ANNEXURE F:
2009 ADDENDUM TO UPDATE THE MCDM LAND USE REPORT

ADDENDUM TO NINHAM SHAND REPORT NO. 4691/402239 OF 31 AUGUST 2008:

APPLICATION OF A MULTIPLE CRITERIA DECISION-MAKING MODEL TO ASSIST WITH FUTURE LAND USE PLANNING AT RÖSSING URANIUM MINE

SUMMARY OF FOLLOW-UP LAND USE PLANNING MCDM WORKSHOP FOR RÖSSING URANIUM ON 26 MARCH 2009

CONTENTS

1. Introduction

1.1 Background

Rio Tinto Rössing Uranium Limited (Rössing Uranium) appointed Ninham Shand (Pty) Ltd (Ninham Shand) in 2008 to facilitate a Multiple Criteria Decision-Making (MCDM) workshop to assist with future land use planning at the Rössing Uranium Mine (the Mine), which resulted in the release of Report No. 4691/402239 dated 31 August 2008. This report described the selected MCDM Model applied, the methodology and process followed, the findings and the way forward. This addendum serves to record the follow-up workshop and is issued as an addendum to Report No. 4691/402239.

With the 2008 workshop, the focus was on combined layouts of the following facilities: heap leach, ripios, tailings and waste dumps. The premise of the workshop was: *"Given the shortage of space we need to find the optimum arrangement to limit impact on undisturbed groun*d". The MCDM methodology was used to rank facility sites in isolation (i.e. to find the best sites for each of the facilities) and combined layouts (i.e. to find the best arrangement of facility sites).

1.2 Follow-Up Workshop

Given the technical developments and refining of cost projections since the 2008 workshop, the need was identified to repeat the ranking for four layouts (including some with facilities on previously unconsidered areas) of heap leach, ripios and tailings facilities. Waste dump sites were excluded, given that the final waste dump site positioning does not influence other land use decisions, as concluded during the 2008 workshop. The Draft Agenda for the workshop, held on 26 March 2009, is included as Appendix A. No changes to the agenda were proposed at the workshop.

The key technical developments since the 2008 workshop were summarised as:

- The proposed heap leach process has been modelled and preliminary designs completed to define the heap leach scale (throughput estimated at 12Mt/a, and associated footprint requirements). The design included site preparation investigations and costing, specifications for the drainage layer material (and confirmation that gneiss from the Khan formation, that could be sourced in the SJ pit, would be suitable), and confirmation of the racetrack layout given that the on/off method is preferred. The recent aerial survey allowed a higher level of accuracy of costing than previously possible.
- The High Density Tailings (HDT) option is better understood following preliminary engineering design and costing. As such, the capacities, footprints and associated infrastructure required have been defined and capital and operational expenditure estimated and Net Present Value (NPV) calculations done for different options. The HDT option holds additional benefits in that iron and uranium in solution can be fed back into the process, rather than being disposed of as tailings.
- The Life of Mine (LoM) scheduling has been updated following recalculation of the ore body reserves which in turn influences mine design and LoM planning. This included production rate modelling for different scenarios (a range of cost and exchange rate variations) to identify the most attractive NPV option. In addition to current reserves, Rössing Uranium is

now also a shareholder in the Rössing South deposit, approximately 7km south of the current operations and this potential development was included in the 2009 MCDM criteria list. This deposit lies within the Namib Naukluft Park, but is similar or larger in extent than the current Rössing ore body and is potentially of a higher grade.

- Strategic considerations related to the sterilisation of reserves (drilling programme confirmed that establishing facilities on the dome will not sterilise ore reserves) and sequencing of operations, specifically new processes such as heap leach and HDT disposal, are better understood and planning for prevention of potential operational interruptions is ongoing.

A similar set of criteria to that used in 2008 was adopted for the 2009 workshop, albeit with different weighting applied – refer to Section 2 below for more information in this regard. To ensure that the workshop participants were representative of all the criteria sets under discussion, a total of ten Rio Tinto / Rössing Uranium staff contributed, as per the attendance list in Appendix B. The MCDM methodology resulted in lively, constructive debate with active participation by all participants.

1.3 Introduction to Aurecon

An international merger between Ninham Shand and Africon of South Africa and Connell Wagner of Australia resulted in the establishment of a new company: Aurecon. Ex Ninham Shand staff are proud to be associated with our new global brand, hence the release of this Addendum under the Aurecon logo. We will continue to provide the level of service for which we are renowned.

