Mr David Kitto  
Director – Mining and Industry Projects  
Department of Planning and Infrastructure  
23-33 Bridge Street  
SYDNEY NSW 2001

Dear David,


2011 IMP Recommendation 1: CGM should undertake the analysis of the properties of the current soil stockpiles as stated in the CGM letter of 29 January 2011, as soon as it is practicable, to further assist in the planning for future rehabilitation.

Barrick (Cowal) Limited (Barrick) will undertake backhoe sampling of the currently stockpiled soil resources at the Cowal Gold Mine (CGM) as soon as practicable (weather permitting). Analysis of the soil stockpiles was unable to be undertaken during 2011 due to very wet conditions which prevented use of the backhoe required for sampling.

Barrick has engaged Dr David McKenzie of McKenzie Soil Management Pty Ltd to conduct agronomic analysis of the soil samples and to provide an interpretation of the soil sampling results. Dr McKenzie has also engaged two 3rd year PhD candidates (Jessica Drake - Australian National University and Adrienne Ryan - University of Sydney) to assist with the soil stockpile sampling study (and dust monitoring programme study - see response to IMP Recommendation 4 below). Carnegie Natives Pty Ltd has also been engaged by Barrick to help facilitate the soil stockpile sampling study. Dr McKenzie will also prepare an appropriate soil stripping procedure for the CGM soil stockpiles to guide appropriate use of the stockpiled materials.

Based on the outcomes of soil stockpile sampling, Barrick will confirm the quantities of topsoil and subsoil currently available for rehabilitation use, update the CGM materials inventory and soil stockpile database and implement amelioration measures (e.g. gypsum application) where necessary to maintain the stockpiled soils.

As detailed in the currently approved CGM Mining Operations Plan (MOP) (January 2011 to September 2102), estimates (as at 21 December 2010) indicate that approximately 1,728,167 m$^3$ of topsoil and 2,083,400 m$^3$ of subsoil are available for future rehabilitation use. These estimates were based on surveying results and mapping of the soil stockpiles conducted using a helium blimp in May 2010.

An action plan and implementation timetable for the measures proposed above is provided in Attachment A.
2011 IMP Recommendation 2: CGM should continue to evaluate the future needs for cover materials for rehabilitation including the subsoil material previously selected and stored for future use. It is recommended that assessment of this material be included in any future field and column trials and that growth of roots into the subsoil in existing trial plots on the Southern Waste Emplacement be explored and the salinity of this subsoil material be determined. Additionally CGM should attempt to obtain an estimate of the salinity range of materials previously saved for rehabilitation; this data will assist the site in calculating the volumes and planning appropriate layering of satisfactory materials for root zone construction through to mine closure.

CGM should also finalise and implement the Northern Waste Emplacement Trials over the next year.

Barrick will continue to evaluate the availability of cover materials likely required for future rehabilitation use (including the availability of currently stockpiled subsoil materials) based on the results of the soil stockpile sampling programme, the updated materials inventory and waste rock production schedule outlined in the CGM MOP.

Subsequent to sampling and analysis of the CGM's stockpiled soils (see response to IMP Recommendation 1 above), Barrick will obtain an estimate of the salinity range of the stored materials to assist in planning the appropriate layering of the materials. Analysis of the salinity of the stored materials and preparation of an appropriate soil stripping procedure will be undertaken by Dr McKenzie (see response to IMP Recommendation 1).

Prior to using subsoil materials in future field and column trials undertaken at the CGM, independent laboratory analysis of the material will be conducted and the results (including the salinity of the material) will be documented.

Barrick currently engages DnA Environmental to monitor rehabilitated areas and conduct rehabilitation field trials at the CGM. Barrick will commission DnA Environmental to include within the rehabilitation monitoring programme conducted at the existing rehabilitation trial plots located on the Southern Waste Rock Emplacement, sampling and analysis of subsoil materials. Sampling will be undertaken using standard soil sampling techniques with a core sampler. Analysis of the subsoil material will be conducted by an independent laboratory and include measurement of Electrical Conductivity to determine soil salinity. The results of this sampling will be included in DnA Environmental's annual rehabilitation monitoring report.

