site

13. The Project is located in the Gloucester Valley and surrounded by a range of agricultural land uses and native bushland within the Hunter/Central Rivers Catchment Management Authority (**CMA**) region and near the western boundary of the Karuah Manning CMA subregion. There are 157 privately owned residences within a 6 kilometre radius of the mine.
14. The Stratford mine complex also owned by GCL is located 20 kilometres to the north of the Project site and has approval to extract and process up to 4.6 million tonnes of (**ROM**) coal per annum until the end of 2013 and up to 3 million tonnes of coal per annum from the start of 2014 until the end of mining operations in 2019.
15. The mining complex is surrounded by a combination of rural properties and bushland, including areas of significant conservation such as the Myall River State Forest, Monkerai Nature Reserve, the Glen Nature Reserve and Ghin-doo-ee National Park.

Statutory Controls

Environmental Planning and Assessment Act 1979

16. The Project, being development for the purposes of coal mining, is classified as a "major project" under s75B in Part 3A of the EPA Act through the application of cl 5 in Schedule 1 to the *State Environmental Planning Policy (Major Development) 2005*.
17. The objects of the EPA Act are set out at s5 of that Act, and include the protection of the environment, encouragement of ecologically sustainable development (**ESD**), and the proper management, development and conservation of resources for the purpose

of promoting the social and economic welfare of the community and a better environment:

5 Objects

The objects of this Act are:

(a) to encourage:

(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,

(ii) the promotion and co-ordination of the orderly and economic use and development of land,

(iii) the protection, provision and co-ordination of communication and utility services,

(iv) the provision of land for public purposes,

(v) the provision and co-ordination of community services and facilities, and

(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and

(vii) ecologically sustainable development, and

(viii) the provision and maintenance of affordable housing, and

(b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and

(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

18. "Environment" is defined in s4(1) of the EPA Act as including all aspects of the surroundings of humans:

environment includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings.

19. Section 4(1) of the EPA Act provides that ESD has the same meaning that it has in s6(2) of the *Protection of the Environment Administration Act 1991 (NSW) (POEA Act)*. Section 6(2) of the POEA Act defines ESD as follows:

(2) ... ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes.

Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

(a) the precautionary principle-namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, public and private decisions should be guided by:

(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

(ii) an assessment of the risk-weighted consequences of various options,

(b) inter-generational equity-namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,

(c) conservation of biological diversity and ecological integrity-namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,

(d) improved valuation, pricing and incentive mechanisms-namely, that environmental factors should be included in the valuation of assets and services, such as:

(i) polluter pays-that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,

(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,

(iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

20. Section 75J(3) of the EPA Act provides that, in deciding whether or not to approve the carrying out of a Part 3A project, the Minister may take into account the provisions of any environmental planning instrument that would not (because of section 75R) apply to the Project if approved.

Great Lakes LEP

21. The Project site is located in the Great Lakes Shire Council local government area. The *Great Lakes Local Environmental Plan 1996 (Great Lakes LEP)* would ordinarily apply to the Project if it were not for s75R.
22. The aims and objectives of the Great Lakes LEP are set out in cl 2(1):

2 What are the aims and objectives of this plan?

(1) The aims of this plan are:

- (a) to provide an updated and simplified plan for the area of Great Lakes, and*
- (b) to protect and enhance the environmental qualities of the area, and*
- (c) to facilitate the orderly and economic development of land within the area, and*
- (d) to promote the well-being of the area's population.*

(2) The objectives of this plan are:

- (a) to provide a land use framework to guide the future use of the land within the area of Great Lakes, and*
- (b) to provide a basis for the preparation of detailed development control plans, and*
- (c) to protect environmentally sensitive areas and the heritage of the area, and*
- (d) to improve opportunities for ecologically sustainable development, and*
- (e) to provide for the cultural needs of and the equitable provision of services and facilities for the community.*

23. The Project site is zoned 1(a) (Rural Zone) under the Great Lakes LEP, in which mining is a permissible use. There is only one objective for Zone 1(a) as set out in cl 8 of the Great Lakes LEP:

Zone No 1 (a) (Rural Zone)

1 What are the objectives of the zone?

The objective of the zone is to restrict development to those uses which are unlikely to:

- (a) prejudice in a significant manner the agricultural production potential of land within the zone, and*
- (b) generate significant additional traffic, or create or increase a condition of ribbon development on any road, relative to the capacity and safety of the road, and*

- (c) have an adverse impact on the area's water resources, and
- (d) create unreasonable or uneconomic demands for the provision or extension of public amenities or services.

