



Nature Conservation Council

The voice for nature in NSW

Major Projects
Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

14 October 2016

Submission of Objection: Amended Rocky Hill Coal Project (SSD 5156)

Dear Sir/Madam,

The Nature Conservation Council of NSW (**NCC**) is the peak environment organisation for New South Wales, representing over 150 member societies across the state. Together we are committed to protecting and conserving the wildlife, landscapes and natural resources of NSW.

NCC **objects** to the Amended Rocky Hill Coal Mine Project due to the inadequacies in the Environmental Impact Statement and the significant impacts on water, climate, human health and agriculture.

Our **attached** submission outlines our specific concerns in relation to:

- Fundamental inaccuracies and omissions in the EIS
- Impacts on water
- Impacts on climate
- Impacts on biodiversity
- Impacts on human health
- Impacts on agriculture

We recommend that the proposed mine be rejected. If you seek any further information on the issues raised in this submission please do not hesitate to contact me on (02) 9516 1488 or ncc@nature.org.au

Yours sincerely,

Kate Smolski
Chief Executive Officer

NCC SUBMISSION – AMENDED ROCKY HILL COAL PROJECT (SSD 5156)

INTRODUCTION

Gloucester Resources Limited, the proponent of the Rocky Hill Coal Project, lodged an original project application in 2013. However due to subsequent changes to the proposal, including agreement with Yancoal Australia Limited, who run the neighbouring Stratford Mining Complex, that coal would be transported to and processed at the existing Stratford coal handling and preparation plant, the project has been subsequently amended and an updated EIS has been lodged.

The proposed Rocky Hill Coal Project is located close to the NSW rural town of Gloucester. The town is known for its peace and natural beauty and the quality of its agricultural lands, with a significant dairy and beef industry located in the area. The proposed open cut coal mine is located adjacent to the town, with a portion of the mine site located less than 1 km from residential areas¹. This is an entirely inappropriate location for an open cut coal mine. Allowing an open cut coal mine within such close proximity to the Gloucester community will have far-reaching health, social and economic impacts.

We are particularly concerned that the Environmental Impact Statement (**EIS**) does not provide a robust and adequate assessment of the impacts on the neighbouring community and farmland.

The Nature Conservation Council of NSW (**NCC**) **objects** to the Project (SSD 5156) for the reasons outlined below.

EIS INADEQUACIES

Assessment of Heavy Metals

Given the proximity of the mine to Gloucester township, one would have expected a rigorous environmental impact assessment of the proposed mine on issues such as dust, noise, air quality, impacts on tank-based drinking water, impacts on the local dairy industry, and impacts on the downstream Manning River catchment which provides the drinking water source for a number of regional towns². Yet there appears to be little emphasis on the possible impact of heavy metals in coal dust sourced from the mine or surface water discharged from the mine. Mercury appears to have been ignored altogether. Even when the potential water quality discharge heavy metal limits from the project are discussed in the EIS³, mercury is not mentioned.

Coal is known to include elements such as mercury, selenium, arsenic, lead, zinc, calcium and fluoride, all of which have the potential to contaminate the local environment and communities, including through dust and water pollution⁴. One would have thought that a section of the EIS titled “Coking Coal

¹ Rocky Hill Coal Project EIS, p 1-10

² Rocky Hill Coal Project EIS, Vol 3, Part 5, p 5-36

³ Rocky Hill Coal Project EIS, p 4-210

⁴ www.smh.com.au/nsw/coal-mines-should-pay-for-polluting-waterways-and-air-say-environmentalists-20160322-gnod10.html

and its Properties”⁵ would be an appropriate place to include a heavy metal analysis of the coal that the proponents intend to mine – but there is no such analysis.

If the Rocky Hill Coal Project EIS has failed to assess the environmental impact of mercury in coal dust and waste water emanating from the site, what else is missing?

The issues of environmental impacts of heavy metals, particularly mercury, will be dealt with in more detail below in relation to water and agricultural impacts.

Statement on coking coal

The EIS claims that *‘(i)n steel production, there is no substitute for coking coal as a high quality source of carbon’*⁶.

