BARRICK
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22 June 2009

Professor L Clive Bell
16 Kewarra Street
Kenmore Qld 4069

Dr Craig Miller
CSIRO Sustainable Ecosystems
306 Carmody Rd
St Lucia Qld 4067

Dear Clive and Craig,

RE: Fourth Annual Report of the Independent Monitoring Panel for the Cowal Gold Project (October 2008) – Recommendations

As requested in Kane Winwood's email dated 18 May 2009, please find below detail relevant to timing and implementation of Barrick Australia Limited's (Barrick's) rehabilitation review programme for the Cowal Gold Mine (CGM). This information is provided in response to Recommendation 3 made by the Independent Monitoring Panel (IMP) in their Fourth Annual Report for the Cowal Gold Project – October 2008 (2008 IMP Report).

2008 IMP Report Recommendation 3: *The erosion control and restoration strategies for the Lake Protection Bund, Waste Rock Emplacements and Tailings Storage Facilities should be reviewed as a matter of urgency. While the IMP acknowledges the engineering constraints and logistic advantages behind the construction of stable graded bund walls, we note that it is essential to incorporate roughness and complexity at multiple scales into the design of these walls if they are to a) minimise sheet or rill erosion, and b) sustain native vegetation. Such roughness can be created, for example, by placing a mulch of competent rock on surface soil.*

Revegetation of these walls will continue to be a challenge. It is essential that CGM is clear about the goals of revegetation, as these will determine the various stages and potential pathways. For example, establishing a quick grass cover may be facilitated by the use of fertiliser, but this will also favour exotic weeds rather than native species. Mulching will be useful for retaining moisture and providing soil organic matter, but it may have to be planted into, as it can inhibit the establishment of some seedlings. Again, roughness and complexity will be key factors in the successful rehabilitation of these walls.

The engagement of a person or persons with practical experience in dealing with the rehabilitation/ stabilisation of landforms comprising highly dispersible materials to work with mine and University personnel on this issue is strongly recommended.

Approximately 122 hectares (ha) of land within Mining Lease (ML) 1535 is currently under rehabilitation (i.e. either shaped and covered or rehabilitated and under maintenance). Amenity plantings have also commenced around the ML 1535 boundary.

Barrick acknowledges that, overall, the success of revegetation works undertaken to date has been limited. This is mainly due to on-going drought conditions that have affected the survival and establishment of planted species. Since mine operations commenced at the CGM, the region has experienced consistently lower than average rainfall.

The drought conditions have caused significant mortality of planted tubestock (e.g. 85% mortality of 2,000 trees and shrubs planted as part of the Remnant Vegetation Enhancement Programme in 2006) and inhibited the success of seeding activities (e.g. the south slope of the southern tailings storage facility has failed to establish a grass cover despite being treated with gypsum, benign rock mulch, hay and seeded with Japanese Millet in December 2008).

In accordance the CGM Development Consent modification approved in February 2009, the perimeter waste emplacement will be redesigned to reflect the height reduction in areas of the emplacement. The height reductions are proposed to enable expansion of the open pit whilst meeting relevant geotechnical criteria. The redesign will account for the changes to landform, water management and revegetation characteristics of the perimeter waste emplacement. Active rehabilitation works on the emplacement will occur after the redesign is completed. This rehabilitation work is expected to occur by late-2011 and is subject to the current approvals process.

Notwithstanding the limitations of the on-going drought conditions, in the second half of 2008 Barrick conducted a Rehabilitation Risk Assessment (RRA) to assess the risks to long term rehabilitation success at the CGM with a focus on:

- rehabilitation materials;
- landform design; and
- revegetation concepts.

The objective of the RRA was to identify the risks to the long term success of rehabilitation of the waste emplacements and tailings storage facilities at the CGM and relevant measures to mitigate the risks identified.

A RRA workshop was held on site in July 2008. The workshop participants included representatives/technical experts (experienced in rehabilitation) from Barrick, Lake Cowal Foundation, URS Corporation, GSS Environmental and Australian National University (ANU).

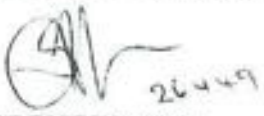
The RRA evaluated the risks to the long term success of CGM rehabilitation. Risk treatment measures were proposed to reduce the level of risk, where required. The success and suitability of a number of the treatment measures were determined to be uncertain by the RRA workshop team due the further requirement for: trial results; additional knowledge input; and/or further research, such as literature reviews, modelling, and survey results.

