

COPPABELLA COAL MINE

HIGH-WIRE ROAD, EAST PIT DRAINAGE AREA

EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MONITORING PLAN

October 2015

1	IMPLEMENTATION PLAN.....	2
1.1	High Wire Road East Pit Drainage Area.....	3
2	INSPECTION AND MAINTENANCE PLAN	4
2.1	Major Maintenance Inspection.....	4
2.2	Minor Maintenance Inspection	4

1 Implementation Plan

The Hire-Wire Road, East Pit Drainage Area (Project) Erosion and Sediment Control (ESC) implementation plan is shown in Figure 1.

The ESC plan is based on a combination of erosion, sediment and drainage controls. The primary control to ensure the movement of sediment off lease is through erosion management in particular Permian rock capping waste dumps to encapsulate exposed dispersive material. Where Permian capping cannot be achieved due to operational dumping requirements the focus is through end of pipe sediment controls.

Implementation time line;

- East Pit Re-shaping – Completed
- East Pit Topsoil and Drainage – Completed
- East Pit Rip Seeding – Completed.

1.1 High Wire Road East Pit Drainage Area

The Project area is shown in Figure 1 below. The ESC's for this area consist of rehabilitating the area including, topsoil and rip seeding and the installation of drainage including contour, spine and sediment traps.

Erosion Controls

- Reshaped slopes have been pushed to 1:7. Where available Permian capping was utilised.
- Slopes have been topsoiled, Ripped and Seeded.

Drainage Controls

- Contour banks have been installed at pre-determined intervals at a 1% grade to direct water flow towards rock verges which enter into constructed spine Drains.
- 10m Permian rock lined verges capture water flow from the east or west and direct it into an 8m wide Spine Drains.

Sediment Controls

- Sediment fences have been installed every 50m of the down drains and have been rock mulched to anchor the base.
- Two Sediment Traps have been installed at the base of the Spine drains, with rock spillways. Rock rip rap has been installed in sections of the drains to further slow the migration of the water off site.
- Sediment traps will be monitored by installing an indication peg approximately $\frac{3}{4}$ along the length of the trap, where loading beyond this point will trigger corrective action.

2 Inspection and Maintenance Plan

The project will be inspected bi-annual, with a major inspection completed post wet season to highlight any required remediation works for that year. A minor inspection plan will then be completed pre wet season ensuring that any identified remediation requirements have been completed. Actions from inspections will enter the Peabody action tracking system.

2.1 Major Maintenance Inspection

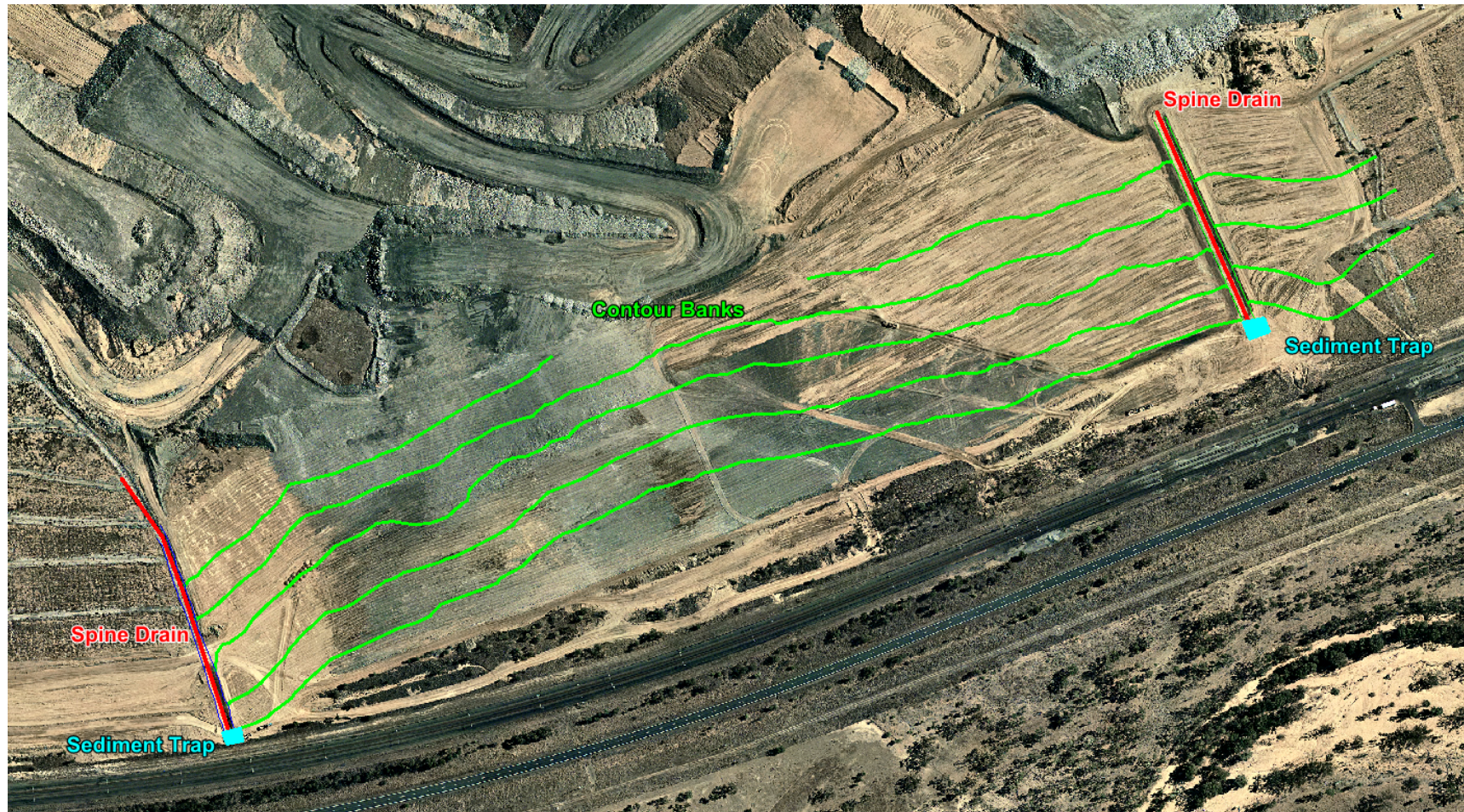
A major maintenance inspection will be conducted post wet season (May), to ensure the structural integrity has been maintained and adequate sediment capacity is present.

