SECTION 5

E42 MODIFICATION
ENVIRONMENTAL ASSESSMENT

REHABILITATION AND LANDSCAPE MANAGEMENT STRATEGY

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5 REHABILITATION AND LANDSCAPE MANAGEMENT STRATEGY

This section outlines the modified CGM Rehabilitation and Landscape Management Strategy. The final landform and use is justified and a detailed description of how the site would be progressively rehabilitated and integrated with the surrounding landscape is presented. Figures 2-2 to 2.4 show the progressive rehabilitation concepts for the modified CGM. Post-mining rehabilitation concepts are shown on Figure 5-1.

The approved CGM rehabilitation programme (including the overall philosophy, principles and objectives, final landform and revegetation concepts) was developed and documented in the EIS. Subsequent to the EIS, these rehabilitation concepts have been further developed via various management plans and the MOP in consultation with relevant stakeholders.

Overall, the approved CGM rehabilitation programme would remain unchanged as a result of the E42 Modification.

The MREMP (Section 3.3.1) *facilitates a flexible response to changing circumstances* and is designed to accommodate the development and refinement of final rehabilitation plans (DPI-MR, 2006). The Rehabilitation and Landscape Management Strategy presented is therefore provisional to allow for the consideration of investigations, studies and trials (Section 5.5) as well as consultation with regulatory agencies.

The results of rehabilitation investigations would continue to be documented in the AEMR and final rehabilitation proposals would be drafted in the MOP for approval prior to implementation (Section 3.3.1).

5.1 REHABILITATION PRINCIPLES AND OBJECTIVES

The approved CGM rehabilitation philosophy is to operate as a non-intrusive landuser and to create stable rehabilitated landforms that increase the areas of endemic vegetation in the mine area and the status of land-lake habitats.

This philosophy would remain unchanged for the additional areas of rehabilitation required as a result of the E42 Modification and the modified CGM would retain this philosophy.

The above philosophy has led to the rehabilitation principles and objectives described below.

5.1.1 Rehabilitation Principles

The approved CGM rehabilitation programme includes the following general principles (North Limited, 1998):

