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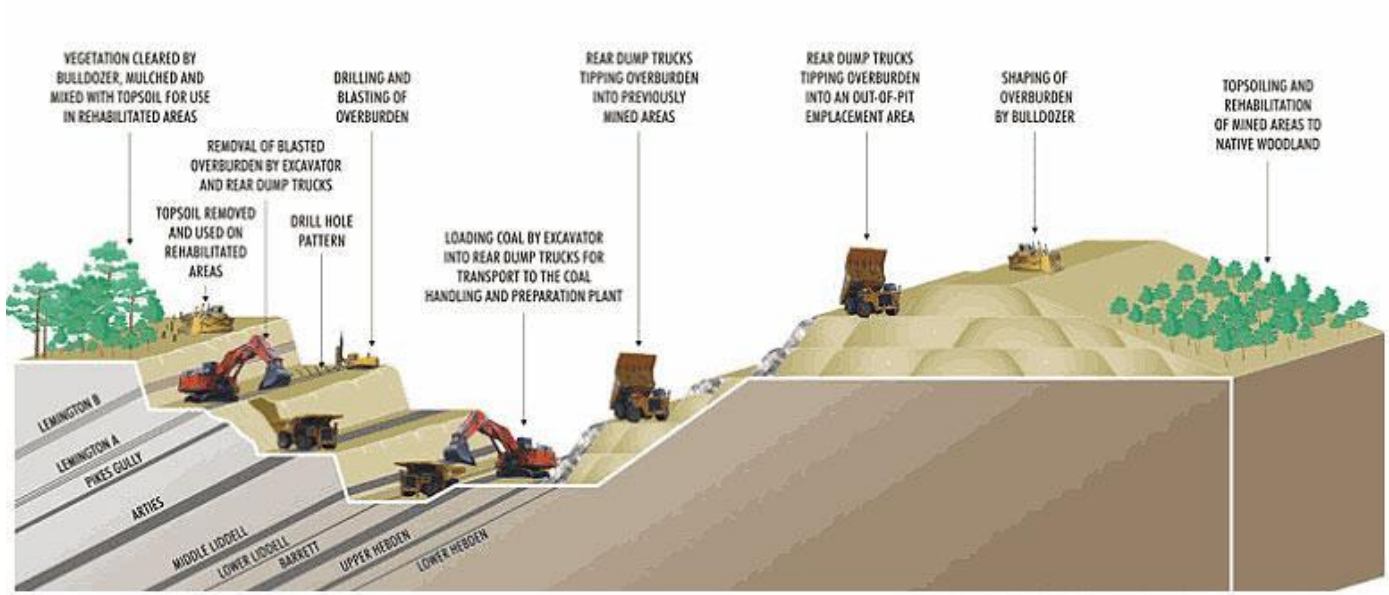
FINAL AND TEMPORARY REHABILITATION PRINCIPLES

BLOOMFIELD GROUP REPORT 2014 – Rix's Creek

Principle	Reporting
Principle 1 – Include rehabilitation planning in mine planning	This has been undertaken in line with current MOP (commenced 15/3/2013), however, lower production rates than those in the MOP have affected the rehabilitation process in previous years. During 2014 Rix's Creek gained development consent to increase production levels up to a maximum of 16.1 million bank cubic metres of material moved per annum. Actual material moved for the year was 15.7 million bank cubic metres. In previous years production levels were below the MOP schedule. Even with lower rates than those in the MOP listed in previous years the cumulative MOP target 320.2 ha rehabilitated to date has been met and exceeded with 374.4 ha of cumulative rehabilitation completed at Rix's Creek to date. Internal equipment / operators as well as contracting companies are dedicated to rehabilitation of final shaped land. Rehabilitation has been focussed on area's closest to the Singleton community and those in view for visual amenity purposes and this will continue in 2015 (See Figure 1). During 2012 to 2014 rehabilitation has continued to progress in area's visible to the public with priority on the West Pit Dump. This eastern face seen from Maison Dieu is a priority area of rehabilitation with progress limited by coal reserves at the 'toe' of in-pit overburden dump batters ("free-fall" waste rock which has come to rest at the base of the pit near the coal reserve to be mined, once the coal is mined this 'toe' will progress westward, essentially bringing the top of the dump and rehabilitation with it). Rix's Creek is currently planning the final rehabilitated landform through Rix's Creek EIS for 'Rix's Creek Continuation Project' in which a final depression is planned to be left which will be entirely rehabilitated as well as the current natural dump profiles. Rixs Creek utilizes GPS control on all Bulldozers. The final landform design is maintained in all mine overburden dump bulldozers so the final landform is developed as an integral part of the production cycle.
Planning for rehabilitation should be integrated into the mine planning process and should include allocating adequate and dedicated resources to achieve the planned rehabilitation outcomes.	

