Ventilation Air Methane Abatement Project

SOUTH32
Illawarra Metallurgical Coal

PROJECT UPDATE ONE **JUNE 2024**

PROPOSED PROJECT

We are proposing a modification to our existing approvals (MP 08_150) to allow the development and operation of a ventilation air methane abatement demonstration plant.

Ventilation air methane (VAM) occurs at low concentrations which existing gas drainage technologies are unable to capture. Methane not captured by the gas drainage system is diluted by the underground ventilation system which exhausts to the atmosphere. Methane has 28 times the greenhouse gas potential of carbon dioxide, so VAM abatement is the biggest opportunity for us to reduce greenhouse gas emissions.

We have been investigating VAM abatement technologies that can be deployed at scale and the purpose of this project is to construct and test a VAM abatement demonstration plant using a Regenerative Thermal Oxidiser.

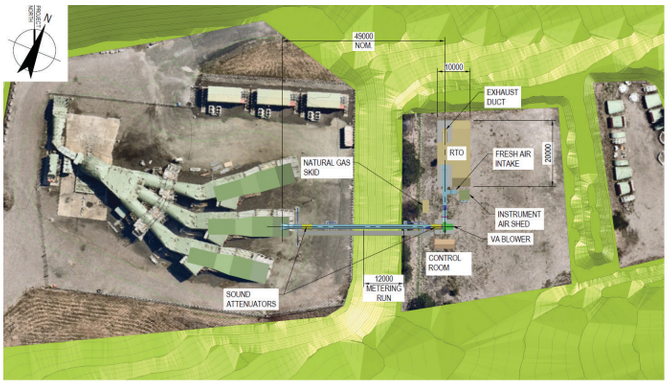
A Regenerative Thermal Oxidiser (RTO) is an oxidising device that converts methane into carbon dioxide and water. It works by continually reversing air flow through two beds of hot ceramics. The chemical reaction is like combustion but differs in that gases can be oxidised at very low concentrations without additional fuel.

It is an established, proven design used worldwide that can be purchased 'off the shelf'. Once operational, the demonstration plant is estimated to reduce GHG emissions by about 25,000 tonnes CO2-e per year.

WHO WE ARE AND WHAT WE DO

Illawarra Metallurgical Coal produces high-quality metallurgical coal – a key ingredient in the steelmaking process. Much of our coal goes to the Port Kembla steelworks, supporting local and regional manufacturing jobs.

In the Wollondilly region, we operate the Appin Mine which is currently in the Douglas Park and Menangle areas. We are a proud local company, employing more than 1,800 people and have been operating in the region for my than 85 years.



Indicative site layout at VS6 (concept only)



Indicative plant layout – southeast elevation (concept only)



Proposed site location adjacent to VS6

PROPOSED LOCATION

The proposed plant will be located on our land east of the Douglas Park township – positioned directly adjacent to the existing Appin Mine Ventilation Shaft 6 (VS6).

Four potential locations were assessed during the site selection process and VS6 was chosen as the preferred site because a large percentage of the VAM gas from our mining operations will flow to this site.

We also considered other factors in the selection process, including proximity and impact on the local community, cultural heritage, environment, and accessibility.

NEXT STEPS

Engineering and environmental assessments have commenced to inform the design, construction, and operation of the proposed facilities. These are being undertaken by technical experts and include:

- Geotechnical drilling
- Heritage surveys, including Aboriginal cultural heritage and European heritage
- Air quality studies
- Noise studies
- Visual amenity studies

These will be assessed against criteria set by the regulators and will form part of our Modification Application to be lodged with the NSW government mid-2024.

CONTACT US

If you would like to speak with us about our activities, call our free Community Call Line 1800 102 210 or email illawarracommunity@south32.net.

COMMUNITY CONSULTATION

We are committed to understanding and considering the needs of the community. We will keep you informed as information becomes available, and we expect the next update to be within the next few months.

If you would like to find out more about the proposed VAM Abatement Project, come and see us at a dedicated information session.

Location:	Douglas Park Community Centre
Date:	Thursday, 27 June 2024
Time:	5pm to 8pm (30-minute blocks)

To ensure your questions are addressed, the sessions will be run in 30-minute blocks. If you would like to attend, then please call our free Community Call Line on 1800 102 210 or email illawarracommunity@south32.net to register. If you are unable to attend, then we would be pleased to present the information to you in-person or virtually at a time convenient to you.

NSW GOVERNMENT MODIFICATION PROCESS

1. **Illawarra Metallurgical Coal consults with the Department on proposed modifications**
2. The Department issues assessment requirements
3. Illawarra Metallurgical Coal prepares and submits Modification Report to the Department
4. The Department places Modification Report on exhibition and seeks submissions
5. Illawarra Metallurgical Coal responds to submissions
6. The Department completes its assessment

The proposed project will follow a comprehensive approvals process through the NSW government.

We will be seeking a modification to our existing Bulli Seam Operations Project Approval (08-0150) as part of the process. Typical steps are outlined above.

Once the Modification Application is submitted to the Department of Planning, Housing, and Infrastructure (DPHI), it will go on public exhibition. We encourage all interested parties to review the submission and provide comment. Following the public exhibition period, IMC will have the opportunity to respond to public submissions before the department makes its assessment and determines the outcome.