Following the findings of the RRA, Barrick has further developed its programme to optimise/maximise the potential for the successful rehabilitation of mine landforms at the CGM. The rehabilitation review programme has included the commissioning of specialists/expert personnel to work with mine and University personnel. An overview of the programme is presented in Attachment 1 and shown diagrammatically on Figure 1.

The results of the rehabilitation review programme will be used to inform the progressive rehabilitation/stabilisation of mine landforms at the CGM. Any proposed changes to the approved CGM rehabilitation programme (i.e. as described in the EIS) that are not considered to be "generally in accordance with the EIS" would be subject to environmental assessment and approval processes (e.g. modifications would be sought under the *Environmental Planning and Assessment Act, 1979*).

Please do not hesitate to call me on 0400235735 should you have any queries.

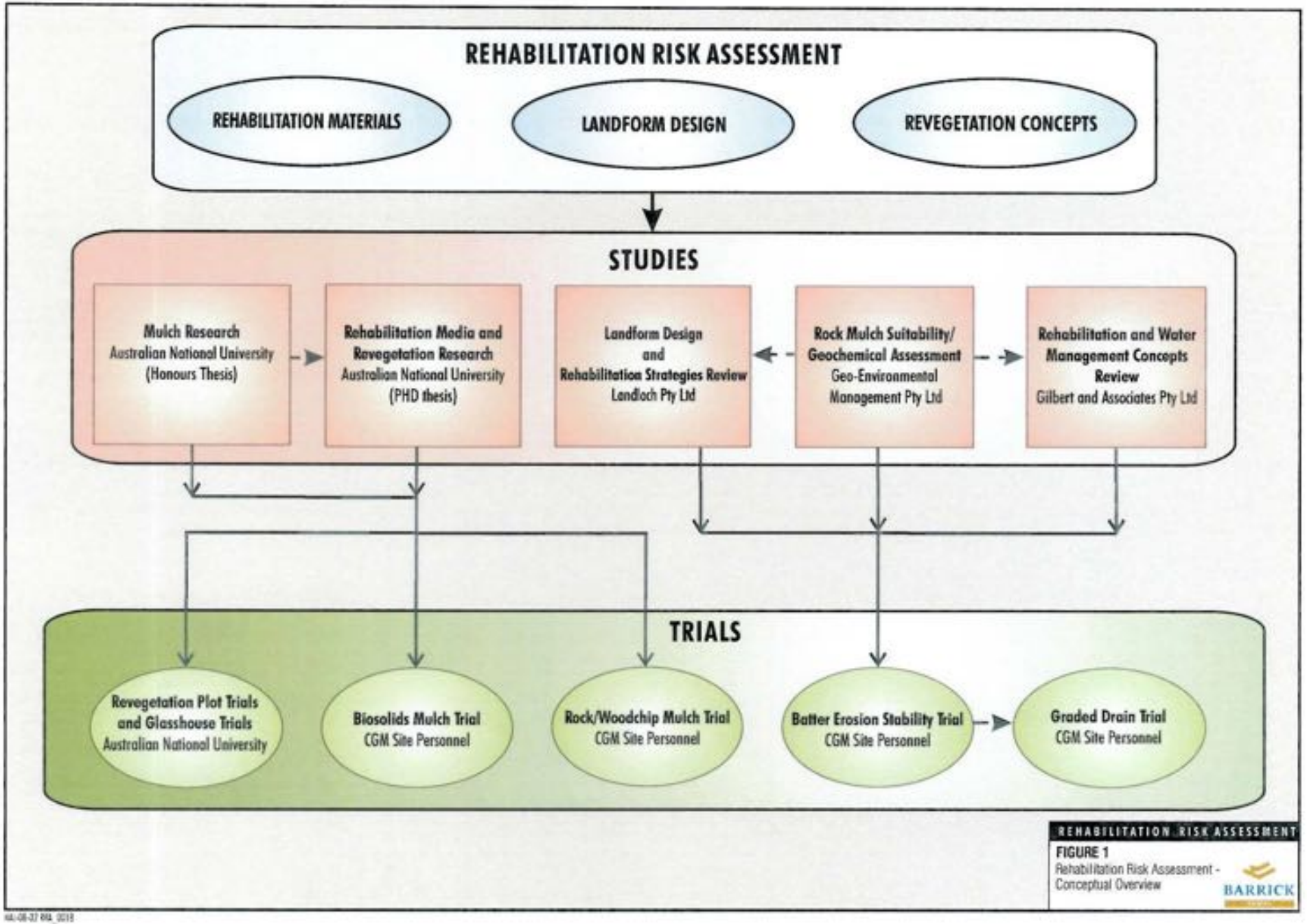
Yours sincerely
Barrick (Cowal) Limited



GARRY PEARSON
Environmental Manager

Attachment 1
Rehabilitation Review Programme

Study/Trial	Technical Specialist	Description	Implementation/Timing of Study/Trial
Mulch Research (Honours Thesis)	Australian National University	Research (12-month honours thesis – Jenny Smits) on the effectiveness of different mulches in mine rehabilitation, specifically short-term effects on the surface stability and the conditions for plant growth at CGM. The aims of the project were to assess: • short-term effectiveness of six different mulch cover treatments in improving soil stability to water erosion, soil conditions for growth, biomass production and landscape function on sloping rehabilitation; and • the difference in plant growth between treatments with a substrate with subsoil and those without. The treatments under study included pasture hay, lucerne hay, cattle manure, woodchips, rock, timber and a control all sown with gypsum and sterile ryecorn seed. The results of this study build on previous studies of soil stabilisation at CGM undertaken by Summerfield (in 2006).	**Complete** – report/thesis received May 2008. Results used to inform rehabilitation media and revegetation research and mulch trials (below).
Rock Mulch Suitability/Geochemical Assessment	Geo-Environmental Management Pty Ltd	Assessment of the geochemical suitability of using waste rock on the batters of mine landforms (a surface treatment suggested by the IMP in their 2008 IMP Report). Includes recommendations regarding the suitability and use of waste rock to armour the batters of mine landforms.	**Completed** – report received December 2008. Results of study used to inform the Landform Design and Rehabilitation Strategies Review, Rehabilitation and Water Management Concepts Review and mulch trials (below).