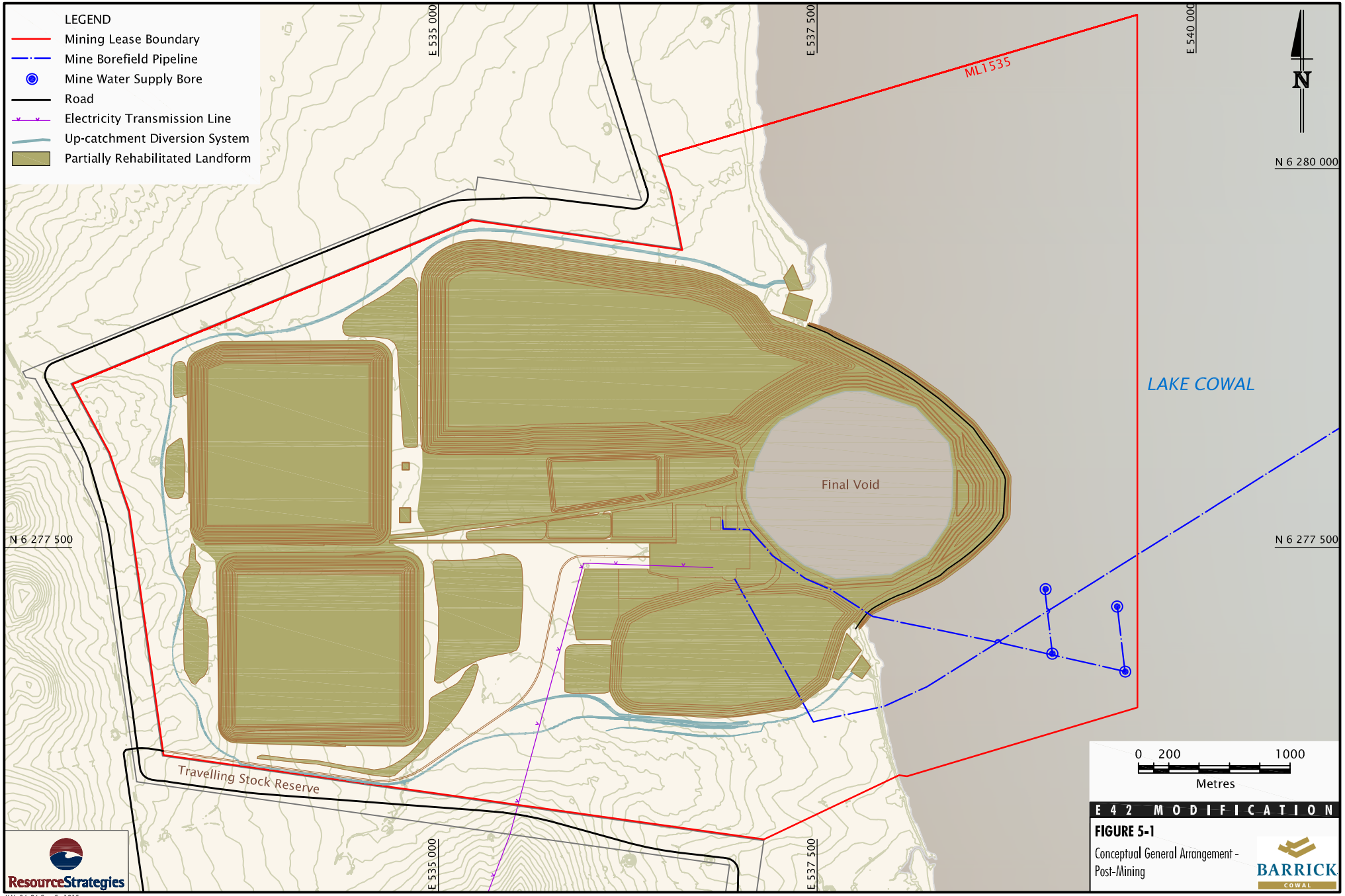
- The rehabilitation of CGM landforms is to be progressive and conducted in accordance with approved, verified plans.
- The stability of newly prepared (i.e. topsoiled) landforms prior to the establishment of long-term vegetation is to be protected via the construction of moisture-retaining graded drains, water-holding structures (e.g. surface depressions) and, where appropriate, the use of authorised hybrid cover crops to provide initial erosion protection.
- Endemic groundcover, understorey, and tree seed and seedlings would be cultivated and utilised.
- Flexible rehabilitation concepts to allow for adjustments, based on investigations, to improve the programme.
- The annual rehabilitation programme and budget is to be prepared by a site team incorporating CGM senior management representatives.

These rehabilitation principles would remain unchanged for the additional areas of rehabilitation required as a result of the E42 Modification and the modified CGM would retain these principles.

5.1.2 Rehabilitation Objectives

The overall objectives of the approved CGM rehabilitation programme are described as follows (North Limited, 1998):

- Ensuring that the water quality of Lake Cowal is not detrimentally affected by the new landforms.
- Revegetating the new landforms with selected species of native and/or endemic vegetation that are both suitable to the physiographic and hydrological features of each landform, and which expand on the areas of remnant endemic vegetation that currently exist in the immediate region.



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- The placement (wherever possible) of subsoils and topsoils on final landforms to enable the progressive establishment of vegetation. This requires that the placed covers are of sufficient depth and properties to absorb and store rainfall.
- The expansion of habitat opportunities for wetland and terrestrial fauna species. This includes the design and implementation of rehabilitation works at the New Lake Foreshore in a manner consistent with the NSW State Wetlands Management Policy (DLWC, 1996).
- The design of landforms and selection of revegetation species in accordance with accepted principles of long-term sustainability (e.g. genotypic variation, vegetation succession, water/drought tolerances).
- Final landforms would be constructed to be stable in the long-term and integrate with the surrounding landscape.
- Land management practices (including the exclusion of grazing and primary production until sufficiently mature communities are established), with decisions on managed grazing to be made after this time.

These rehabilitation objectives would remain unchanged for the additional areas of rehabilitation required as a result of the E42 Modification and the modified CGM would retain these principles.