2. Criteria

2.1 Criteria List

The criteria for the ranking of layouts were predetermined, using the 2008 list as a basis, although further minor changes were motivated at the workshop. The same four main criteria categories were used, and again weighted using the MCDM methodology:

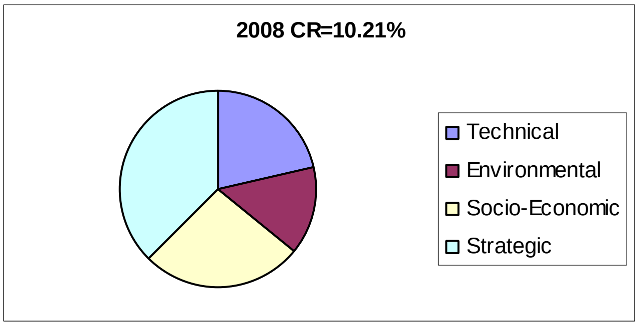
- Technical;
- Environmental;
- Socio-Economic; and
- Strategic.

The first three of these criteria categories correspond to triple bottom line consideration, as subscribed to by Rio Tinto, with the fourth added to include strategic development considerations. A full list of the criteria is contained in Appendix C, including the sub-elements considered under each of the main criteria categories.

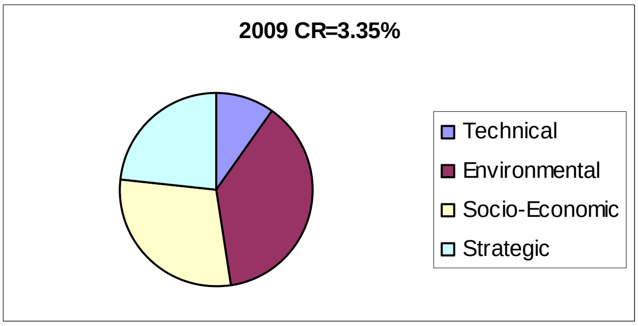
2.2 Criteria Weighting

The weighting of criteria using the MCDM methodology resulted in changes to the overall weighting scenario, as per the graphs below. Note that the Consistency Ratio (CR) value indicated on each of the graphs shows a lower value for 2009, indicating a higher level of consistency in the ranking application. The most significant changes in the weighting scenario were the increased weight of the environmental category and associated reduced weight of the strategic and technical categories. These changes were substantiated by the further technical development work and clarity on some of the strategic issues since the 2008 workshop. Some of the initial criteria have been taken into account in formalising the layouts to be considered – as such, these criteria are now less important, as reflected in the weighting.

Weighting of Criteria in 2008



Weighting of Criteria in 2009



The final weighing applied as the "base case", against which a sensitivity analysis was later done using different weighting scenarios:

- 9.67% Technical;
- 37.93% Environmental;
- 29.01% Socio-Economic; and
- 23.38% Strategic.

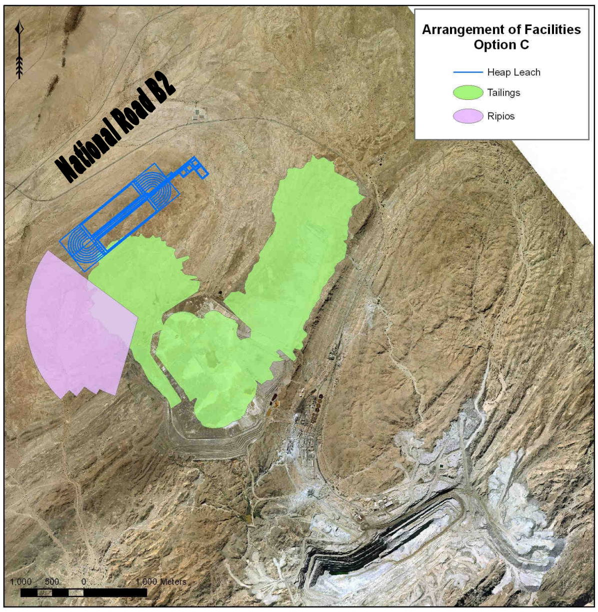
In determining these weights per criteria category, the same method as used in 2008, i.e. selecting the two most critical sub-criteria under each of the four main criteria categories and applying the MCDM methodology to rank it to obtain overall criteria category weight by adding the resultant weights of each pair of criteria from the particular category, was again applied. Note that in 2009 different sub-criteria were identified as being most significant, from some of the main criteria categories, for the same reasons as mentioned above.