- Contour banks, rock verges and down drains inspected for tunnel and rill erosion, remediated as required.
- Sediment traps will be de-silted once loading has reached the indication peg (approximately $\frac{3}{4}$ along the length of the trap).
- Riprap remains in place and operational, to be replaced where necessary.

2.2 Minor Maintenance Inspection

A minor maintenance inspection will be completed pre wet season (November) or on completion of any actions from the Major inspection. The minor inspection will allow time for any minor remediation works to be completed prior to the wet season.

Figure 1 – High-Wire Road, East Pit Drainage Area ESCP



Note – Program of Works has subsequently been completed post aerial (September 2015) as seen in the plates below.

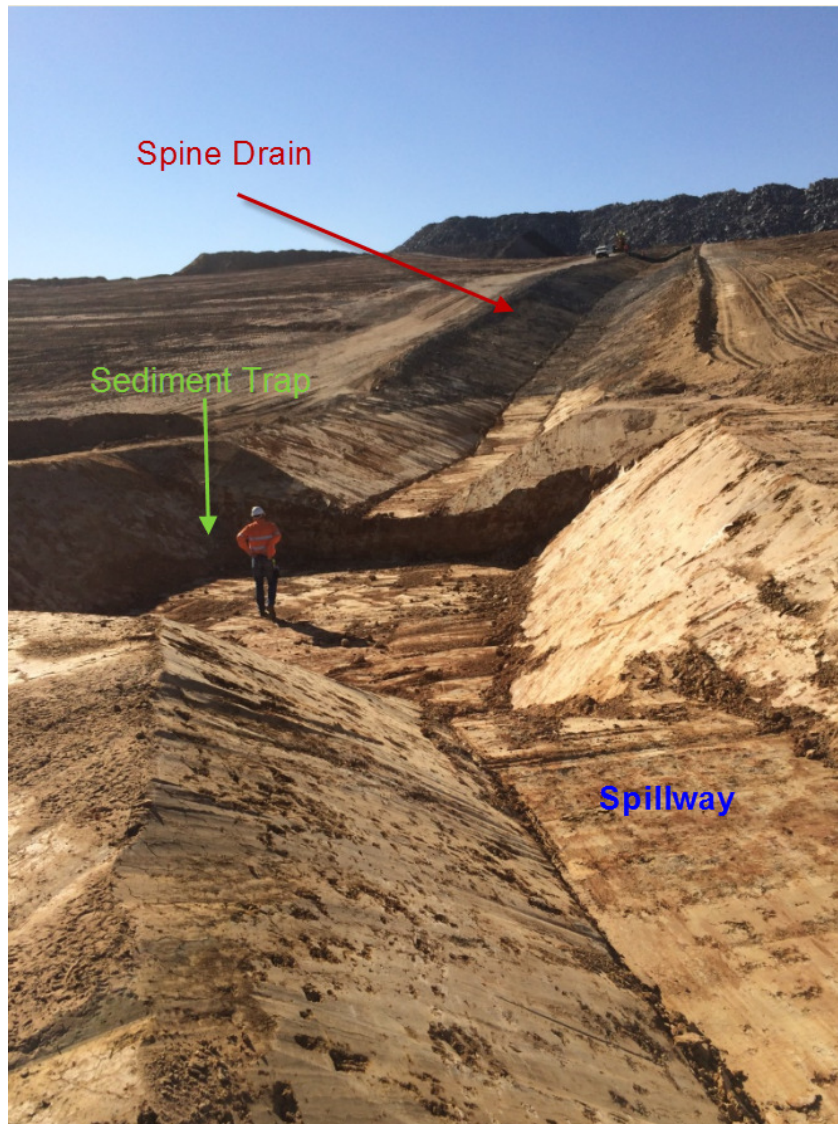


Plate 1 – East Pit Spine, Sump and Spillway pre Rock.

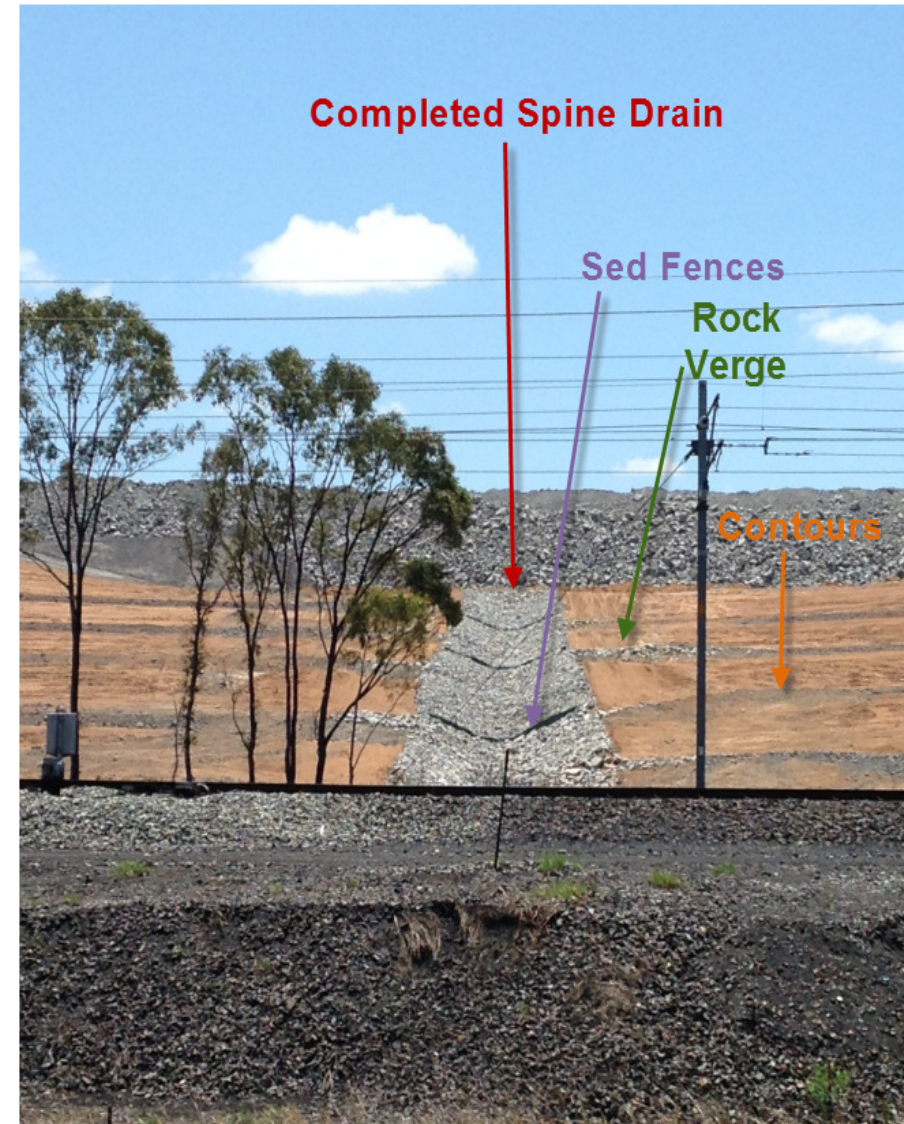


Plate 2 – Contors, Verges, Sed Fences and Spine Drain