

INVESTIGATION INFORMATION RELEASE

Rehabilitation at the former Nymboida Clay Mine

Overview

During a proactive compliance monitoring program, NSW Resources Regulator inspectors detected unrehabilitated land at the former Nymboida Clay Mine south of Grafton, NSW. Subsequent regulatory action has resulted in the effective rehabilitation of the mine.

The mine

The Nymboida Clay Mine is about 32 kilometres south west of Grafton, operated under mining lease (ML) 613 (1973).

ML 613 is on Crown Land adjacent to the Nymboida National Park and popular recreational areas associated with the park and Nymboida River. A travelling stock reserve also traverses the mining lease.

Mining occurred sporadically at the lease to supply clay to the South Grafton Brickworks from 2000 until the brickworks closed in 2015.

Site inspection

The Regulator conducted a site inspection in May 2017 and identified the following compliance concerns:

- The quarry face was actively eroding (refer to figure 1).
- Many areas were unrehabilitated, with poor surface water and sediment controls, presenting further risks of sedimentation impacts (refer to figure 3).
- Sediment dams built outside of the lease boundary had the potential to discharge turbid water offsite toward an adjacent public road and nearby watercourse (refer to figure 5).

The Regulator also identified that mining had been carried out beyond the mine lease boundary.

Direction to rehabilitate

The Regulator issued a statutory notice in April 2018 to rehabilitate all mining-related disturbance pursuant to section 240 of the *Mining Act 1992*. The notice directed the lease holder to carry out rehabilitation in accordance with a rehabilitation strategy that had been developed in consultation with the North Coast Local Land Services, which manages the travelling stock reserve. Specifically, the notice directed the lease holder to:

- achieve a safe and stable landform
- achieve water quality in the existing dams that is suitable for stock
- revegetate disturbed areas with native vegetation species endorsed by North Coast Local Land Services.

Rehabilitation outcomes

The lease holder carried out rehabilitation works including:

- earthworks to reprofile the quarry face and removing material stockpiles
- building rock line water diversion drains and swales to control surface waterflow, minimising erosion and sediment transport to retained dams
- revegetation works including planting native tree and shrub tube stock and seeding areas prone to erosion with fast-growing grasses
- rehabilitation monitoring including water quality, erosion monitoring and vegetation monitoring to demonstrate achievement of rehabilitation outcomes in the agreed rehabilitation management plan.

The Regulator inspected the site in July 2019 with representatives of the North Coast Local Land Services. Observations confirmed that the lease holder had complied with the rehabilitation requirements of the notice.

The photographs below taken before and after execution of rehabilitation works depict the achievement of the required rehabilitation outcomes at ML 613.

Figure 1 Before – the unrehabilitated pit has steep, unstable faces and waste rock stockpiles remaining on the pit floor



Figure 3 Before – disturbed areas in the pit floor, including waste material stockpiles, were the source of potential offsite pollution during storm events due to sediment laden run-off



Figure 5 Before - poor dam water quality due to sediment laden run off from disturbed areas and waste material stockpiles



Figure 2 After – the pit is reprofiled to safe and stable slopes. Swales control run off and limit erosion



Figure 4 After - waste material stockpiles have been removed and areas seeded to minimise erosion. Rock check dams installed (in the background) slow down flows and capture coarse sediment before run-off collects in the dams



Figure 6 After - stabilisation of disturbed areas has resulted in improved water quality in the retained dams, providing a resource for the travelling stock reserve



Recommendations

The Regulator expects lease holders to comply with their obligations under the *Mining Act 1992*. This includes:

- complying with all mining lease conditions including annual environmental reporting and any requirements to operate in accordance with an approved mining operations plan (MOP)
- complying with all statutory obligations to protect the environment
- undertaking rehabilitation progressively in a timely manner
- maintaining rehabilitation records.

Further information

- [NSW Resources Regulator, Exploration and mining rehabilitation fact sheet](#)
- [NSW Resources Regulator, ESG3 mining operations plan \(MOP\) guidelines, September 2013](#)

About this information release

The information contained in this publication is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the NSW Resources Regulator or the user's independent adviser.

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