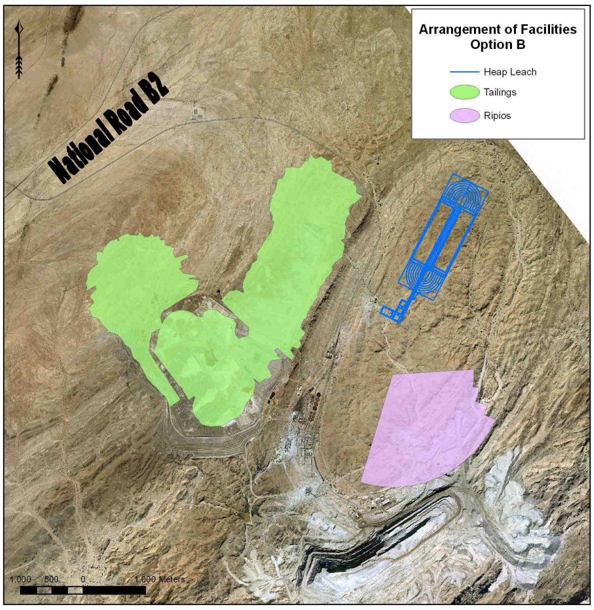
3. Layouts

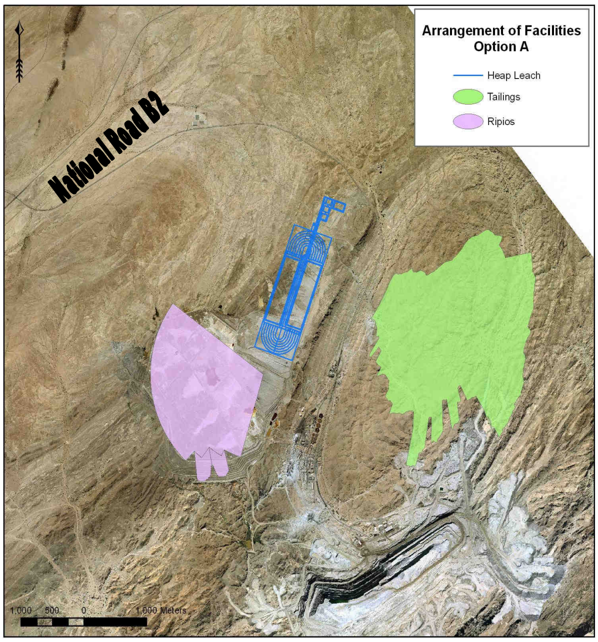
Four different layouts, or arrangement of facilities, were evaluated and ranked. These layouts were determined by the Rio Tinto / Rössing Uranium staff prior to the workshop, and could be summarised as per the table below:

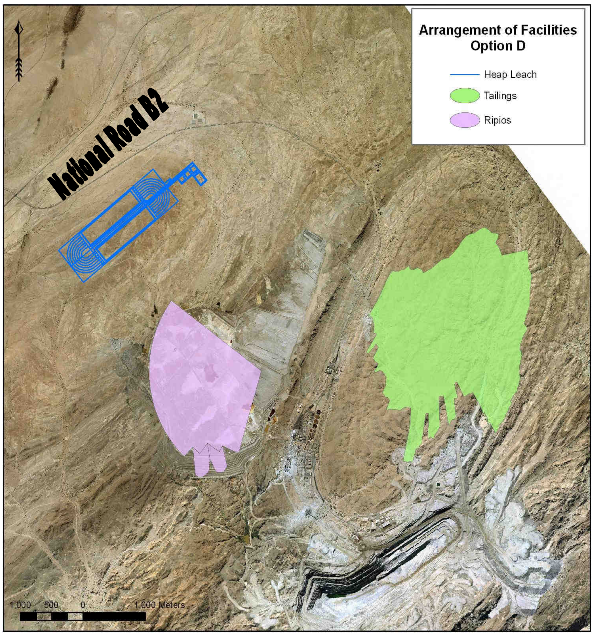
Facility	Layout A	Layout B	Layout C	Layout D
Heap Leach	Current Tailings	Dome	New Area	New Area
Ripios	Current Tailings	Dome	New Area	Current Tailings
High Density Tailings	Dome	Current Tailings	Current Tailings	Dome

The four layouts are schematically represented below, with the same legend applied throughout. The “New Area” applicable to facilities in Layouts C and D refer to the relatively flat area within the accessory works area of the mine along the access road from the B2.









