

Understanding the difference between underground and open cut mining

The Maxwell Underground Project is a proposal to develop an **underground coal mine**. Underground mining is very different from open-cut mining.

- **Open cut mining** involves removing layers of soil and rock to expose the coal seams, which usually involves blasting to help remove the waste material. This is currently the main coal mining method used in the Hunter Valley.
- **Underground mining** only involves a small surface disturbance area and only the coal seam is mined, thereby leading to significantly lower impacts than an open cut mine. Due to the limited surface activity there is a dramatic reduction in impacts from dust, lighting and noise, whilst retaining the many benefits from a coal mining operation, including jobs, community investment, and support for local suppliers.
- It is Malabar's strong view that our underground proposal can comfortably co-exist with other industries and land uses in the area.

	Maxwell Underground Project		Open cut mine	
Dust	Dust emissions from the Maxwell Project represent less than 10% of the emissions that were predicted for the previous mine proposed for the area.	✓	High dust emissions resulting from the overburden removal process including from blasting, loading and haulage plus the dump areas.	✗
Noise	Limited surface activities mean that Maxwell would be indistinguishable from background noise at receivers south of the Golden Highway. To the north of the mine, the level of activity within the Maxwell Infrastructure area will generally be lower than the previous mining operations.	✓	Noise from off-road haulage trucks, excavators, dozers and blasting.	✗
Visual Impacts	We have designed the mine entry for the Maxwell Project so that will not be visible from the Golden Highway or neighbours to the south. Also, the entry would be located 5km north of the Golden Highway.	✓	Significant disturbance of the local landform, including the creation of mining voids in the landscape, resulting in greater visual impacts.	✗
Water	Negligible impacts on users of Hunter River surface water or alluvial groundwater.	✓	Similar to an underground project.	✓
Land Use and Rehabilitation	Agricultural activities can continue on Malabar-owned land above the underground mining areas.	✓	Areas disturbed by excavation and emplacement of excess rock require rehabilitation (5+ years) prior to being available for non-mining land uses.	✗
Blasting	No operational blasting	✓	Regular operational blasting	✗