Specific mine landform rehabilitation objectives are presented in the EIS and are described below. These objectives would remain unchanged for the modified CGM landforms.

Tailings Storage Facilities

Tailings storage facility batters would be revegetated during operations so that they provide minimal habitat value for bird life (i.e. pasture cover).

Final Void

Specific rehabilitation objectives for the final void are to:

- leave the void surrounds safe (for humans and stray stock); and
- create habitat opportunities for waterbirds at the approximate level at which void water would reach equilibrium, where feasible.

Waste Emplacements

Specific rehabilitation objectives for the waste emplacements are to:

- stabilise batters during operations with a combination of moisture retaining and water-holding water management works and revegetation with native and/or endemic species suited to slope position (e.g. species suited to berms and batter slopes); and
- provide for long-term stable structures that are able to convey water from top surfaces and berms to the toe of batter slopes during rainfall and runoff events that exceed the moisture retention and water-holding capacities.

5.2 REHABILITATION STATUS

Approximately 118 ha of land within ML 1535 is under rehabilitation (i.e. either shaped and covered or rehabilitated and under maintenance) (Barrick, 2008a). Components currently under rehabilitation include:

- northern tailings storage facility (starter embankment) (shaped and covered);
- perimeter waste emplacement (southern section shaped and covered);
- temporary isolation bund (shaped and covered);
- lake protection bund (shaped and covered);
- UCDS (rehabilitated and under maintenance);
- components of the ICDS (rehabilitated and under maintenance);
- water supply pipeline (rehabilitated and under maintenance); and
- contained water storage D9 (shaped and covered).

Amenity plantings have also commenced around the ML 1535 boundary.

Overall, the success of revegetation works undertaken to date has been limited due to on-going drought conditions that have affected the survival and establishment of planted species.

5.3 REVEGETATION SPECIES

Lists of proposed revegetation plant species have been developed for the major CGM landforms and vegetation screens surrounding ML 1535. Revegetation objectives and trials relevant to the major modified CGM landform components are described below.

5.3.1 New Lake Foreshore

Revegetation species for the New Lake Foreshore would be selected in consideration of the lake's hydrological regime (wetting and drying cycles), species performance during revegetation trials and suitability to substrate conditions. Subject to these parameters, species may be selected from the following vegetative suites:

- fringing lake vegetation on the foreshore batters (i.e. Eucalypt dominated woodland including River Red Gum, River Cooba, Wilga, Kurrajong, Deane's Wattle and Grey Box); and
- freshwater habitats (i.e. Foxtail, Rush, Canegrass and Lignum).

Endemic revegetation species lists have been identified for the New Lake Foreshore (as documented in the EIS and relevant management plans) and would be refined through continual monitoring and trials in consultation with regulatory authorities (Section 5.5).

Revegetation trials for the New Lake Foreshore proposed in the EIS include:

- evaluation of the relative revegetation establishment rates of native plant species; and
- assessment of various establishment procedures and suitability of propagation methods.

Revegetation trials that have been undertaken on the New Lake Foreshore have included native grass establishment, hand broadcasting of Red River Gum (*Eucalyptus camaldulensis*) (brushing method) and planting of wetland species such as Lignum and Rushes from tubestock and cuttings (Johnston, 2005; Barrick, 2008a).

Further to the above, consideration would also be given to trialling the establishment of regionally endangered species such as the Austral Pillwort (*Pilularia novae-hollandiae*).

Future revegetation trials would continue for the modified CGM and be proposed in the MOP and results reported in the AEMR (Section 3.3.1). Monitoring would be undertaken to assess the success of rehabilitation and enhancement measures in improving wetland habitats for wildlife and to determine the need for maintenance and/or contingency measures (Section 5.6.1).

5.3.2 Waste Emplacements

The aim of revegetation activities on the waste emplacements is to utilise a combination of endemic plant species and pasture species to rapidly stabilise landforms in the initial period following construction, consistent with the objectives described in Section 5.1. As described in the EIS, the objective of revegetation activities on the waste emplacements is to re-establish endemic woodland, shrub and grassland communities similar to those remnants in the regional landscape, whilst recognising the relationship of each vegetation community with topography and elevation (North Limited, 1998). This objective would remain unchanged as a result of the E42 Modification.