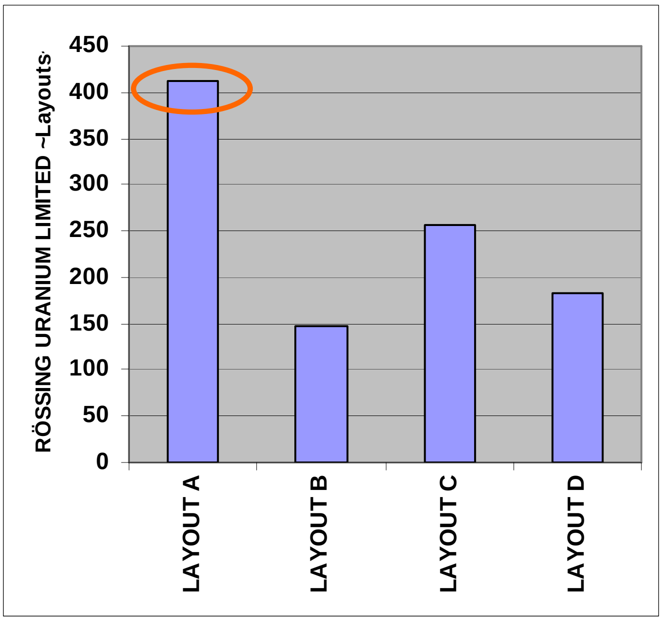
4. Results

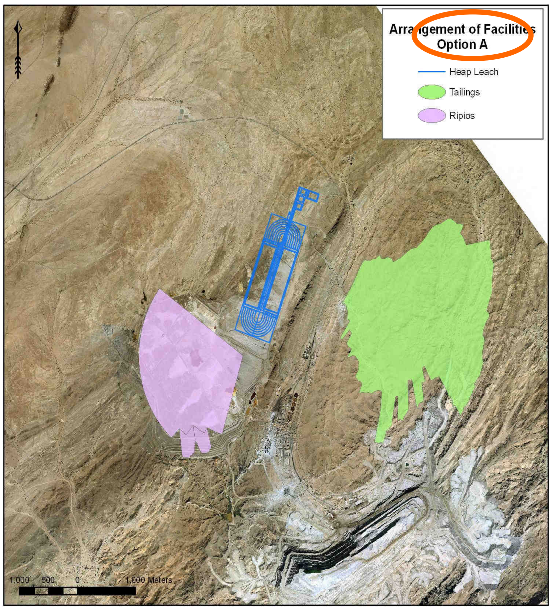
4.1 Ranking per Criteria Category

The ranking matrix for each of the four criteria categories is included in Appendix D. Exceptionally low CR values were achieved in every instance, indicating good consistency in the rankings.

4.2 Layout Preference Results

In addition to the individual matrices, the results sheet is also included in Appendix D, indicating an overall preference for Layout A, followed by Layouts C, D and B in that order as per the graph below (representing the 2009 base case). It is evident that Layout A is strongly preferred above the others considered.





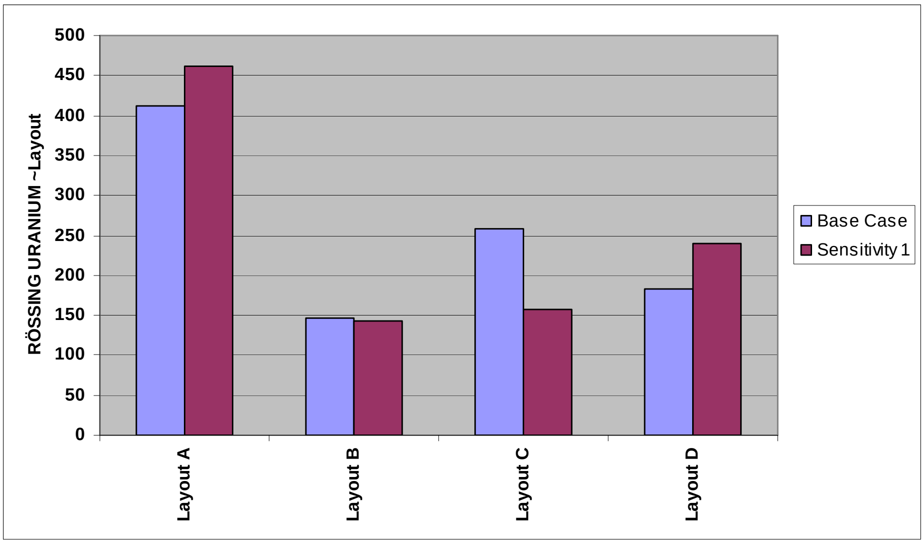
4.3 Sensitivity Analysis

Similar to the 2008 application, a sensitivity analysis was undertaken to test the outcome of the application of the MCDM model to rank combined layouts with different weighting scenarios, as described below. The graphs provided for each scenario indicates the outcome of the sensitivity analysis against the base case for comparative purposes. In conclusion, the sensitivity analysis confirmed the overall preference for Layout A.

<u>Sensitivity 1: 2008 Weighting Scenario</u>
The weighting of the criteria categories were adjusted to the following for this analysis:

Technical	=	21,44%
Environmental	=	14,53%
Socio-Economic	=	26,40%
Strategic	=	37,63%

Layout A was preferred, as per the 2009 base case. The relative preference of other layouts did not match up (preference was A-C-D-B in the base case and A-D-C-B with this sensitivity analysis indicating change in the order of preference), but relative preference for Layout A was emphasized even stronger than with the 2009 base case. Each of the sensitivity analysis results is plotted in purple against the 2009 base case results in blue, as per the graph below.