This statement supporting justification for the project is misleading. In fact, there is a substitute method of steel production that does not require coal – the electric arc furnace⁷. A balanced environmental impact statement would have mentioned that there are alternative methods for steel production which would not require the use of coal. It has been suggested that approximately 30% of the world’s steel production does not require coal⁸, and there is a significant potential for an expansion of this method using renewable energy which delinks steel production from climate-damaging coal burning. An EIS attempting to justify the environmental impacts of mining coking coal has a responsibility to at least mention the alternative method of steel making using electric arc furnaces, and to explain why the mining of coking coal needs to continue.

IMPACTS ON WATER

Heavy metal contamination

Surface water quality impacts associated with the proposed Rocky Hill Coal Project are very important because runoff from the site flows into the Avon River, which is part of the Manning River catchment, water source for a number of significant NSW Central Coast towns. The potential impact of mine runoff on the drinking water quality of these towns appears to be missing from the EIS, and as previously mentioned, mercury levels were not even measured in an attempt to establish background levels of heavy metals⁹.

One of the specialist consultant studies attached to the EIS¹⁰ makes the statement that:

“No major obstructions to flow or fish passage are known to occur between the mine area and the Pacific Ocean”

⁵ Rocky Hill Coal Project EIS, p 1-11

⁶ Rocky Hill Coal Project EIS, p 1-11

⁷ <https://www.lenr-forum.com/forum/index.php/Attachment/870-eaf-final-pdf/>

⁸ <https://frontlineaction.org/coking-coal-steel-production-alternatives/>

⁹ Rocky Hill Coal Project EIS, Section 4.7.2.6, Water Quality, p 4-187

¹⁰ Amended Rocky Hill Coal Project, Part 8, Aquatic Ecology Assessment, p 8-9

This means that the possibility of heavy metal contamination in the fish population of the Avon/Manning River catchments as a result of the project, including potential bioaccumulation of mercury levels into the marine food fish population, is completely unknown because environmental mercury levels have not been measured or assessed in the EIS. The statement that *‘the project is unlikely to affect any threatened aquatic species’* is therefore invalid in the absence a proper assessment of potential heavy metal contamination from the project impacting on aquatic species through bioaccumulation.

Saline water management

Groundwater impacts of the project are a particular concern. The EIS acknowledges that:

“Groundwater inflows and surface runoff within the open cut pits would have elevated salinity levels and an increased risk of elevated levels of dissolved metals and hydrocarbons”¹¹.

The EIS claims that this water will be ‘managed’ by a combination of:

- Water storage in dams on site
- Irrigation onto the adjoining dairy farms
- Controlled release into the downstream drinking water catchment
- Treatment in an on-site water treatment plant.

Details of the management of the environmental impact of this contaminated water in the EIS are inadequate. The potential impacts of wastewater irrigation on dairy farms will be discussed in greater detail below.

The saline water removed from the site is proposed for the first 3 years simply to be removed to on-site dams (subject to flooding and leakage with potential contamination of the downstream catchment) and from the fourth year, treated in an on-site water treatment plant and then used for irrigation purposes on the adjacent dairy¹². The quantity of saline water expected to be removed is up to 913 ML per annum.

Given that this treated water is either to be irrigated onto agricultural land to be grazed by dairy cattle, or released into the Avon River, part of a human drinking water catchment, NCC would have expected an analysis of the treated water proposed to be released into the environment. In a reasonable scan of the EIS documents, NCC was unable to find such documentation. The closest was Table 4.15, showing Potential Water Quality Discharge Limits¹³. Most of the elements of concern are listed, however mercury and fluorine are missing from the list.

It is also unclear who would be responsible for the water quality program. Such a program would only be appropriate if it was in the hands of a competent body (such as the EPA) which was independent of the proponent. The costs of the monitoring would of course have to be paid by the proponent.