The proposed revegetation plan for the waste emplacements would endeavour to re-establish native endemic woodland and understorey and thereby recognise the alliances that naturally occur across the continuum of slope and elevation.

Revegetation species identified in the EIS include the following (North Limited, 1998):

- Watercourse – Riverine Floodplain areas (e.g. River Red Gum, Yellow Box, Windmill Grass);
- Flat to Gently Undulating Slopes (e.g. Poplar Box, Yellow Box, White Cypress Pine, Wilga);
- Low Ridges and Hills (e.g. Windmill Grass, Mugga Ironbark, Black Cypress Pine); and
- Hill Tops and Elevated Land (e.g. Windmill Grass, Yellow Box, Mugga Ironbark).

The revegetation species lists developed for the approved CGM waste emplacements may be refined in consultation with regulatory authorities following rehabilitation investigations and trials for the modified CGM. Revegetation species would be selected following consideration of their suitability and performance relative to both stability and ecosystem reconstruction.

This may include incorporation of trial findings such as the use of revegetation species suited to hill slope positions on waste emplacement batters, with different revegetation species where berms occur.

5.3.3 Tailings Storage Facilities

As described in the EIS, the tailings storage facility embankments would be revegetated after construction to reduce potential visual impact and provide embankment surface stability. Revegetation works would also utilise a combination of native and/or endemic plant species and pasture species to rapidly stabilise landforms in the initial period following construction.

Post-operations, the tailings storage facilities would be revegetated with plant species that may include the following:

- In the central, occasionally wet area, species such as River Red Gum (*Eucalyptus camaldulensis*) and understorey species such as Rush (*Eleocharis* sp.).
- On the remainder of the covered storage surface, species that occur on low ridges to elevations of around RL 225 m AHD).

The provisional plant species lists developed for the approved CGM tailings storage facilities may be refined in consultation with regulatory authorities following rehabilitation investigations and trials. Trial findings which apply to waste emplacement batters (described above) would also be applied to the tailings storage facility embankments.

5.4 DESCRIPTION AND JUSTIFICATION OF FINAL LANDFORM AND USE

The final landform design concepts presented in the EIS stated that landforms would be (North Limited, 1998):

- designed wherever possible to be compatible with regional landscape features;
- progressively constructed as a ROM operation wherever possible and left with untrimmed surface roughness to lower runoff coefficients and promote water absorption and storage; and
- revegetated with endemic vegetation communities (Section 5.3), selected specifically for their suitability to the created elevation, substrate conditions and the overriding objective of re-establishing a greater extent of endemic vegetation within ML 1535.

The above final landform design concepts would remain unchanged for the E42 Modification and the modified CGM. They would be applied to the changed landforms which would result from the E42 Modification which would include higher and larger (in area) southern and northern waste emplacements and a lower (in places) perimeter waste emplacement (Section 2.4.3).

These concepts may be revised and refined if necessary throughout the mine life via the MREMP, utilising the outcomes of on-going consultation with relevant regulatory authorities, stakeholders and the results of rehabilitation investigations, studies and trials. Final landform construction would be consistent with the EIS objectives outlined in Section 5.1.

5.4.1 New Lake Foreshore

As described in the EIS, rehabilitation of the New Lake Foreshore would be an iterative process, comprised of the revegetation species described in Section 5.3.1 and the rehabilitation works described below.

Consistent with the EIS, the temporary isolation bund would remain in place until the lake protection bund and the first batter of the perimeter waste emplacement (i.e. the New Lake Foreshore) is stabilised. The temporary isolation bund would then be reworked (and breached) by light machinery (i.e. small excavator and bob cat) when the level of the lake was lower than the bund, to create a series of low mounds. The mounds would comprise a mixture of the inert bund rock and lakebed sediments.

