



COPPABELLA COAL MINE
MAIN HAUL ROAD, THRITY MILE CREEK CROSSING
EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MONITORING PLAN
July 2014

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1 Implementation Plan

The Main Haul Road Thirty Mile Creek Crossing (Project) Erosion and Sediment Control (ESC) implementation plan has been divided into 5 areas (Figure 1). The ESP plan is based primarily on sediment and drainage controls. Due to the active mining area erosion controls cannot be installed in this catchment.

1.1 Area 1

Area 1, is located to the North of the haul road and creek crossing and consist of upgrading an existing drainage line with further controls.

Sediment Controls

- The reinstallation of a drain to the north of the project area and the installation of bund will be constructed, with Rip Rap installed to slow the water movement prior to entering the existing drainage channel.
- A small intersecting channel/sump will be cut on the existing haul road area and have Rip Rap installed prior to entering the revised drainage channel.
- A sediment trap will be installed at the south of Area 1, approximately 20m x 4m x 2m deep. Further Rip Rap will be installed downstream of the sediment trap prior to water entering Thirty Mile Creek.
- 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.

Drainage Controls

- A excavated drainage channel will be reinstated with rock check drains positioned along the length.

1.2 Area 2

Area 2, is located to the North East of the creek crossing. An existing sediment trap exists however needs works to be reinstated as operational.

Sediment Controls

- Sediment Trap A will be excavated to a depth of approximately 206 RL.
- Rip Rap will be installed to a height of approximately 206RL in the South East corner of Sediment Trap B, Prior to entering an existing drainage channel and in turn Thirty Mile Creek
- 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.

Drainage Controls

- Reinstallation of a bund wall will be completed directing water to the far ends of the sediment trap.

1.3 Area 3

Area 3, is located to the South West of the Haul road and consists of installing a sediment trap.

Sediment Controls

- A sediment trap will be installed approximately 20m x 4m x 2m deep. Further Rip Rap will be installed downstream of the sediment trap prior to water entering Thirty Mile Creek.
- 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.

Drainage Controls

- See area 5

1.4 Area 4

Area 4 is located to the South of the Thirty Mile Creek crossing.

Sediment Controls

- A drain will be installed with the cut material forming the outer bank directing water flow north into Thirty Mile Creek
- Rip Rap to 209RL will be installed at the entrance to Thirty Mile creek forming a sediment trap in the drainage channel.
- 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.

1.5 Area 5

Area 5 consist of a raise of the Haul Road as it crosses Thirty Mile Creek.

Drainage Controls

- Raising the haul road to 211 RL directs water movement from this area to the 4 previous sediment control areas via bunding and minor drainage channels in the footprint of the road.
- Implementation and training of a SWP for grading haul roads in ESCP area will be implemented to ensure that dispersive material is bulk hauled from the area maintaining the roads drainage.

2 Inspection and Maintenance Plan

The project will be inspected bi-annual, with a Major inspection completed post wet season to highlight the required remediation works for the year, while a minor inspection plan will be completed pre wet season ensuring that the outline remediation has been completed. Actions from inspections will enter the Peabody action tracking system.

2.1 Major Maintenance Inspection

A minor maintenance inspection will be conducted post wet season (May), to ensure the structure has maintained integrity and appropriate sediment capacity.

- Area 1:
 - o Northern Silt trap silt build up will be assessed and desilted if required.
 - o Area 1 Sediment trap will be desilted once loading has reached the indication peg (approximately $\frac{3}{4}$ along the length of the trap)
 - o Check Dams repaired/ desilted where required.
 - o Rip Rap remains in place and operation
- Area 2:
 - o Area 2 Sediment Trap Sediment trap will be desilted once loading has reached the indication peg (approximately $\frac{3}{4}$ along the length of the trap)
 - o Rip Rap remains in place and operation
- Area 3:
 - o Area 3 Sediment trap will be desilted once loading has reached the indication peg (approximately $\frac{3}{4}$ along the length of the trap)
 - o Rip Rap remains in place and operation
- Area 4:
 - o Sediment trap will be desilted once loading has reached the indication peg (approximately $\frac{3}{4}$ along the length of the trap)
 - o Rip Rap remains in place and operation
 - o Damaged bunds to be repaired
- Area 5:
 - o Bunding to be checked and repaired
 - o Drainage channels being maintained
 - o Review of Grading Haul Roads SWP for effectiveness.