Landform Design and Rehabilitation Strategies Review	Landloch Pty Ltd	Assessment/review of rehabilitation strategies and landform design. Includes site observations and recommendations regarding depths of rehabilitation media, suitability of different treatment materials (e.g. rock mulching), landform design and revegetation/seeding.	**Completed** – report received December 2008. Results of study used to inform the Rehabilitation and Water Management Concepts Review and mulch trials.
Rehabilitation and Water Management Concepts Review	Gilbert and Associates Pty Ltd	Review of the current water management system and potential implications for surface drainage for various alternative surface treatment/landform design scenarios. Includes site observations and estimation of batter flow velocities and stormwater runoff rates for various alternative surface treatment/landform design scenarios. Also includes recommendations for testing the physical properties of rock mulch and a trial to assess batter erosion stability using rock mulch. A drop structure trial is also recommended, dependent on the results of the batter erosion stability trial.	**Completed** – report received May 2009. Results of study used to inform the set-up of the batter erosion stability trial (below).
Rehabilitation Media and Revegetation Research (PhD Thesis and Honours Thesis)	Australian National University	Research (PhD thesis – Jess Drake; Honours Thesis - Andrew Halliday) involving an assessment of stockpiled topsoil and subsoil quality, soil ameliorants and holistic landscape structure, function and composition. Plot trials (growing Stipa and salt tolerant grasses in soil from the ML) were established in March 2009. Development of glasshouse trials is expected to take place in the second half of 2009. Research will further the work undertaken by Summerfield (in 2006) and Smits (in 2008).	**Commenced** – research commenced in 2008. Plot trials established March 2009. Preliminary results of plot trials expected to be available in second half 2009. Glasshouse trials to be established second half 2009. Preliminary results expected to be available in mid-2010.


REHABILITATION RISK ASSESSMENT
REHABILITATION MATERIALS
LANDFORM DESIGN
REVEGETATION CONCEPTS
STUDIES
Mulch Research
Australian National University
(Honours Thesis)
Rehabilitation Media and Revegetation Research
Australian National University
(PHD thesis)
Landform Design and Rehabilitation Strategies Review
Landloch Pty Ltd
Rock Mulch Suitability/ Geochemical Assessment
Geo-Environmental Management Pty Ltd
Rehabilitation and Water Management Concepts Review
Gilbert and Associates Pty Ltd
TRIALS
Revegetation Plot Trials and Glasshouse Trials
Australian National University
Biosolids Mulch Trial
CGM Site Personnel
Rock/Woodchip Mulch Trial
CGM Site Personnel
Batter Erosion Stability Trial
CGM Site Personnel
Graded Drain Trial
CGM Site Personnel
REHABILITATION RISK ASSESSMENT
FIGURE 1
Rehabilitation Risk Assessment - Conceptual Overview
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