5.4.2 Waste Emplacements

The final rehabilitation concepts for the waste emplacements would comprise the revegetation species described in Section 5.3.2 and the construction concepts described in Section 2.4.3. Progressive rehabilitation concepts for the modified CGM (including the waste emplacements) are shown on Figures 2-2, 2-3 and 2-4.

As described in the EIS, the surface rehabilitation zone on the waste emplacements would comprise:

- approximately 1.5 m to 2 m thick layer of select ROM oxide waste;
- approximately 0.5 m of gypsum-treated non-saline or low salinity subsoil; and
- approximately 0.25 m to 0.30 m of topsoil.

As discussed in Section 5.5, trials are currently being undertaken to determine the suitability of rehabilitation growth media types and depths. Materials and depths assessed as being most suitable (i.e. those which could sustain long-term vegetation growth and are stable) would be used in the final landform rehabilitation.

Batter drainage would be affected by the use of wide reverse-graded berms every 5 m in vertical height. The berms would diffusely grade inwards and the surfaces be kept as rough as possible to maximise absorption. This, together with the considerable depth of cover over primary rock, would have the effect of absorbing and storing rainfall in all but extreme events (in which case, runoff would longitudinally fall along the berms to be held for absorption by a series of depressions constructed every 50 m to 100 m in the reverse-grading berms). The drainage design for the inner batters of the waste emplacements would also include the construction of drop structures, bench drains and a toe inner drain designed to direct any surface runoff towards the contained water storages and open pit.

Drainage on the top surfaces of the emplacements would be similarly managed via a series of small shallow basins (depressions), deep cover of high absorption capacity, and woodland vegetation. The use of depressions would be aimed at maximising internal drainage without creating permanent ponding during normal and heavy rainfall events. As discussed in Section 5.5, studies into landform design and water management would be undertaken for the modified CGM and may result in refinement of the design concepts described above for the modified CGM.

Changes to the approved CGM landforms would include elevation and/or area changes to the northern, southern and perimeter waste emplacements (Section 2.4.3). These landforms would be constructed to elevations of approximately RL 275 m AHD (northern waste emplacement), RL 255 m AHD (southern waste emplacement) and RL 223 m AHD (perimeter waste emplacement, with reduced height in some places). As described in Section 3.8.2, alternatives to the construction of the waste emplacements (i.e. backfilling of the final void) were not considered feasible.

The modified CGM waste emplacements have been designed to minimise the increase of the ICDS catchment area. This results in increased waste emplacement final heights, although their heights would remain below the vegetated ridgeline to the west and other regional topographic features such as Billys Lookout and Wamboyne Mountain (Appendix I).

As described in Section 5.3.2, the waste emplacements would be progressively revegetated with a pasture cover crop and endemic woodland shrubs and/or trees that would assist in integration of the modified CGM landforms with the surrounding landscape.

Upon consideration of the above, the final landform is considered justified.

5.4.3 Tailings Storage Facilities

The final rehabilitation concepts for the tailings storage facilities would comprise the revegetation species described in Section 5.3.3 and construction concepts described in Section 2.6.2. Progressive rehabilitation concepts for the modified CGM (including the tailings storage facilities) are shown on Figures 2-2, 2-3 and 2-4.

Surface rehabilitation and drainage concepts for the tailings storage facilities were developed as part of the EIS and follow similar principles to the waste emplacement concepts. The EIS rehabilitation concepts comprise of (North Limited, 1998):

- A rough, deep cover system to allow infiltration to be absorbed and stored by the covers.
- At the completion of processing, the tailings storage facility surfaces would form a low, internally draining landform. With controlled placement of covers, the surfaces would drain via a number of shallow swales as described for the waste emplacements. The storage surfaces would form contained catchments (i.e. would not spill over the batters) and would be able to retain all but the unlikely event of a probable maximum precipitation (which can be conveyed to ground surface via a rock drain in the south western corner of each storage). As with the waste emplacements, surface materials and revegetation would maximise water absorption and storage or evapo-transpiration.