2.2 Minor Maintenance Inspection

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

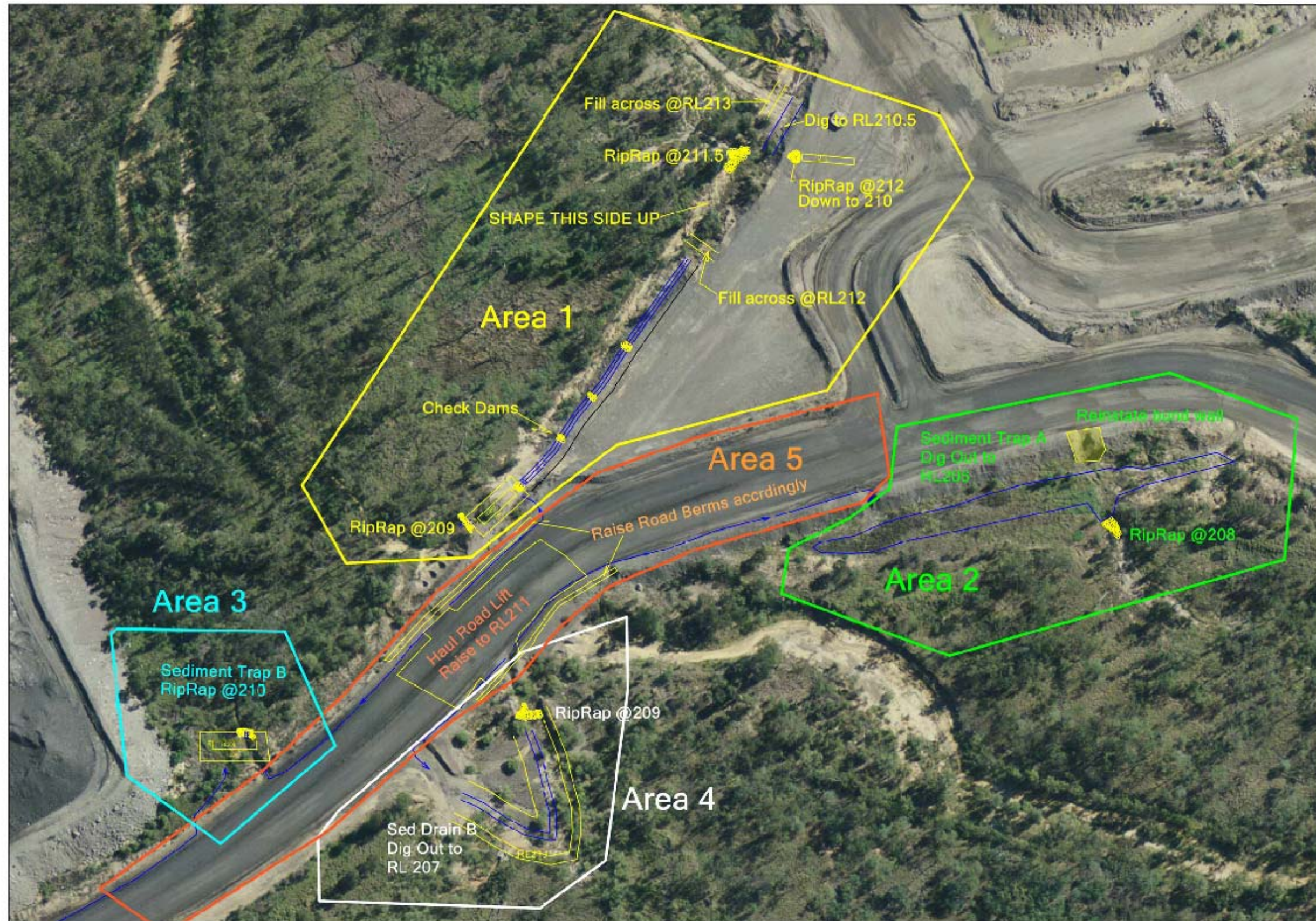


Figure 1 – Main Haul Road, Thirty Mile Creek ESCP