Gippsland Critical Minerals

Fingerboards Critical Minerals Project
Study Briefs – Air Quality Assessment

Overview

The air quality assessment will involve characterising the existing air quality conditions of the area, developing an understanding of the climate and local meteorology and topography of the area and identification of nearby sensitive receptors and land uses.

On site monitoring will be carried out to characterise the existing air quality conditions of the area and dispersion modelling will be undertaken to assess the magnitude and extent of potential emissions of dust and air pollutants that could occur during construction, operation and closure of the Project.

The air quality assessment will provide a scientific and evidence-based analysis of the Project's potential effects on local air quality and practical mitigation strategies to avoid, minimise and manage effects on the local air quality and social amenity of the area, protect the health and wellbeing of residents and the local community and protect the local agricultural and horticultural industry.

Assessment Objectives

- Characterise the existing conditions of the area to establish the existing background levels of the air pollutants of interest, identify nearby sensitive receptors and land uses and develop a sound understanding of the climate and local meteorology and topography of the area.
- Assess all potential air quality impacts of the proposed mine across construction, operations and rehabilitation, focusing on both dust and air pollutants of interest and how they may disperse in the area.
- Develop mitigation measures to minimise dust and pollutant emissions and protect community health, local amenity, agricultural activities, and natural environments of the surrounding area.
- Support engagement with the local community to ensure that their concerns over air quality impacts are addressed in the assessment process and outcome reporting.
- Support informed decision-making by providing a robust and transparent assessment with practical mitigation strategies.

Preliminary Focus Areas

- **Characterising the existing environment -** Review of relevant documentation and previous investigations and onsite monitoring to appropriately characterise the existing conditions of the area.
- **Meteorological and dispersion modelling -** Evaluation of the dispersion of dust (PM10 and PM2.5), respirable crystalline silica, deposited dust, heavy metals, and other pollutants of interest from proposed mine activities using advanced dispersion modelling software (AERMOD) to determine air movements and to predict how pollutants may disperse in the area for several potential scenarios.
- **Impact assessment -** Assessment of the potential air quality impacts from construction, operation and closure of the Project, with consideration to the existing conditions of the area.
- **Mitigation measures-** Identification of appropriate mitigation measures in response to the modelling and impact assessment to avoid, minimise and manage potential air quality impacts.
- **Stakeholder engagement -** Support community meetings and transparent reporting, allowing the local community to provide feedback and understand the findings, including planned mitigation measures.

Specialist Consultant

AECOM Australia, the lead environmental consultant to GCM for the Project, will deliver the air quality assessment. They are an internationally recognised infrastructure consulting firm with multidisciplinary teams that provide independent, science-based assessment and modelling across air quality, hydrology, ecology, noise and related disciplines. The local Melbourne air quality team at AECOM has extensive experience leading air quality assessments for Environment Effects Statements for major infrastructure project including major mining projects across Victoria and Australia. More information can be found at https://aecom.com/en-au/

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