The surface cover system would comprise:

- a capillary-breaking layer of select rock placed over tailings to restrict the upwards migration of tailings salts under periods of negative pore pressure (e.g. during periods of prolonged drought);
- about a 1 to 1.5 m thick layer of gypsum-treated subsoil to provide for moisture/absorption and storage, and a plant rooting medium;

- about a 0.5 to 1 m thick layer of low salinity subsoil (gypsum treated if necessary) to provide for moisture absorption and plant water storage; and
- an approximate 0.2 m thick layer of topsoil for initial germination and provision of soil fungi and bacteria.

As discussed in Section 5.5, trials are currently being undertaken to determine the suitability of rehabilitation growth media types and depths. The outcomes of on-going trials and investigations that would be undertaken for the modified CGM may result in refinement of the rehabilitation concepts. Materials and depths assessed as being most suitable (i.e. which could sustain long-term vegetation growth and are stable) would be used in the final landform rehabilitation.

The EIS describes that at the completion of processing, the tailings storage facility infrastructure would be rehabilitated as follows (North Limited, 1998):

- The decant area would be allowed to dry and the decant tower would be permanently capped with fill and/or a concrete plug.
- The underdrains (which previously conveyed decanted water to the reclaim dam) would be grouted.
- The tailings discharge pipes, cyanide destruction plant and monitoring systems would be dismantled for reuse or disposal with the bulk of CGM infrastructure.
- The tailings storage facilities would be fenced.

The E42 Modification would not change the above concepts and they would continue to apply for the modified CGM.

The final landforms would include the northern and southern tailings storage facilities to elevations of approximately RL 252 m AHD and RL 256 m AHD, respectively (Section 2.6.2).

As described in Section 3.8.2, alternatives to the proposed design of the modified CGM tailings storage facilities (e.g. construction of additional tailings storage facilities) would not be economically optimal when considering capital requirements and the opportunity to use the existing facilities.

The modified CGM tailings storage facilities have been designed to avoid increasing their area. This results in increased tailings storage facility final heights, although their heights would remain below the vegetated ridgeline to the west and other topographic features in the region such as Billys Lookout and Wamboyne Mountain (Appendix I). As described in Section 5.3.3, the tailings storage facility embankments would be progressively revegetated following construction with a pasture cover crop during mining operations, followed by endemic woodland shrubs and/or trees post-mining, that would assist in integration of the landforms with the surrounding landscape.

Upon consideration of the above, the final landform is considered justified.

5.4.4 Final Void

Characteristics

At the completion of mining, the final landform would include a final void (i.e. the disused open pit).

The final void would be approximately 1,250 m long, 1,350 m wide and 440 m deep and surrounded on three sides by the revegetated waste emplacements.

A description of the long-term final void hydrological characteristics is presented in Appendix B. Modelling indicates that the void would fill slowly reaching a level of RL 48 m AHD after about 200 years (Appendix B). Ultimately, the void would reach an equilibrium water level estimated to be between RL 140 m AHD and RL 150 m AHD (Appendix B). Predictions of average void salinity confirm that salt concentrations in void waters would slowly increase, reaching about 67,000 mg/L after approximately 200 years. Salinity is predicted to continue to increase trending towards hyper-salinity (Appendix B).

Final Rehabilitation

Rehabilitation concepts for the final void are presented in the EIS. These concepts would remain unchanged for the modified CGM. The void surrounds would be fenced upon completion of mining. Signposted warnings to the public would be placed along the fence. The first berm would be planted with understorey that may include species associated with River Red Gum woodland (i.e. Windmill Grass, Rosewood and Birdwood) and the batter and berm surfaces left in a roughened state to encourage succession and to provide micro-habitat for bird and (potentially) bat species (North Limited, 1998).

The final void would be screened from public views on Lake Cowal Road by the tailings storage facilities and waste emplacements (Appendix I).

Rehabilitation concepts for the final void may be revised following the outcomes of trials and investigations to be undertaken for the modified CGM.

As described in Section 5.4.2, backfilling of the open pit with waste materials was not considered to be an economically or physically feasible alternative to the creation of a final void.

Upon consideration of the above, the final landform is considered justified.

5.4.5 Infrastructure Areas

Proposed rehabilitation for the approved CGM infrastructure areas is described in the EIS. These areas include the workshop, storage, process plant, administration, access roads, transmission line and substation, borefields and exploration areas. These rehabilitation concepts would continue to apply for the modified CGM.