Mining SEPP

- 24. The State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (**Mining SEPP**) applies to the Project.
- 25. The aims of the Mining SEPP are set out in cl 2:

2 Aims of Policy

The aims of this Policy are, in recognition of the importance to New South Wales of mining, petroleum production and extractive industries:

- (a) *to provide for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting the social and economic welfare of the State, and*
- (b) *to facilitate the orderly and economic use and development of land containing mineral, petroleum and extractive material resources, and*
- (c) *to establish appropriate planning controls to encourage ecologically sustainable development through the environmental assessment, and sustainable management, of development of mineral, petroleum and extractive material resources.*

- 26. Clause 12 of the Mining SEPP provides as follows:

12 Compatibility of proposed mine, petroleum production or extractive industry with other land uses

Before determining an application for consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must:

- (a) *consider:*
 - (i) *the existing uses and approved uses of land in the vicinity of the development, and*
 - (ii) *whether or not the development is likely to have a significant impact on the uses that, in the opinion of the consent authority having regard to land use trends, are likely to be the preferred uses of land in the vicinity of the development, and*
 - (iii) *any ways in which the development may be incompatible with any of those existing, approved or likely preferred uses, and*
- (b) *evaluate and compare the respective public benefits of the development and the land uses referred to in paragraph (a) (i) and (ii), and*

(c) evaluate any measures proposed by the applicant to avoid or minimise any incompatibility, as referred to in paragraph (a) (iii).

27. Clause 14 of the Mining SEPP provides as follows:

14 Natural resource management and environmental management

(1) Before granting consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider whether or not the consent should be issued subject to conditions aimed at ensuring that the development is undertaken in an environmentally responsible manner, including conditions to ensure the following:

(a) that impacts on significant water resources, including surface and groundwater resources, are avoided, or are minimised to the greatest extent practicable,

(b) that impacts on threatened species and biodiversity, are avoided, or are minimised to the greatest extent practicable,

(c) that greenhouse gas emissions are minimised to the greatest extent practicable.

(2) Without limiting subclause (1), in determining a development application for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider an assessment of the greenhouse gas emissions (including downstream emissions) of the development, and must do so having regard to any applicable State or national policies, programs or guidelines concerning greenhouse gas emissions.

28. The following SEPPs are also relevant to the Project:

- a) State Environmental Planning Policy 33 (Hazardous and Offensive Development) 1992;
- b) State Environmental Planning Policy (Rural Lands) 2008;
- c) State Environmental Planning Policy 44 (Koala Habitat Protection) 1995; and
- d) State Environmental Planning Policy 55 (Remediation of Land) 1998.

Threatened Species Conservation Act 1995

29. The Project requires habitat removal including the clearance of at least 87 hectares of native vegetation, removal of dead wood and trees, bushrock removal, loss of hollow bearing trees and alteration to the natural flow regimes of rivers, streams, floodplains and wetlands which are listed as key threatening processes under the *Threatened*

Species Conservation Act 1995 (NSW) (TSC Act). A further 109 hectares of derived grasslands and 11 hectares of cropping land would also be cleared on the Project site.

30. A total of 18 threatened fauna species listed under the TSC Act or the *Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)* are contained within the Project area and/or surrounds, including the Giant Barred Frog, Brown Treecreeper (eastern subspecies), Koala, Gang-Gang Cockatoo, Speckled Warbler, Grey-crowned Babbler (eastern subspecies), Squirrel Glider, Brush-tailed Phascogale, Eastern Freetail-bat, Eastern Bentwing-bat, Large Footed Myotis and Swift Parrot.
31. Seven vegetation communities and derived grasslands are contained within the Project area and/or surrounds.
32. Three threatened ecological communities listed under the TSC Act have been identified on the floodplain of the Mammy Johnsons River to the east of the Project, being:
 - a) River-Flat Eucalypt Forest Endangered Ecological Community (**EEC**);
 - b) Freshwater Wetlands on Coastal Floodplains EEC; and
 - c) Lowland Rainforest on Floodplain EEC.

