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To Whom It May Concern

Re: Submission to the Newstan Mine Extension Project Proposal

I object to the Centennial Coal Newstan Mine Extension Project application in its current form. I have many concerns about this proposal. Some, I will outline below.

Awaba Conservation Area.

Most of the area for this mine extension project is within the confines of the proposed Awaba Conservation Area (ACA). The ACA, which is mainly on Crown Land, is a vital wildlife corridor between the Watagans and Lake Macquarie. The importance of this area has been acknowledged since 1972 by the National Trust of Australia and subsequently by Lake Macquarie City Council (LMCC) in 1995 and the then NSW Department of Environment, Climate Change and Water in 2009.¹

LMCC's Awaba Biodiversity Conservation Area is not only part of Council's offset obligations but it is a part of the proposed ACA. While consultants have acknowledged the Awaba Biodiversity Conservation Area and other existing biodiversity conservation areas.² I have concerns around the area's that are designated for full extraction within the Biodiversity Conservation Area, other existing biodiversity conservation areas (i.e. the proposed ACA), Kilaben Creek³ catchment and the integrity of the Teralba Conglomerate Formation. If the Teralba Conglomerate Formation is compromised, how will this effect ground and surface water and thus the integrity of all biodiversity conservation areas in the projects boundaries?

Ecological/ Ecosystem Services.

RPS's report (Appendix M) makes no reference to natural assets and ecological/ecosystem services even though it is stated that 1036.27ha is native vegetation,⁴ which is 70.7%.⁵ The concept of ecosystem services is now well established⁶, with a universal consensus, that the "perceived and unobserved benefits people obtain from nature are important".⁷ Services provided by the ecosystem include: oxygen production, water quality management, air quality management, carbon storage, pollination services, pollution control, tourism and recreational opportunities as well as cultural and spiritual opportunities. These services are

¹ Charlton R 2015 Awaba Conservation Area

² GHD 2020 pg.310

³ Ibid Fig6.1 pg.99

⁴ RPS Newstan Mine Extension Project, Biodiversity Development Assessment Report pg.4

⁵ Ibid pg. 12

⁶ DEWHA *Ecosystem Services: Key Concepts and Applications* pg.2

⁷ ICUN 2019 *Ecosystems Services: The benefits people obtain from the planet's natural resources*

natural assets in their own right and will provide a long term benefit to the majority, lasting decades, if not centuries into the future.

The Precautionary Principle

GHD's report invokes the Precautionary Principle for ecological sustainable development: *"The precautionary principle states "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."*⁸ It states that all potential serious or irreversible risks have been quantified and avoided. I contest this argument with reference to the above. I suggest that the Precautionary Principle appears to be overridden because of the argued importance of extracting this coal resource. The financial costs of potential degradation are not considered.

Eraring Ash Dam (the Dam)

The Dam has caused great concern and angst within the community, in recent years. The Dam itself is large (occupying an area of approximately 150ha⁹), unlined¹⁰ and estimated to contain **40 million tonnes** of ash waste¹¹. This ash waste contains heavy metals including selenium, lead and arsenic¹².

Groundwater and surface water monitoring indicates that waste from the Dam is seeping into Lake Macquarie via the sub-catchments of Muddy Lake, Myuna Bay and Whiteheads Lagoon¹³.

In 2019 the Myuna Bay Sport and Recreation Centre was closed because of the risk posed to people and infrastructure if the Dam wall were to collapse due an earthquake.

The MSEC report (Appendix H), states that the coal seams are "characterised by complex patterns of splitting"¹⁴ and that dykes, faults and folds dominate¹⁵ the area.

Currently there are no first workings under the Dam and it states that the existing workings in the Great Northern Seam will be reactivated in order to source the coal from under the Dam.¹⁶ Figure .1.5¹⁷ indicates that the Great Northern Seam is less than 50 metres under the floor of the Dam.

Less than 20 mm of vertical subsidence is predicted in areas of first workings only, including under the dam wall¹⁸. How this is possible, when full extraction under the dam itself is proposed¹⁹.

⁸ Ibid pg.317

⁹ HCEC 2020 Out of the Ashes II, pg 56

¹⁰ GHD 2020 Report for Centennial Newstan Pty Ltd - Newstan Mine Extension Project pg. 126

¹¹ HCEC 2020 Out of the Ashes II : Summary of Key Findings pg 3

¹² Ibid

¹³ Ibid

¹⁴ MSEC 2020 SUBSIDENCE PREDICTIONS AND IMPACT ASSESSMENTS FOR NEWSTAN COLLIERY 201 TO 218 PANELS pg 7

¹⁵ Ibid

¹⁶ MSEC 2020 SUBSIDENCE PREDICTIONS AND IMPACT ASSESSMENTS FOR NEWSTAN COLLIERY 201 TO 218 PANELS pg. 10

¹⁷ Ibid pg 7

¹⁸ GHD Report for Centennial Newstan Pty Ltd - Newstan Mine Extension Project, 2220261 pg.iv Table ES-1

¹⁹ Ibid pg.4 Figure1-1

Great consideration in mine design has been given with infrastructure such as the Main Northern Railway, a 132 kV substation, Ulan Rail Loop and Eraring Power Station, with only first or partial workings proposed.²⁰ Yet for the Ash Dam, a vital part of the Eraring Power Station's infrastructure, full extraction is proposed. Why?

Awaba Colliery

Part the land to be cleared at the Colliery is 0.15 ha of PCT 1718 (Swamp Mahogany – Flax-leaved Paperbark swamp forest on coastal lowlands of the Central Coast)²¹ which is an Endangered Ecological Community. I request that Centennial leave this EEC as is and work around it.

I would like all efforts to be made to leave hollow bearing trees intact and/or a major nesting box program be implemented for the area.

Muddy Lake

I have concerns around increased water discharge and contamination into Muddy Lake. How will this be mitigated? Will there be a new water treatment plant built, to manage this? Muddy Lake is already under duress with levels of contamination and aquatic weed infestation.

References

Charlton R: 2015 *Awaba Conservation Area*

<https://conserwestlakes.wordpress.com/awaba-conservation-area> Cited 10 October 2021

GHD: 2020 Report for Centennial Newstan Pty Ltd - Newstan Mine Extension Project, 2220261

HCEC: 2020 *Out of the Ashes II*

IUCN Red List of Ecosystems: 2019 <https://iucnrle.org/blog/ecosystem-services-the-benefits-people-obtain-from-the-planets-natural-resources/> Cited 5 October 2021

MSEC: 2020 Report: SUBSIDENCE PREDICTIONS AND IMPACT ASSESSMENTS FOR NEWSTAN COLLIERY 201 TO 218 PANELS

RPS: 2020 Newstan Mine Extension Project, Biodiversity Development Assessment Report

²⁰ GHD Report for Centennial Newstan Pty Ltd - Newstan Mine Extension Project, 2220261 pg.iv Table ES-1

²¹ Ibid pg. 185