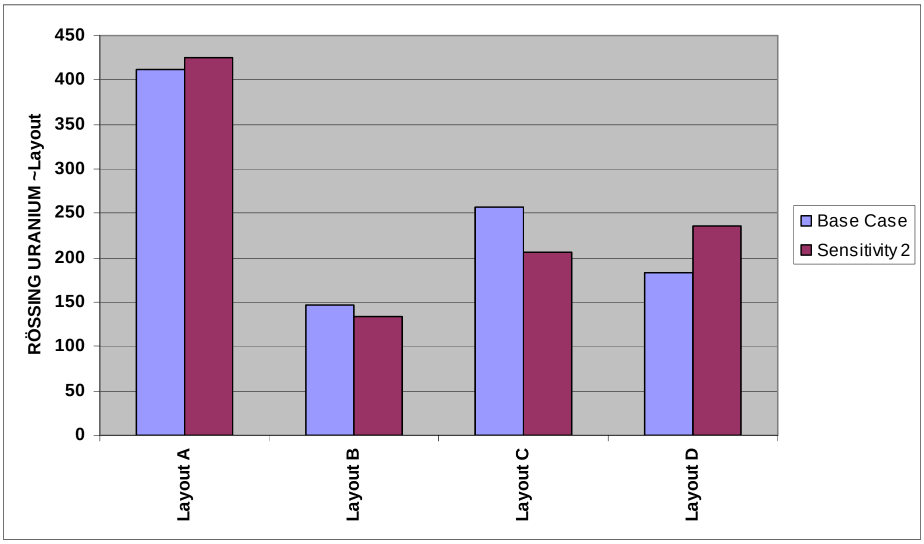


Sensitivity 2: All Criteria Equal

The weighting of the criteria categories were adjusted to the following for this analysis:

Technical	=	25,00%
Environmental	=	25,00%
Socio-Economic	=	25,00%
Strategic	=	25,00%

Similar to Sensitivity 1, Layout A was preferred, as per the base case. Relative preference of other layouts again not matching up against the 2009 base case, but relative preference for Layout A emphasized even stronger than with the base case.

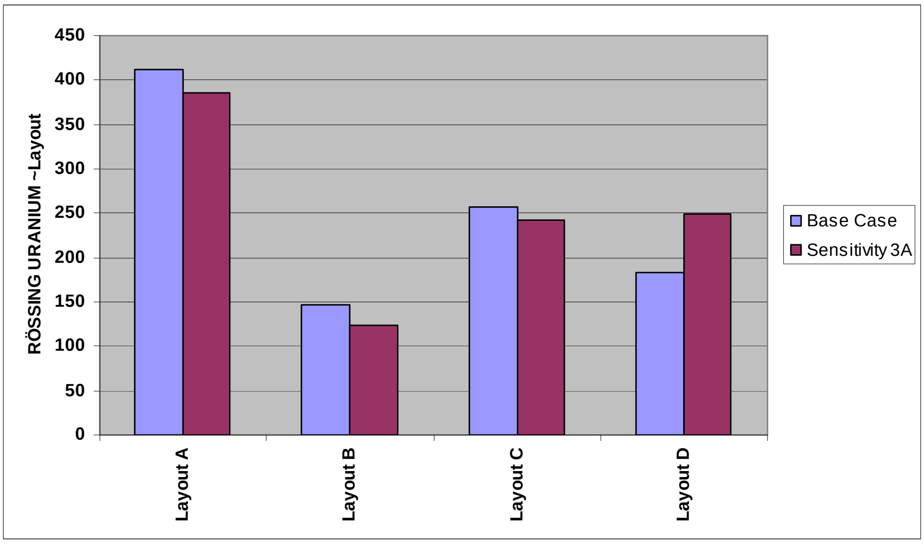


Sensitivity 3: Discounting a Criteria Category and Remaining Criteria Being Equal

The weighting of the criteria categories were adjusted to the following for the first analysis discounting strategic criteria and remaining criteria being equal:

Technical	=	33,33%
Environmental	=	33,33%
Socio-Economic	=	33,33%
Strategic	=	00,00%

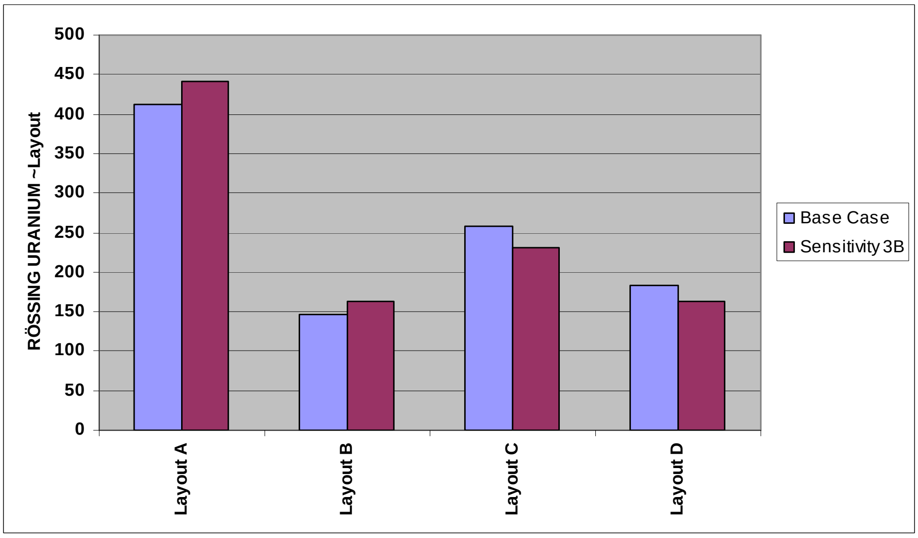
This scenario further confirmed the preference for Layout A, although other layouts were again not matching the relative preference of the base case.