Principles of biodiversity offsets

33. The DECCW has developed principles for the development of biodiversity offsets in NSW (**DECC offset principles**). Those principles include:
 - a) Principle One: Impacts must be avoided first by using prevention and mitigation measures.
 - b) Principle Five: Offsets must be underpinned by sound ecological principles. They must:
 - i. include the consideration of structure, function and compositional elements of biodiversity, including threatened species;
 - ii. enhance biodiversity at a range of scales;
 - iii. consider the conservation status of ecological communities; and
 - iv. ensure the long-term viability and functionality of biodiversity.
 - c) Principle Six: Offsets should aim to result in a net improvement in biodiversity over time. In particular, enhancement of biodiversity in offset areas should be equal to or greater than the loss in biodiversity from the impact site.
 - d) Principle Seven: Offsets must be enduring - they must offset the impact of the development for the period that the impact occurs. In particular, the offset should

also be permanent and secured by a conservation agreement or reservation and management for biodiversity, and offsetting should only proceed if an appropriate legal mechanism or instrument is used to secure the required actions.

- e) Principle Nine: Offsets must be quantifiable and the impacts and benefits must be reliably estimated.
- f) Principle Twelve: Offsets must be supplementary. In particular, offsets must be beyond existing requirements. Existing protected areas on private land cannot be used for offsets unless additional security or management actions are implemented.

Environment Protection and Biodiversity and Conservation Act 1999

- 34. The Giant Barred Frog, a species listed as endangered under the EPBC Act, is known to occur in the area of the Project site. The Swift Parrot also listed as an endangered species under the EPBC Act has been previously recorded in the Project site. Accordingly, approval is required for the Project under the EPBC Act as a controlled action.
- 35. The Project was referred to the Commonwealth Department of Sustainability, Environment, Water, Populations and Communities (**Commonwealth Department**) under the EPBC Act. On 22 December 2010, the Commonwealth Department granted approval for the Project under ss130 and 133 of the EPBC Act.

PART B: CONTENTIONS

- 1. The Applicant contends that the Court should refuse the application for approval to extend and continue the existing open cut mining operations at the DCM, for the reasons set out below.

Public Interest and Ecologically Sustainable Development

- 2. The Court must consider the public interest as a mandatory relevant consideration when disposing of an appeal made under s75L of the EPA Act. ESD is an element of the public interest. The Project is inconsistent with the following principles of ESD for the reasons set out at paragraphs 3-11 below:
 - a) the precautionary principle;
 - b) intergenerational equity; and
 - c) the conservation of biological diversity and ecological integrity, which are a fundamental consideration.

Biodiversity and threatened species

3. The EA does not adequately assess impacts on biodiversity in the Project site and surrounding area in respect of a range of threatened species, and the Project fails in its application of the precautionary principle. It may also have an impact on the conservation of biological diversity and ecological integrity of the area and breach the principle of intergenerational equity.

Particulars:

- a) The Project will require the removal of habitat including the clearing of at least 87 hectares of native vegetation and approximately 109 hectares of derived grasslands;
- b) A total of 18 threatened fauna species and three endangered ecological communities listed under the TSC Act or the EPBC Act, occurring in seven vegetation communities and derived grasslands are contained within the Project area and/or surrounds;
- c) There is insufficient information in the EA regarding the distribution and abundance of a number of threatened species on the Project site, including all aquatic species (vertebrate and invertebrate), Spotted-tailed Quoll, Powerful Owl, Speckled Warbler, Gray-crowned Babbler, Squirrel Glider, Brush-tailed Phascogale, Koala and Common Planigale and Varied Sittella;
- d) The lack of information referred to above leads to an inadequate assessment in the EA of the potential impacts of the Project on a number of threatened species on the Project site, including aquatic species, Spotted-tailed Quoll, Powerful Owl, Speckled Warbler, Gray-crowned Babbler, Squirrel Glider, Brush-tailed Phascogale, Koala and Common Planigale and Varied Sittella;
- e) Threatened species records kept by the existing mine operations have not been mapped in the EA;
- f) There is not an adequate assessment in the EA as to why Coal Shaft Creek is "minor habitat" for recorded threatened species;
- g) There is an inadequate habitat assessment in the EA as to potential changes in taxa diversity and abundance across the Project site, no detailed aquatic survey, and no flora and fauna assessment between April 2009 and January 2010;

- h) The threat of serious or irreversible environmental damage as a result of the Project, where there is lack of full scientific certainty regarding the distribution and abundance of a number of threatened species, is contrary to the precautionary principle;
 - i) Given the uncertainty as described above, it is unclear whether the Project will conserve biological diversity and ecological integrity, and whether it will be consistent with the principle of intergenerational equity.
4. The EA does not adequately assess the impact of the Project on the Giant Barred Frog (GBF), and the Project fails in its application of the precautionary principle.