Mine Fleet Workshop

At the completion of mining (end Year 18), the mine fleet would be demobilised and the contractors' workshop dismantled. The footprint area would be tested for contamination from fuels and lubricants and any contaminated soils removed for proper disposal in accordance with the DECC requirements. The area would then be contour ripped, topsoiled and revegetated with endemic species.

Reagent and Fuel Storage Areas

Unused reagents and fuels at the completion of processing would be returned to the supplier in accordance with all relevant safety and handling procedures. Storage areas would be tested for contamination from fuels and lubricants and any contaminated soils removed for proper disposal in accordance with the DECC requirements. The area would then be contour ripped, topsoiled and revegetated with endemic species.

Process Plant and Administration Area

The process plant and administration area buildings would be dismantled and removed following the cessation of mining.

The foundations and floors would be retained if a suitable alternative use is agreed in the MREMP (Section 3.3.1). Alternatively, they would be excavated for disposal at the base of the void or as buried landfill in an approved manner.

Internal powerlines, pipelines and the explosives magazine would be dismantled and removed.

Internal Access Road and Other Roads

All internal roads would be contour ripped, topsoiled and revegetated with endemic species, unless otherwise agreed with the ultimate landholder.

Transmission Line and Substation

At the end of the E42 Modification life, the ETL would be the property of the electricity utility and as a piece of infrastructure, would be likely to remain in place.

Bland Creek Palaeochannel Borefield

The bores and associated pump stations may be transferred to regional landholders or, alternatively, dismantled and the bores plugged and capped.

The pipeline would either be raised and dismantled for recycling or kept in place if required for local use. If dismantled, the section of pipeline in the bed of Lake Cowal would be raised when the lake is dry. If this is not possible due to successive high rainfall seasons, any decision to remove the pipeline under strict environmental management procedures would be discussed with the relevant regulatory authorities. However, given the maintenance period for the modified CGM rehabilitation, it is likely that the lake would be sufficiently dry at some stage during this period.

Saline Groundwater Supply Bores

The bores and associated pipeline may be transferred to regional landholders or, alternatively, dismantled and the bores plugged and capped.

The pipeline would be dismantled and removed during dry conditions.

Exploration Areas

All open drillholes would be backfilled and tracks revegetated in accordance with the procedures adopted for waste emplacements and site roads.

5.5 INVESTIGATIONS, STUDIES AND TRIALS

Rehabilitation materials would be selected according to their suitability as growth media for revegetation species and ability to provide for long-term stability.

Research trials undertaken at the approved CGM have included:

- **Material Amelioration** – Investigation into the chemical and physical properties of a range of topsoils and the optimum rates of gypsum application to improve their stability and structure.
- **Rehabilitation Media** – Investigation into the relative effectiveness of different mulch treatments (i.e. pasture hay, lucerne hay, cattle manure, woodchips, rock, timber and a control) and soil types (i.e. oxide waste and topsoil only versus oxide waste/subsoil/topsoil) (Smit, 2007).

These and future trials (e.g. studies into water management and landform slope design) would be used to determine the suitability of different rehabilitation materials and cover depths, particularly in terms of native plant establishment and relative slope stability.

Subject to the outcome of further monitoring and trials, and in consultation with the relevant regulatory authorities, this may result in changes to the rehabilitation materials and cover depths used on the waste emplacements and tailings storage facilities. However, the rehabilitation treatments and cover depths selected would be consistent with the rehabilitation objectives described in Section 5.1.

5.6 REHABILITATION MANAGEMENT

5.6.1 Rehabilitation Monitoring, Maintenance and Reporting

On-going monitoring of rehabilitation would be conducted to assess the:

- progression of rehabilitated land;
- effectiveness of rehabilitation techniques used; and
- performance of rehabilitation trials.

Based on monitoring results, maintenance works/contingency measures may include:

- additional erosion control works (e.g. shaping of berms);
- repair of drainage paths and de-silting of sediment control structures;
- re-seeding or re-planting;
- soil treatment works (e.g. gypsum application);
- fire management activities; and
- implementation of weed and feral animal control measures (Barrick, 2008a).