Assessment of plant root growth in the subsoil materials of the existing rehabilitation trial plots located on the Southern Waste Rock Emplacement will also be included in the monitoring programme conducted by DnA Environmental. DnA Environmental will detail the methodology for assessing plant root growth and the monitoring results in their annual rehabilitation monitoring report.

Barrick also engages Carnegie Natives Pty Ltd to conduct column trials using shallow and deep-rooted tree and shrub species in both tailings and waste rock materials from the CGM. Plant root growth is currently monitored by Carnegie Natives Pty Ltd in these column trials. Plant root growth will continue to be monitored in future column trials conducted using subsoil materials.

An action plan and implementation timetable for the measures proposed above is provided in Attachment A.

**Northern Waste Rock Emplacement Additional Replicate Plot Trials**

Barrick has finalised with DnA Environmental the design for additional replicate trial plots to be established on the outer batters of the Northern Waste Rock Emplacement, adjacent to the D1 contained water storage. DnA Environmental's design is described in the report 'Revised experimental design and implementation plan – Northern waste emplacement rehabilitation trials for Cowal Gold Mine Barrick (Cowa) Limited November 2011'. DnA Environmental's report:

- outlines the aim of the additional replicate rehabilitation trials;
- describes the landform construction philosophy (including landform preparation procedures) and topsoil and subsoil stockpiling protocols;
- summarises the revegetation strategy; and
• details the design of the replicate plots, quantities of materials required and discusses the proposed monitoring methodology.

DnA Environmental’s report also provides a recommended schedule of works to guide implementation of the rehabilitation trials (including appropriate timing for topsoil re-spreading and re-seeding to coincide with Autumn rainfall) (refer to Attachment B). Barrick anticipates commencement of works in accordance with DnA Environmental’s design and implementation plan in early 2012, with replicate plots to be established by April 2012.

Monitoring of the replicate trial plots will also be undertaken by DnA Environmental and an annual weeds survey of all rehabilitation trials will be undertaken by Carnegie Natives.

An action plan and implementation timetable for the measures proposed above is provided in Attachment A.

2011 IMP Recommendation 3: CGM should continue to monitor the status of rehabilitation on the tailings walls to provide data to confirm that the current preferred rehabilitation approach will lead to a cover which is stable and sustainable.

Barrick will continue to engage DnA Environmental to monitor CGM rehabilitation and prepare an annual rehabilitation monitoring report that will evaluate the status of the rehabilitation at the CGM (including on the tailings storage facility batters). DnA Environmental will continue to use the Ecosystem Function Analysis (EFA) monitoring methodology to assess the performance of rehabilitation at the CGM.

Barrick will also prepare a report in the first quarter of 2012 which will detail the results of all rehabilitation trials conducted at the CGM to date. The report would aim to formally document the outcomes of all CGM rehabilitation trials, and based on these outcomes, propose the preferred surface cover system concepts most likely to provide successful, stable and sustainable rehabilitation of the final landforms at the CGM.

An action plan and implementation timetable for the measures proposed above is provided in Attachment A.

2011 IMP Recommendation 4: CGM should ensure that new bulk standard samples of soil and waste materials are prepared for use as an ongoing check on metal and other analyses conducted at various laboratories.

Barrick has conducted bulk standard sampling of soil and waste materials to monitor for metals and other relevant parameters and has dispatched this new sample to an independent laboratory (National Measurement Institute, Sydney) for analysis. The results of this sampling will be used to verify results from the dust monitoring programme undertaken at the CGM.