Particulars:

- a) The GBF is listed as an endangered species under the TSC Act and is listed as endangered under the EPBC Act;
- b) The population of the GBF in the Mammy Johnsons River is regionally significant;
- c) The EA deals with the impact of the Project on the GBF at the local "population" level and not the species level, and there is insufficient detail in the EA to accurately understand baseline conditions for the GBF;
- d) There is insufficient detail, including as to methodology, in the EA to provide comparable and independent results for the GBF from the Project area to other populations of the GBF;
- e) There is insufficient data in the EA (including the population of GBF along Mammy Johnson River) to provide statistical certainty in relation to the impact of the Project on the GBF population;
- f) Indicators of water quality health adopted in the EA are inappropriate for the GBF;
- g) The proposed monitoring program set out in the EA is inadequate to detect the impact of the Project on the population of the GBF;
- h) The survey methodology used in the EA to identify the presence of the GBF in the Project area and surrounds is inadequate;
- i) The Project presents a threat of serious or irreversible environmental damage, in circumstances where there is a lack of full scientific certainty regarding the impact of the Project on the GBF, contrary to the precautionary principle.

5. The Project may lead to a long term decrease in the size of the local population of the GBF, the area of occupancy of the GBF, and disrupt the breeding cycle of the GBF, failing in its application of the principles of intergenerational equity and conservation of biological diversity and ecological integrity.

Particulars:

- a) Increased and variable concentrations of salinity in the Mammy Johnsons River and Coal Shaft Creek may have a negative impact on one or more of the critical life stages of the GBF;
 - b) Saline discharge from the Project may impact the area of occupancy of the GBF, increasing the risk of further decline of the GBF;
 - c) The impact of the Project on the hydrology of the Mammy Johnsons River and Coal Shaft Creek may disrupt the breeding cycle of the GBF;
 - d) The Project will result in the loss of biological diversity and ecological integrity;
 - e) The loss of biodiversity values as a result of the Project is contrary to the principles of intergenerational equity and conservation of biological diversity and ecological integrity.
6. The Project will fragment an existing population of the GBF and adversely affect habitat critical to the survival of the GBF, failing in its application of the principles of intergenerational equity and conservation of biological diversity and ecological integrity.

Particulars

- a) The impact of the Project on Coal Shaft Creek will result in a fragmented population of GBF;
 - b) Degraded water from the Project will impact habitat critical to the survival of the GBF;
 - c) The Project will result in the loss of biological diversity and ecological integrity;
 - d) The loss of biodiversity values as a result of the Project is contrary to the principles of intergenerational equity and conservation of biological diversity and ecological integrity.
7. The Project will result in invasive species that are harmful to the GBF becoming established in the habitat of the GBF, failing in its application of the principles of intergenerational equity and conservation of biological diversity and ecological integrity.

Particulars

- a) Invasive species that are predators to the GBF will increase in abundance around the Project site, resulting in further decline of the local population;
- b) The Project will result in the loss of biological diversity and ecological integrity;
- c) The loss of biodiversity values as a result of the Project is contrary to the principles of intergenerational equity and conservation of biological diversity and ecological integrity.

Water quality

8. The Project will impact on water resources in the Project area and surrounds, and the EA does not adequately assess impacts of the Project on water resources, failing in its application of the precautionary principle. It may also have an impact on the conservation of biological diversity and ecological integrity of the area, and breach the principle of intergenerational equity.

Particulars:

- a) The Project proposes to continue implementation of the first flush protocol to capture runoff with elevated salinity levels from Project irrigation areas, and expand the irrigation areas for mine water;
- b) The use of the first flush protocol will lead to an adverse impact on water quality in the area;
- c) There is insufficient information in the EA to adequately assess the impact of the first flush protocol on any aquatic species in the area;
- d) The EA does not adequately assess the impact of the Project on groundwater, including after the life of the mine;
- e) The Project will not achieve the aims and objectives of the Great Lakes LEP, which include the protection and enhancement of environmental qualities and improving opportunities for ESD;
- f) The Project will have an adverse impact on the area's water resources, in conflict with the only objective of Zone 1(a) in the Great Lakes LEP, at subparagraph (c) of the zone objective;
- g) The threat of serious or irreversible environmental damage as a result of the Project, where there is lack of full scientific certainty regarding the

impact of the proposal on aquatic species, is contrary to the precautionary principle;

- h) Given the uncertainty as described above, it is unclear whether the Project will conserve biological diversity and ecological integrity, and whether it will be consistent with the principle of intergenerational equity.