Principle 2 – Undertake progressive rehabilitation *Companies should undertake rehabilitation progressively, with the objective of ensuring that rehabilitation is as close as possible to active mining.*	During 2014 rehabilitation was carried out to any area's shaped to final landform design – this ensured rehabilitation is as close as possible to the active mining areas. The integration of final GPS landform design into each overburden dump bulldozer assists this process. This will continue during 2015. A bench-style sequence of stripping/mining/dumping/shaping/rehabilitation maintains this. 

	The below photo shows the progressive rehab following the open cut void and dumps 

Principle 3 – Minimise time that disturbed areas are left without vegetation	Employment of a full-time rehabilitation contractor ensures rehabilitation is commenced within 12 months of land becoming available. In fact rehabilitation is usually commenced well within 12 months of land becoming available (generally less than 3 months unless weather is unfavourable).
Companies should actively seek to minimise the time that land is left without cover during mining. This should include: ▪ *Taking steps to ensure that rehabilitation is commenced within 12 months of land becoming available for rehabilitation* ▪ *Utilising methods of temporary rehabilitation[1], such as aerial seeding of over burden and other disturbed areas where permanent rehabilitation has not commenced.*	 **10 ha area prepared in May 2014 and rehabilitated in June 2014.** Rix's Creek has also undertaken the following temporary rehabilitation: • 100 ha of aerial seeding took place on overburden batters (visual and dust minimisation) during 2012. These area's can be easily seen by motorists passing on the New England Highway. • Hydromulching of steep batters such as the ROM Pad noise bund. • Hand seeding of area's disturbed and inaccessible by conventional means along the New England Highway and infrastructure areas (temporary and permanent). Temporary / permanent habitat: • Installation of stag tree's / nest boxes on new rehab to provide wildlife habitat prior to tree's / tree hollows becoming available. This also includes rock / wood piles for ground-dwelling creatures. These techniques will be constantly reviewed when further temporary rehabilitation is required.

[1] Temporary rehabilitation describes reshaping, revegetation and other rehabilitation techniques that are used for purposes other than final rehabilitation. This includes such initiatives as seeding overburden emplacement areas to reduce erosion, which are only temporary.

Principle 4 – Prioritise areas of rehabilitation and temporary cover to reduce impacts *Companies should prioritise rehabilitation and temporary cover in those areas where leaving land exposed will have the most impact. The following areas should be considered to have priority:* ▪ *Areas that have the greatest impact on visual amenity, such as areas that face townships, residences, or the highway* ▪ *Areas that have the potential to generate dust leaving the site* ▪ *Areas that are important for biodiversity, such as rehabilitation adjoining or providing connectivity to remnant vegetation.*	Within the limits of the mine plan containing access to multiple work bench's (so machine work areas can be changed to allow for a variety of metrological conditions), the principle of completion of final landform as part of the production process, allows topsoiling and planting to maintain its priority within the production cycle. Rehabilitation and temporary cover is given the highest priority where the area is seen by the public everyday. This includes tree screens/ bunds, strategic planting of overstorey species in areas to fit in with the existing landscape and habitat corridors (remnant or rehabilitation), overburden batters facing New England Highway/ main roads, overburden dumps that are designed to tie in with unmined surrounding landscapes as well as minimise offsite impacts such as noise/dust/water/etc. Rehabilitation has been designed from nearest residences / townships and to move away aligned to production rates as discussed in Principle 1 – area's of priority are those closest to Singleton Heights / Retreat / Maison Dieu Industrial Estate and to move onto other area's as they progress away from the population. The priority for 2014 was the creation of visual bunds alongside the New England Highway improving visual amenity for passing motorists.