¹¹ Rocky Hill Coal Project EIS, pp 4-194 to 4-198

¹² Rocky Hill Coal Project EIS, p 4-195

¹³ Amended Rocky Hill Coal Project, Part 5, Table 4.15, p 5-141

The environmental disposal of a significant amount of solidified salt (an average of 6.9 tonnes per day) is dismissed in a most cavalier fashion in a single sentence in the EIS¹⁴. The lack of detail in the EIS around what would be a potentially significant, medium term environmental problem again highlights the lack of adequate information in the EIS.

IMPACTS ON CLIMATE

The scope 3 emissions associated with the project are the most concerning. The total scope 3 emissions for the project are listed on p 4-101 of the EIS as 36.28 million tonnes of CO₂ equivalent emissions – dwarfing the figure from Scope 1 and Scope 2 sources. While this figure is significantly less than those from several of the recent coal mine proposals from the Hunter Region, the greenhouse gas impacts on global climate from NSW coal mines are all cumulative.

The Rocky Hill Open Cut Coal Project is being considered in the shadow of the historic agreement at the UN Conference of the Parties (the Paris Agreement) on 12 December 2015. The Paris Agreement was unanimously signed by 195 countries. The agreement commits all nations, including Australia, to keeping global average temperatures to below 2 degrees Celsius.

The Climate Council of Australia has stated what this target means for Australian coal mining:

*“For Australia to play its role in preventing a 2 degree C rise in temperature requires over 90% of Australia’s coal reserves to be left in the ground, unburned”.*¹⁵

International researchers from the University College of London have come to a similar conclusion¹⁶. They suggest that to have at least a 50% chance of keeping global warming below 2 degrees C throughout the twenty-first century, globally a third of oil reserves, half of gas reserves and over 80% of current coal reserves should remain unused. Even if carbon capture and storage technologically is developed, the report indicates that over 90% of Australasian coal reserves would have to remain unburnt before 2050 to meet the 2 degrees C warming ceiling.

The Australian government has committed to reducing greenhouse gas emissions by 26 to 28 per cent by 2030. In spite of this commitment, it appears that Australia’s annual emissions are increasing when other developed economies are cutting their carbon pollution¹⁷.

An international addition of the Green Innovation Index¹⁸, published before the 2015 UN Climate Conference, targets Australia’s poor performance on a per capita basis in relation to coal. The report notes that Australia is the 5th largest producer of coal and the highest consumer of coal per capita on earth.

¹⁴ Rocky Hill Coal Project EIS, p 4-198

¹⁵ Climate Council of Australia (2015): *“Unburnable Carbon: Why We Need to Leave Fossil Fuels in the Ground”*, pp iii – iv, www.climatecouncil.org.au

¹⁶ C. McGlade & P. Ekins: *The geographical distribution of fossil fuels unused when limiting global warming to 2degrees C*, Nature, V. 157, 8th January 2015, pp 187-190

¹⁷ *Carbon emissions on rise despite Direct Action*, Australian Financial Review, 1 February 2016, www.afr.com/news/politics/carbon-emissions-on-rise-despite-direct-action-20160131-gmif6a

¹⁸ <http://next10.org/international> (Australian Press Release)

The report states that:

“Australia has a crucial role to play in helping the world to avoid the most dangerous impacts of climate change, as the pollution from Australia’s coal resources alone could take us two-thirds of the way to a two degree rise in global temperature”.

NCC maintains that it is fundamentally irresponsible for the NSW Government to continue to approve new or expanded coal mine projects at a time when Australia’s GHG emission trajectory is moving in the opposite direction to that required for Australia to meet its international GHG emission reduction commitments.

In light of the unequivocal evidence that the burning of coal contributes to anthropogenic climate change and an international agreement to keep global average temperatures to below 2 degrees Celsius, we do not consider that the approval of the Amended Rocky Hill Coal Project is in the public interest.

IMPACTS ON BIODIVERSITY

Unlike other open cut coal mine proposals reviewed by NCC over the last 2 years, the mine disturbance area consists of land which has been largely cleared for agricultural purposes many years ago. The EIS indicates that 51.8ha of native vegetation would be cleared, mainly made up of dry sclerophyll forest. The EIS also indicates that a biodiversity offset area has been identified, which appears to offset the biodiversity damage caused by the mine proposal¹⁹. It should also be noted that the amended project does not constitute a Controlled Action under the Commonwealth EPBC Act²⁰.