Biodiversity offsets

- 9. Biodiversity offsets are not consistent with the conservation of biological diversity and ecological integrity as a fundamental consideration.
- 10. Should the Court take the view that biodiversity offsetting is appropriate, then the offsets as proposed are inadequate to compensate for the adverse impacts of the Project on biodiversity and ecological integrity, and the Project fails in its application of the principles of intergenerational equity and conservation of biological diversity and ecological integrity.

Particulars:

- a) The Project will remove all known habitat recorded on the Project site and locality for the Swift Parrot, Brown Treecreeper (eastern subspecies), Grey-crowned Babbler (eastern subspecies) and Squirrel Glider;
- b) The Project will result in the clearing of at least 87 hectares of native vegetation, and the removal of 109 hectares of derived grassland;
- c) The DGRs required the proponent to provide a detailed description of the measures that would be implemented to maintain or improve the biodiversity values of the surrounding region in the medium to long term;
- d) The EA contains inconsistent information on the amount of vegetation to be cleared under the Project, for example, in some parts stating approximately 87 hectares of native vegetation will be cleared, while other parts refer to clearing of 96 hectares of native vegetation;
- e) The ratios of offsets to cleared vegetation proposed by the Project are not sufficient to secure a "net improvement" in biodiversity in the long term;
- f) The Project results in a "net loss" in floral diversity;
- g) The offsets proposed for the Project are not "like for like" in that there are key physical differences in the areas proposed as offsets and the vegetation which will be lost within the Project site;

- h) The biodiversity offsets proposed for the Project do not meet the DECCW offset principles;
- i) The Project results in the loss of biological diversity and ecological integrity;
- j) The loss of biodiversity values as a result of the Project is contrary to the principles of intergenerational equity and conservation of biological diversity and ecological integrity.

Air quality and impacts to human health

11. The Project will negatively impact the health of communities in the vicinity of the Project site, the Hunter Valley, and in the Greater Metropolitan Region of Sydney, failing to promote the social welfare of the community and a better environment and to protect the environment as objects of the EPA Act, and in its application of the precautionary principle and the principle of intergenerational equity. It also fails to adequately address the public interest and public health of the community.

Particulars

- a) The Project may generate particulate matter with a diameter of less than $2.5\mu\text{m}$ (micrometer) ($\text{PM}_{2.5}$);
- b) $\text{PM}_{2.5}$ is a respirable substance;
- c) The potential for an increase in the concentration of atmospheric $\text{PM}_{2.5}$ as a result of the Project raises the potential for the community's exposure to $\text{PM}_{2.5}$;
- d) There is a demonstrated statistical association with exposure to atmospheric $\text{PM}_{2.5}$ concentrations and health effects, including:
 - i. Coughing, wheezing and shortness of breath;
 - ii. Increased hospital admissions for respiratory illness and heart disease;
 - iii. Airway inflammation;
 - iv. Negative effects on lung development and function;
 - v. Death from heart and lung disease.
- e) The Project will have an adverse impact on the health of the community;
- f) The impacts of the Project on the health of the community will continue to stretch already under-resourced health facilities in the region, creating unreasonable or uneconomic demands for the provision or extension of public amenities or services;

- g) The predicted emissions of particulate matter with a diameter less than $10\mu\text{m}$ (PM_{10}) will exceed in some cases the 24-hour concentration criteria for PM_{10} set out in the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW and the Ambient Air Quality National Environmental Protection Measure;
- h) Condition 19 of Schedule 3 to the Project Approval is not sufficient to prevent such an exceedance referred to above;
- i) The Project will not achieve the aims and objectives of the Great Lakes LEP, which include the protection and enhancement of environmental qualities, the promotion of the well-being of the area's population, and the promotion of opportunities for ESD;
- j) The Project will create unreasonable or uneconomic demands for the provision or extension of public amenities or services, in conflict with the objective of Zone 1(a) in the Great Lakes LEP, at subparagraph (d) of the zone objective;
- k) The threat of serious or irreversible environmental damage, in circumstances where there is a lack of full scientific certainty regarding the impact of the Project on the health of communities in the vicinity of the Project area, is contrary to the precautionary principle;
- l) The Project will negatively impact on the health of communities in its vicinity, failing to promote the social welfare of the community and a better environment;
- m) The Project will result in health impacts for the community that will be ongoing beyond the life of the Project and the present generation, contrary to the principle of intergenerational equity.

SIGNATURE

Signature of legal representative



Capacity

Solicitor

Date of signature

3/3/11