	 **Area shaped in February-March 2014 and rehabilitated in March 2014. Crest of bund and area downslope (left) was tree seeded while the downslope (right) was seeded with pasture species.**

West Pit – New England Highway visual bunds – 4 months after seeding (July 2014)

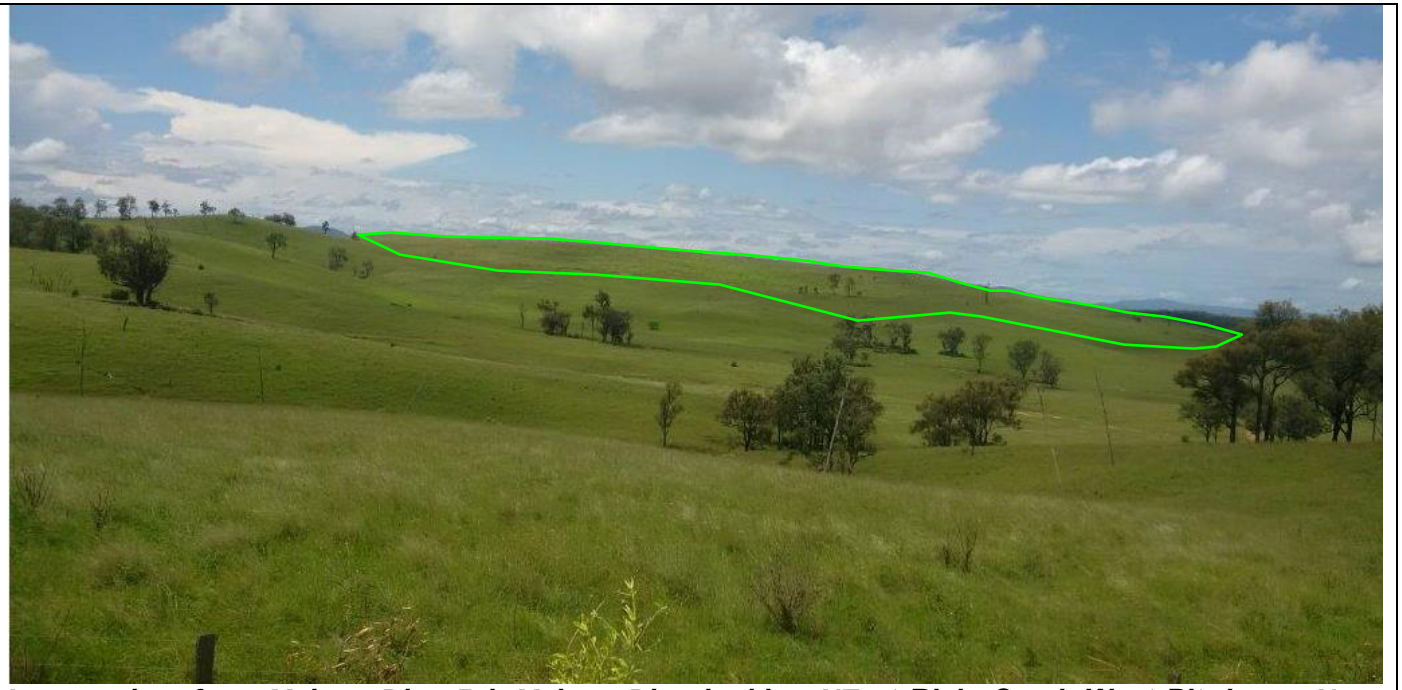


Image taken from Maison Dieu Rd, Maison Dieu looking NE at Rix's Creek West Pit dump. Note how it conforms naturally to surrounding unmined landscape.

Principle 5 – Meet target for rehabilitation progress identified in the Mining Operations Plan *Each company should meet the annual target for rehabilitation quantity (area) set in the Mining Operations Plans for each of its mines.*	Rix's Creek AEMR shows 28.5 ha was rehabilitated in 2014 (see Figure 2) giving Rix's Creek a cumulative area rehabilitated of 374.4 ha since 1990. This cumulative area is 54.2 ha ahead of the MOP cumulative total of 320.2 ha in 2014. This is a great outcome to date as Rix's Creek MOP is aligned to maximum production rates of 15 million BCM (Bank Cubic Metres) of material movement per year (now 16.1 million BCM), with Rix's Creek generally well below this level in all its previous years of operation.

Principle 6 – Set quality targets for rehabilitation in the Mining Operations Plan and implement a monitoring program to measure performance	Rehabilitation areas are reviewed frequently after sowing for any maintenance required (regarding land stability / nutrients / weed and pest presence) with Landscape Function Analysis (LFA) rehabilitation monitoring carried out on a biannual basis. This includes commencing more monitoring sites as new rehabilitation sites are available. The species utilised and monitored from establishment through to total (sustainable) rehabilitation is aligned to Rix's Creek MOP. Aside to this Rix's Creek conducts trials of its pasture species with a current trial comparing the use of ameliorants on pasture rehabilitation and also if the rehabilitation pasture can sustain grazing. The trial has ran for 18 months to date out of a 5 year trial period.
Each company should include quality targets for the various types of rehabilitation in the Mining Operations Plan for each of its mines. A monitoring program to measure the performance of rehabilitation areas against the quality targets should be implemented at each of its mines.	