The weighting of the criteria categories were then adjusted to the following for the next analysis discounting technical criteria and remaining criteria being equal:

Technical	=	00,00%
Environmental	=	33,33%
Socio-Economic	=	33,33%
Strategic	=	33,33%

The results matched the relative preference of the base case.

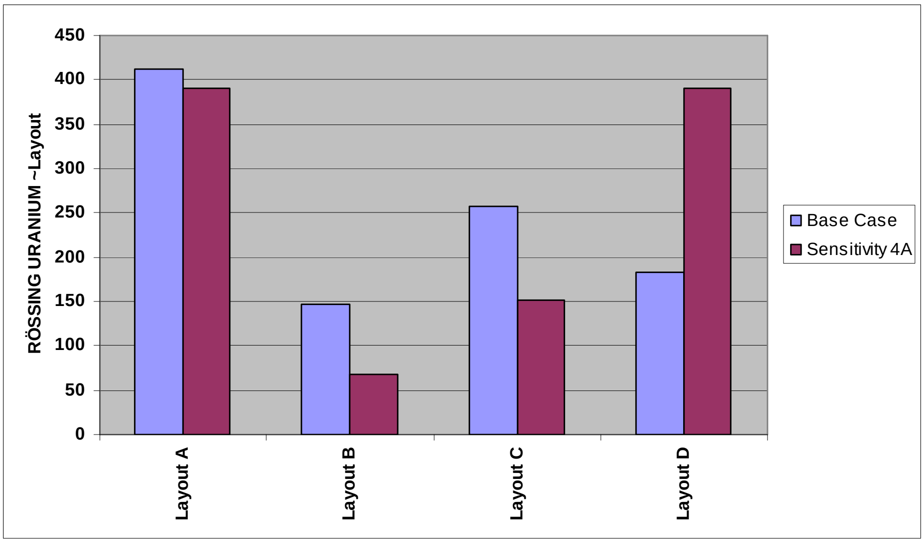


Sensitivity 4: Each Criteria on its Own

The weighting of the criteria categories were adjusted to the following for this first analysis:

Technical	=	100,00%
Environmental	=	000,00%
Socio-Economic	=	000,00%
Strategic	=	000,00%

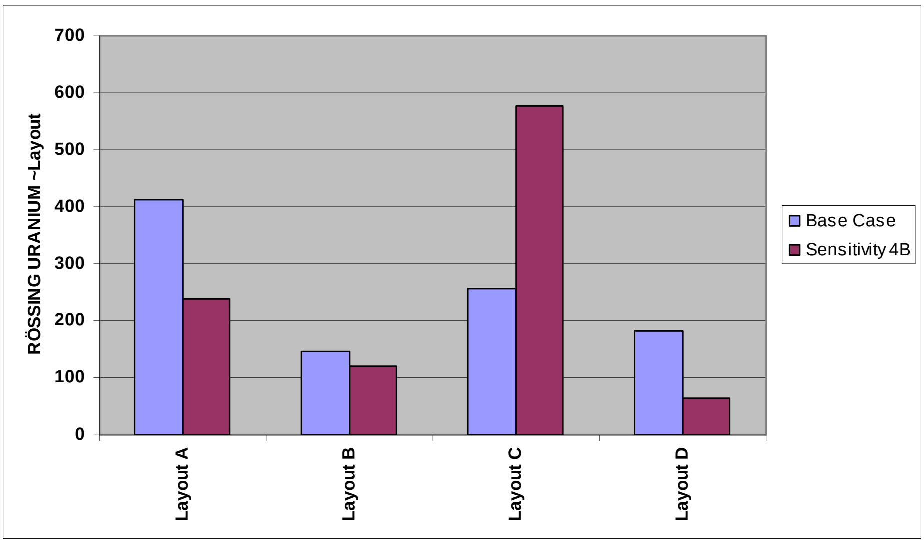
This resulted in Layouts A and D having equal preference, followed by Layouts C and B in that order.



The weighting of the criteria categories were then adjusted to the following:

Technical	=	000,00%
Environmental	=	100,00%
Socio-Economic	=	000,00%
Strategic	=	000,00%

This resulted in Layout C being the preferred alternative, followed by Layouts A, B and D in that order.