The arrangements for long term security of the biodiversity offsets²¹, in contrast to many of the larger open cut coal mine proposals examined in the last 12 months, appear to be adequate, in perpetuity arrangements.

IMPACTS ON HUMAN HEALTH IMPACT

We are concerned that the EIS does not give proper consideration to the impacts of the proposed mining operations on the communities of Gloucester and Camberwell, in particular the impacts of coal dust, noise and heavy metals on human health.

For example, the domestic tank water supplies quoted in the EIS²² provide very poor models about what might be expected if the project goes ahead in Gloucester. The village of Camberwell would certainly be a good location to study coal dust, but why did the researchers confine themselves to lead? It is unclear why the analysis does not include an assessment of the potential contamination of domestic tank water supplies with other contaminants such as mercury, selenium, arsenic, cadmium and fluorine.

¹⁹ Rocky Hill Coal Project EIS, Fig. 4.65, p 4-304

²⁰ Rocky Hill Coal Project EIS, p4-292-293

²¹ Rocky Hill Coal Project EIS, p 2-95

²² Rocky Hill Coal Project EIS, p 4-99

None of the studies quoted provide that assurance, and the Queensland study is far enough away from the project site, in the absence of heavy metal and fluoride analysis of coal and coal dusts from both locations, as to be of little value as a scientific model.

IMPACTS ON AGRICULTURE

We are concerned that the EIS does not give proper consideration to the impacts of the proposed mining operations on neighbouring farmland, in particular the impacts of coal dust and heavy metals on stock and agricultural productivity²³.

For example, the EIS cites several studies that suggest that cattle will eat feed that is contaminated with coal dust, however it is a complete nonsense to derive any scientific principles that the feed is safe to eat from the concept of 'cattle palatability'. Cattle are notorious for consuming substances which are not good for them because they like the taste. For example, cattle love the taste of lead, and will happily lick and chew lead batteries, lead sheets etc. until toxic symptoms develop²⁴. A common weed in coastal NSW called green cestrum is highly toxic to cattle, which may become addicted to the taste and eat the plant until they die on the spot. Green Cestrum poisoning is a common cause of sudden death in cattle in NSW²⁵.

More relevant and useful cattle studies, providing analyses of coal dust deposited on pastures eaten by dairy cattle and treated saline water irrigating pastures, would attempt to answer questions like:

- Does the presence of coal dust on soil and pastures or crops grazed by dairy cattle cause heavy metal residues such as lead, arsenic or mercury in milk and other dairy products?
- Will the irrigation of treated saline water on soil and pastures grazed by dairy cattle over long periods of time cause heavy metal residues such as lead, arsenic or mercury in milk and other dairy products?
- Will coal dust accumulation on pastures or long-term irrigation of pastures with treated saline water result in heavy metal residues in meat in grazing cattle? Cull dairy cattle often end up being sent as beef mince to the US market – a detection of heavy metal residues in Australian beef in the US could cause the loss of valuable beef export markets, costing potentially billions of dollars. The Australian beef industry has world class traceback mechanisms to allow them to trace beef residues back to the property of origin, and the industry has stated in the past that they will seek to recover any industry loss from those responsible. Are the coal mine proponents, Gloucester Resources Ltd, comfortable that any risk of heavy metal residues has been appropriately assessed, or are they gambling with Australia's international reputation for clean, green beef?

The EIS does not seem to have addressed any of these important questions.

²³ Rocky Hill Coal Project EIS, p 4-99 to 4-100

²⁴ http://www.dpi.nsw.gov.au/data/assets/pdf_file/0014/102416/Lead-poisoning-in-livestock.pdf

²⁵ http://www.dpi.nsw.gov.au/data/assets/pdf_file/0004/235408/Green-cestrum.pdf

Conclusion

NCC **objects** to the Amended Rocky Hill Coal Mine Project due to the inadequacies in the Environmental Impact Statement and the significant impacts on water, climate, human health and agriculture.