Rehabilitation works would be detailed in the MOP in accordance with the requirements of the DPI-MR (2006). For each area to be rehabilitated, the MOP would describe, where relevant (DPI-MR, 2006):

- physical and chemical characteristics of mining and processing waste of emplaced material relevant to rehabilitation;
- method of land shaping;
- characteristics of all cover material including sealing/drainage layers, subsoil/topsoil;
- thicknesses of cover layers and methods of laying and compaction;
- drainage and erosion control consistent with material characteristics or erosion risk;
- final landform profile and slopes;
- soil treatment;
- vegetation species and methods of their establishment;
- the extent to which agreed rehabilitation outcomes and landuse have been met; and
- maintenance activities/requirements.

Monitoring results and maintenance activities would be reviewed and reported annually through the AEMR process (Section 3.3.1).

5.6.2 Land Management

Pest (Animal and Vermin) Control

Barrick would continue to undertake pest control activities implemented at the approved CGM, including (Barrick, 2003d and 2003j):

- regular property inspections to assess the status of pest populations within Barrick-owned land;

- mandatory pest control for declared pests (i.e. rabbits, pigs and wild dogs) in accordance with Pest Control Orders under the *Rural Lands Protection Act, 1998*; and
- inspections to assess the effectiveness of control measures implemented and review these if necessary.

These pest control activities described in the LMP and FFMP would be continued for the modified CGM.

Barrick would continue to undertake pest control activities in conjunction with adjacent landholders for more effective pest control. This process would be facilitated via consultation with local landholders and landholder groups through the CEMCC process (Section 3.6.2).

Weed Management

Barrick currently manages weeds at the approved CGM in accordance with measures described in the LMP (Barrick, 2003d). The weed management programme is aimed at minimising the possibility of new weed incursion and controlling the spread of any existing noxious weeds on Barrick-owned land (Barrick, 2003d).

The weed management programme described in the LMP would be continued for the modified CGM and includes the following measures (Barrick (2003d):

- identification of weeds by annual site inspections;
- communication with other landholders/leaseholders and regulatory authorities to keep weed management practices in line with regional weed control activities;
- mechanical removal of identified noxious weeds and/or the application of approved herbicides in authorised areas (herbicide use in wetland areas would be strictly controlled);
- implementing follow-up site inspections to determine the effectiveness of the weed control measures;
- where practicable, prevention of the establishment of new weeds on Barrick-owned land by minimising seed transport of weed species through the use of a vehicle wash bay; and
- pest control activities.

Bushfire Management

Bushfire management at the approved CGM includes fuel management strategies, planning and implementation procedures for hazard reduction on Barrick-owned land and strategies for reducing fire hazards and related risks. These strategies and procedures would continue to be implemented during the life of the mine.

Soil and Erosion Management

Barrick would continue to aim to prevent land degradation (i.e. erosion, salinity, and loss of soil structure and nutrients) and rehabilitate previously degraded land or land affected by Barrick activities where practicable.

Use of Fertiliser and Chemicals

As described in the LMP (Barrick, 2003d), the application of chemical pesticides, herbicides or chemicals used for stock treatment would continue to be recorded by Barrick. Where practicable, the use of herbicides, pesticides and fertilisers on Barrick-owned land in close proximity to Lake Cowal, or in areas that could result in direct runoff from agricultural areas into the lake, would be minimised.

5.6.3 Lease Relinquishment

Upon the cessation of mining operations, tenure of ML 1535 would be maintained by Barrick until such a time when lease relinquishment criteria (required by the DPI-MR and the DoP) are satisfied. It is anticipated that lease relinquishment criteria would include (North Limited, 1998):

- landform stability;
- maintenance of downstream water quality;
- establishment of self-sustaining revegetation;
- satisfaction of all lease conditions (including public safety considerations); and
- removal of hard-stand areas and infrastructure.

The Strategic Framework for Mine Closure published by the ANZECC (2000) would be used as a guide regarding rehabilitation criteria for mine closure.