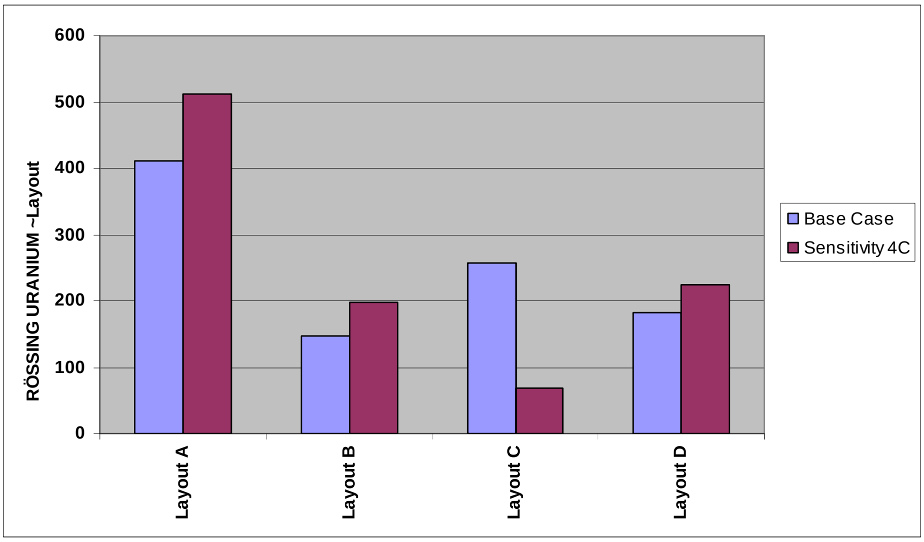


This sensitivity analysis confirms the preference for Layout C based on the environmental criteria in isolation, given that this is the only layout that does not impact on the dome area that has been identified as an area of biodiversity importance.

The weighting of the criteria categories were adjusted to the following for the third analysis:

Technical	=	000,00%
Environmental	=	000,00%
Socio-Economic	=	100,00%
Strategic	=	000,00%

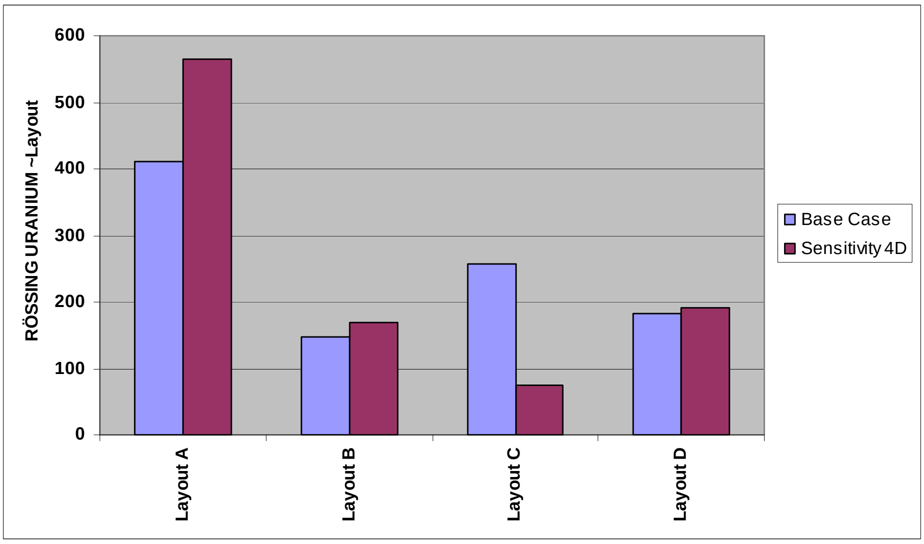
This resulted in Layout A being the preferred alternative, followed by Layouts D, B and C respectively.



Ultimately, the weighting of the criteria categories were adjusted to the following:

Technical	=	000,00%
Environmental	=	000,00%
Socio-Economic	=	000,00%
Strategic	=	100,00%

Similarly, this resulted in Layout A being the preferred alternative, followed by Layouts D, B and C respectively.



5. Way Forward

Layout A, with the heap leach and ripios facilities on the existing Tailings Storage Facility (TSF), and HDT on the Dome, is the preferred alternative. Rössing Uranium needs to establish and confirm the strategic acceptability of Layout A, given that the Dome area has been identified as an area of biodiversity importance. Opting for Layout A would inevitably impact on the current habitat on the Dome, although this is not considered unique. Rössing Uranium needs to prioritise biodiversity fieldwork to clarify the significance of this habitat and species to be potentially impacted upon, possibly through studying similar habitats further afield in Erongo.

The final outcome in terms of layout preference will feed into the Phase 2 Social and Environmental Impact Assessment process for the expansion project, to assess its associated social and environmental impacts in detail. Although unlikely, should Layout A prove to be unsuitable, the other layouts could be re-evaluated in more detail.