An action plan and timetable for implementation of the measures outlined in this response is provided in Attachment A. The schedule of works for implementation of the Northern Waste Rock Emplacement additional replicate plot trials outlined in DnA Environmental’s (2011) ‘Revised Experimental Design and implementation plan – Northern Waste Emplacement Rehabilitation trials for Cowal Gold Mine Barrick (Cowal) Limited November 2011’ is provided in Attachment B.

As requested, a copy of the 2011 IMP Report will be placed on Barrick’s website by the end of January 2012.
Please do not hesitate to call should you have any queries.

Yours sincerely
BARRICK (COWAL) LIMITED

GARRY PEARSON
Environmental Manager

Copies:
George Mobayed (DP&I)
Emer. Prof. L. Clive. Bell (IMP)
Dr. Craig Miller (IMP)
ATTACHMENT A

ACTION PLAN AND IMPLEMENTATION TIMETABLE FOR 2011 IMP RECOMMENDATIONS
<table>
<thead>
<tr>
<th>2011 IMP Recommendation</th>
<th>Action Plan</th>
<th>Timing</th>
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</table>
| **2011 IMP Recommendation 1:** CGM should undertake the analysis of the properties of the current soil stockpiles as stated in the CGM letter of 29 January 2011, as soon as is practicable, to further assist in the planning for future rehabilitation. | - Conduct backhoe sampling of soil stockpiles (weather permitting).  
- Conduct laboratory analysis of soil stockpile samples.  
- Dr McKenzie to interpret sampling results and prepare an appropriate soil stripping procedure for stockpiled soils at the CGM.  
- Confirm the quantities of topsoil and subsoil available for rehabilitation use and update CGM materials inventory with results from soil stockpile sampling.  
- Arrange for amelioration measures to be conducted (if necessary). | January 2012  
January/February 2012  
March 2012  
March 2012  
March 2012 |
| **2011 IMP Recommendation 2:** CGM should continue to evaluate the future needs for cover materials for rehabilitation including the subsoil material previously selected and stored for future use. It is recommended that assessment of this material be included in any future field and column trials and that growth of roots into the subsoil in existing trial plots on the Southern Waste Emplacement be explored and the salinity of this subsoil material be determined. Additionally CGM should attempt to obtain an estimate of the salinity range of materials previously saved for rehabilitation; this data will assist the site in calculating the volumes and planning appropriate layering of satisfactory materials for root zone construction through to mine closure. | - Evaluate the availability of cover materials likely required for future rehabilitation use based on results of stockpiled soils sampling and updated materials inventory.  
- Dr McKenzie to provide an estimate of the salinity range of all stored materials (including topsoil and subsoil materials).  
- Conduct independent laboratory analysis of subsoil materials prior to use in future field and column trials and document the salinity of the material.  
- DnA Environmental to include sampling and analyses of the subsoil material in the monitoring programme conducted at the existing rehabilitation trial plots on the Southern Waste Rock Emplacement. Soil analyses to include measurement of salinity. DnA Environmental to include results of the soil sampling in annual rehabilitation monitoring report.  
- DnA Environmental to also assess plant root growth in the subsoil materials at the existing rehabilitation trial plots on the Southern Waste Rock Emplacement and include description of methodology and results in annual rehabilitation monitoring report.  
- Carnegie Natives Pty Ltd to monitor plant root growth in future column trials conducted using subsoil materials and document results.  
- Commence implementation of additional replicate trial plots on the outer batters of the Northern Waste Rock Emplacement, adjacent to the D1 contained water storage. The schedule of works for implementation of the rehabilitation trials outlined in DnA Environmental’s (2011) ‘Revised experimental design and implementation plan – Northern waste emplacement rehabilitation trials for Cowal Gold Mine Barrick (COW) Limited November 2011’ is provided in Attachment B.  
- Establish additional replicate plots on the outer batters of the Northern Waste Rock Emplacement, adjacent to the D1 contained water storage. | March 2012 - ongoing  
March 2012  
Ongoing  
January 2012 - ongoing  
January 2012  
April 2012 |
### Action Plan and Implementation Timetable for 2011 IMP Recommendations (continued)

