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**Committee Secretary**

Senate Standing Committees on Environment and Communications  
PO Box 6100  
Parliament House  
CANBERRA ACT 2600

24<sup>th</sup> August 2017

**Re: Inquiry into the rehabilitation of mining and resources projects as it relates to Commonwealth responsibilities**

**Dear Committee Secretary,**

Monash University holds a substantial interest in the current and future rehabilitation of mining projects and would like to offer support to the inquiry. This submission is to address the committee on important issues that surround the rehabilitation of mining projects, highlight the need for a coordinated national research strategy between industry, government and research providers, and also to demonstrate Monash University's commitment towards providing solutions for these issues.

Monash University is one of the largest research providers in Australia and has extensive cross-disciplinary capacity to develop strategic mine closure and rehabilitation solutions. Monash University currently works in partnership with the Australian mining industry to address mine closure and rehabilitation challenges. A range of complex economic, social and environmental challenges are associated with the closure and rehabilitation of mining operations. Addressing these challenges requires multi-disciplinary research approaches to ensure that proposed solutions are technically sound, whilst meeting the needs of community, industry and government stakeholders. The research and training that is currently being conducted across Monash University's various faculties provides a deep expertise that can be harnessed to identify potential opportunities and solutions to mine closure and rehabilitation challenges. Our Faculty of Engineering conducts technical research in areas such as artificial soils, the stability of mine slopes, the migration of pollutants through groundwater systems, remediation of contaminated land, and the role of vegetation selection to manage erosion and runoff water quality. Monash University's Faculty of Law, Faculty of Arts and Faculty of Business and Economics also possess expertise in the social perceptions of mining, environmental policy, environmental management and also the taxation arrangements of extractive industries.

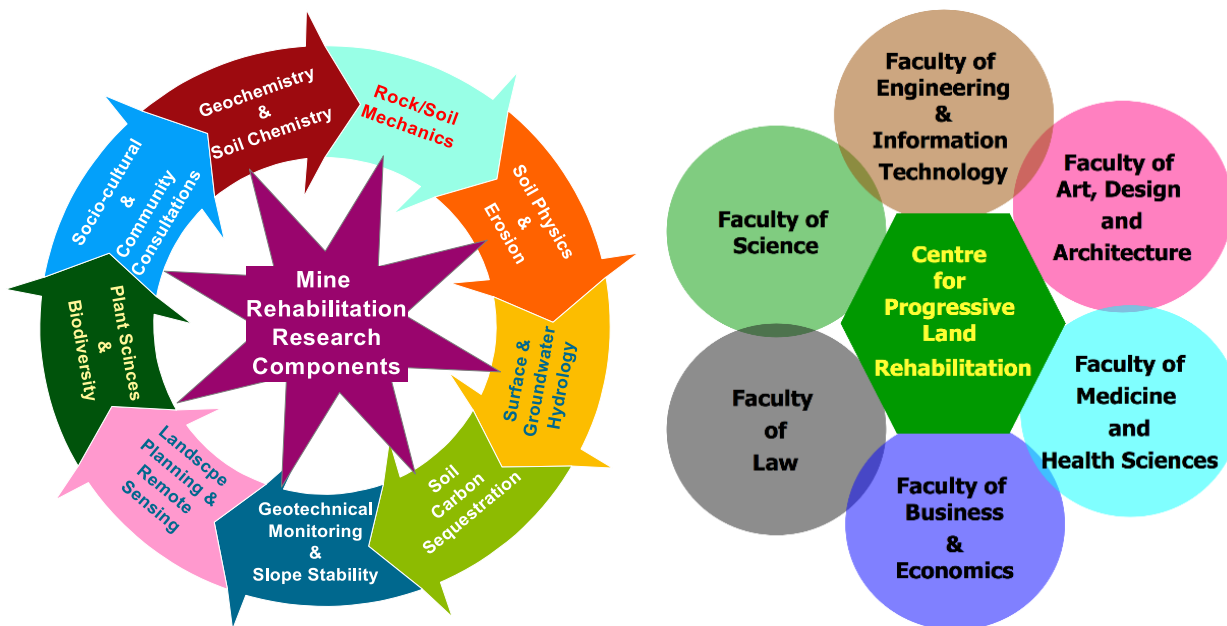
**Monash's commitment to mine rehabilitation**

Monash University is proposing the establishment of a Centre for Progressive Land Rehabilitation that will provide proactive and integrated approaches to the rehabilitation of degraded land. Mine rehabilitation requires coordination of expertise from a range of scientific areas (Figure 1) to achieve meaningful outcomes for all stakeholders. Through the development of this centre, Monash University will be positioned to provide world-leading research on mine site rehabilitation for the benefit of industry, communities, regulatory authorities, and state and federal Australian governments. The aim of this Center of Excellence is to develop a framework to facilitate successful

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transition to closure while alleviating social, economic and environmental wellbeing of communities living in and around major mining centers in Victoria, Australia and the world.

The proposed Centre for Progressive Land Rehabilitation will bring together and coordinate the research efforts of Monash University's multi-disciplinary teams, as well as strategic collaborators and partner organisations. The centre will coordinate research efforts across multiple disciplines or research areas including: engineering, environmental health, ecology, cultural landscapes and aesthetics, economics, environmental policy and sustainable development.



**Figure 1: Scientific areas involved in mine rehabilitation (left) and Monash's diverse team (right)**

## Funding and Coordination of Mine Rehabilitation Research

In 2016, the Australian Research Council (ARC) only funded several research projects related to mine rehabilitation in areas such as the hydrogeology of mining operations, plant establishment on waste rock dumps and post-mining landscapes, and geosynthetic liners for reducing contaminant seepage risks. The Australian Coal Association Research Program (ACARP) has funded research programs to develop and evaluate mine rehabilitation strategies in the black coal industry. However, there are limited funding mechanisms available through other industry or research bodies to develop research tailored to address the technical, social, economic and environmental issues surrounding rehabilitation at Australian brown coal mines, quarry and sand mining operations, metalliferous mines, or abandoned and/or historical mines.

Given the contribution of the mining industry to the Australian economy, it is important that best-practice mine closure and rehabilitation outcomes be achieved to prevent adverse outcomes to the environment or local communities that are economically dependent upon mining activities. Ensuring progressive rehabilitation throughout the life of mining operations and an effective transition to post-mining landscapes are critical for Australia to be seen as a world leader in environmental stewardship and mineral resource governance. Due to this, Monash University would welcome the development of a Federal Government strategy for mine closure and rehabilitation research, to provide strategic guidance, targeted funding and to improve coordination between the Australian mining industry,



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private and public research providers, and Federal and State government regulatory authorities. Such an initiative would lead to positive outcomes for the Australian mining industry and local communities.

Submission prepared by:

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Approved by:

**Professor Jeff Walker**, Dean, Faculty of Engineering

**Professor J Kodikara**, Head, Department of Civil Engineering

Yours Sincerely,

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