Figure 1 – 1990-2013 Rehabilitation progress

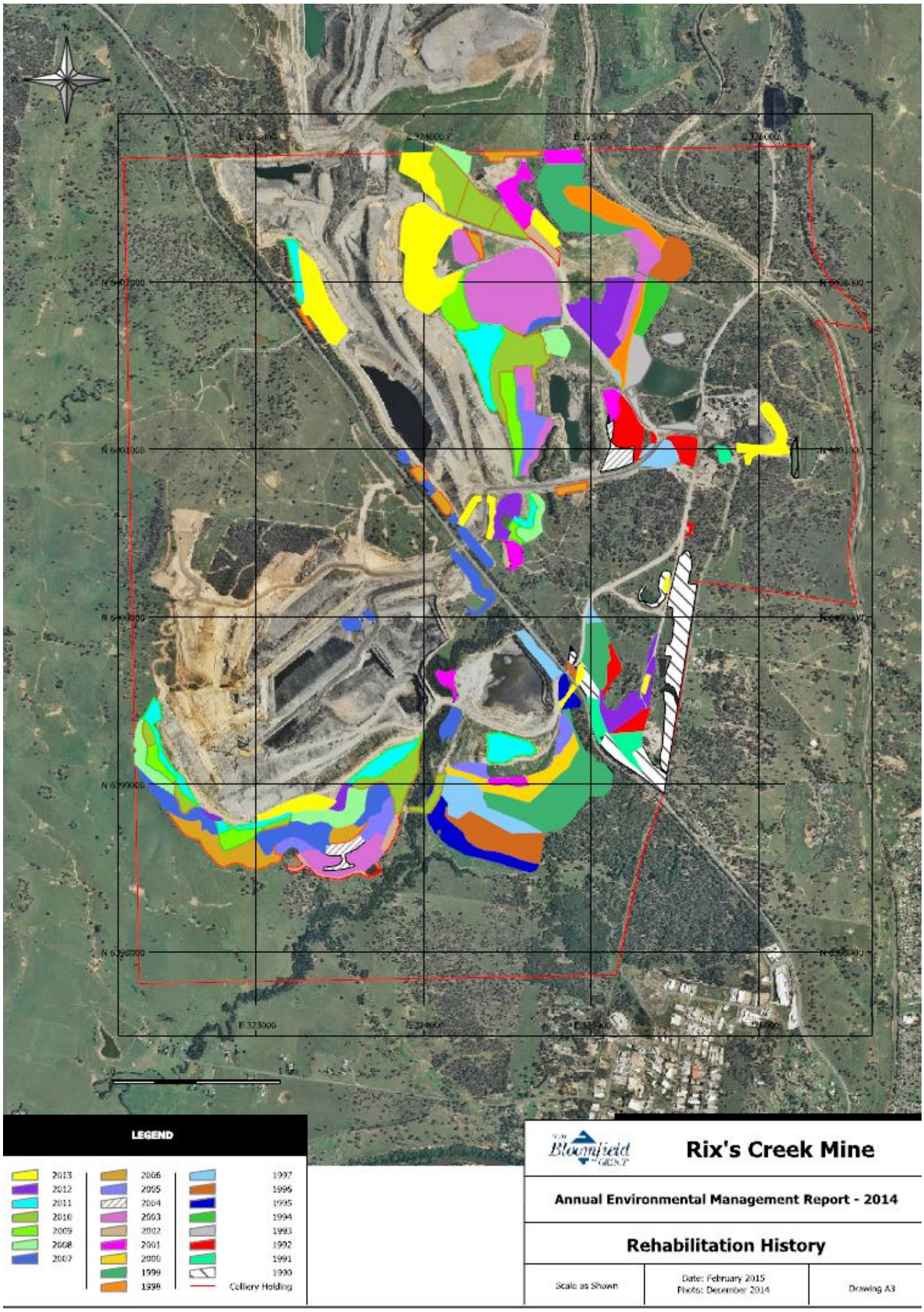


Figure 2 – 2014 Rehabilitated areas