<table>
<thead>
<tr>
<th>2011 IMP Recommendation</th>
<th>Action Plan</th>
<th>Timing</th>
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<tbody>
<tr>
<td><strong>2011 IMP Recommendation 3:</strong>&lt;br&gt;CJM should continue to monitor the status of rehabilitation on the tailings walls to provide data to confirm that the current preferred rehabilitation approach will lead to a cover which is stable and sustainable.</td>
<td>- DnA Environmental to continue to monitor performance of CGM rehabilitated areas and rehabilitation trials using EFA monitoring methodology.&lt;br&gt;  - DnA Environmental to finalise 2012 annual rehabilitation monitoring report.&lt;br&gt;  - Barrick to commence preparation of draft report detailing the results of all rehabilitation trials conducted at the CGM to date.&lt;br&gt;  - Barrick to finalise CGM rehabilitation trials report.</td>
<td>Ongoing&lt;br&gt;December 2012&lt;br&gt;January 2012&lt;br&gt;March 2012</td>
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<tr>
<td><strong>2011 IMP Recommendation 4:</strong>&lt;br&gt;CJM should ensure that new bulk standard samples of soil and waste materials are prepared for use as an ongoing check on metal and other analyses conducted at various laboratories.</td>
<td>- Conduct bulk standard sampling of soil and waste materials to monitor for metals and other relevant parameters.&lt;br&gt;  - Send samples to an independent laboratory for analysis.&lt;br&gt;  - Verify results from bulk standard sampling with dust monitoring programme.</td>
<td>December 2011&lt;br&gt;December 2011&lt;br&gt;February 2012</td>
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ATTACHMENT B

SCHEDULE OF WORKS FOR IMPLEMENTATION OF NORTHERN WASTE ROCK EMLACEMENT
ADDITIONAL REPLICATE PLOT TRIALS
(DnA Environmental, 2011)
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<td>Engage reputable seed collector</td>
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<td>Order native tubestock from reputable native plant nursery for planting in autumn</td>
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<td>Identify suitable native pastures for harvest and ensure they will remain ungrazed to maximise harvest yield</td>
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<tr>
<td>Arrange local hay contractor to bale native pasture hay in spring/autumn harvest periods</td>
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<td>Arrange native grass seed harvester to harvest native pasture hay in spring/autumn harvest periods</td>
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<td>Liaise with Mining department to specify experimental design, roles and responsibilities and schedule requirements</td>
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<td>Construct primary landform</td>
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<td>Ensure native seed collection is underway</td>
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<td>Harvest and translocate native pasture hay to site</td>
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<td>Harvest native grasses</td>
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<td>Spread run of mine oxide rock (rock underlay)</td>
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<td>Apply gypsum at recommended rates (standard across all sites)</td>
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<td>Spread topsoil according to the experimental design (Note: topsoil should not be spread until all experimental treatments materials are ready for spreading out).</td>
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### Schedule of Works for Implementation of Northern Waste Rock Emplacement Additional Replicate Plot Trials (continued)

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<tr>
<td>Cross-rip using dozer to create troughs and banks</td>
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<td>Spread out native pasture hay at appropriate densities according to the experimental design</td>
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<td>Sow cover crop at recommended rate (standard across all sites)</td>
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<td>Pre-treat native seed as required (seek expert advice)</td>
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<td>Prepare seed mixes, record weight of each species applied for later reference</td>
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<td>Allow one month settling period prior to native seed application treatments.</td>
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<td>Apply seed according to the experimental design</td>
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<td>Plant tubestock according to the experimental design (after suitable rainfall event)</td>
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<td>Consultants/University to undertake baseline monitoring (on completion of set up)</td>
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<td>Consultants/University to undertake 6mths (and thereafter annual) monitoring</td>
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<td>Implement weed control and maintenance (eg replace tubestock) as required</td>
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<td>Nov/yr as required</td>
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Source: DnA Environmental (2011).