6. Appendices

Appendix A: Draft Agenda ~ 26 March 2009 Workshop
Appendix B: Attendance List ~ 26 March 2009 Workshop
Appendix C: Criteria Master List
Appendix D: Layout Ranking Results

APPENDIX A: Draft Agenda ~ 26 March 2009 Workshop

DRAFT AGENDA

RÖSSING URANIUM LIMITED LAND USE PLANNING FOLLOW-UP MCDM WORKSHOP 2009

Rössing Uranium Limited
Swakopmund Offices

Day 1	**26 March 2009**
8.00 – 8.15	Welcome and introduction (Rainer Schneeweiss)
8.15 – 8.30	Summary of MCDM Model application in 2008 (Andries van der Merwe)
8.30 – 10.00	Criteria weighting (Rainer Schneeweiss & Andries van der Merwe)
10.00 – 10.30	Tea break
10.30 – 12.00	Ranking of layouts (Rainer Schneeweiss & Andries van der Merwe)
12.00 – 12.30	Finger lunch
12.30 – 14.30	Ranking of layouts (Rainer Schneeweiss & Andries van der Merwe)
14.30 – 16.30	Sensitivity analysis (Andries van der Merwe)
Day 2	**27 March 2009**
8.00 – 9.30	Review the outcome and recommendations (Rainer Schneeweiss & Andries van der Merwe)

APPENDIX B: Attendance List ~ 26 March 2009 Workshop

RÖSSING URANIUM LIMITED LAND USE PLANNING FOLLOW-UP MCDM WORKSHOP 2009

Rössing Uranium Limited, Swakopmund Offices

ATTENDANCE LIST: DAY 1 – 26 March 2009

Name	Email	Telephone	Role
Pierre Smit	pierre.smit@riotinto.com	+264-64-5202741	Supt Environmental and Asset Resource Stewardship, Sustainable Development Department
Brian Gerrell	bgerrell@rossing.com.na	+264-81-1282410	Manager Innovation, Projects Department, coordinating metallurgical test work
Martin Errington	martin.errington@riotinto.com	+44-791-7185248	Engineering Consultant, Rio Tinto Technology & Innovation, advising on engineering and costing aspects
Stephanie Brayshaw	stephanie.brayshaw@riotinto.com	+264-81-1282068	Supt Projects, Projects Department, coordinating civil and geotechnical work
Rainer Schneeweiss	rainer.shneeweiss@riotinto.com	+264-64-5202213	Supt land Use Management, Projects Department, coordinating the SEIA and land use management
Du Preez Calitz	dupreez.calitz@riotinto.com	+264-81-1247647	Manager Projects, Projects Department, responsible for implementation of engineering projects
Anneke du Plessis	vanderwesthuizen.anneke@riotinto.com	+264-81-2464898	Supt Environmental Management, HSE Department, responsible for the HSE – MS and environmental technical support
Paul le Roux	paul.leroux@riotinto.com	+264-81-1249168	Supt Safety, HSE Department, responsible for safety management
Stellio Tsauseb	stellio.tsauseb@riotinto.com	+264-81-1410694	Supt Tailings Dam & Water Management, Processing Department, responsible for operations and planning of the tailings storage facility and water management
Dave Garrard	dave.garrard@riotinto.com	+264-81-1494908	Manager Development Projects, Projects Department, coordinating feasibility studies for strategic projects
Andries van der Merwe	andries.vandermerwe@af.aurecongroup.com	+27-83-2764626	Associate, Environmental Skills Group, Aurecon George, MCDM Model facilitator

APPENDIX C: Criteria Master List

Criteria List

TECHNICAL

Height and distance from plant, heap leach or pit

Conveyor/haul routes and cycle times

Power consumption, diesel consumption and general equipment wear-and-tear

Topography and elevation

Terrain preparation

Cut off grade (will affect volumes/leach recovery)

Volume and area footprint

Material profile (final)

Stability and settlement (liner tear risk)

Sufficient buffer for fly rock

Deposition method (conveyor, pipeline, paddies, thickened, dry stacking, race track, on-off)

Geohydrology

Subsurface stability

Lining requirements

Leachate management

Storm water permeability

Closure

Cover requirements

Long term stability

ENVIRONMENTAL

Ecology

Biodiversity

Flora and fauna (including red listed species)

Ecological services

Impact on habitat

Dust due to wind erosion

Land Use, footprint extension

Resource use (water, energy)

Water losses due to wind

Power consumption

Residual seepage impact

Geohydrology

Water quality

Closure

Rehabilitation

Long term leachate

SOCIO-ECONOMIC

Air quality impact and control options

Distance from Arandis (potential health impact on inhabitants)

Surface area exposed (radon emissions)

Sence of place and visual impact, both with respect to colour and height

Archaeology

Geohydrology - Resource Use

Closure - Long term emissions (i.e. water, air)

STRATEGIC

Sterilisation of ore reserves and future drilling areas

Surrounding land uses

Sequencing

Reputation and closure

Bad and good practice

Extend operational footprint into undisturbed areas

Impact on habitat (possible loss of red listed species)

Potential development of Rossing South

Note: Highlighted sub-criteria were selected for the weighting of the criteria categories using the MCDM methodology.

APPENDIX D: Layout Ranking Results

RioTinto

LAYOUTS

- Technical criteria

RÖSSING URANIUM LIMITED ~Layouts~

TECHNICAL	LAYOUT A	LAYOUT B	LAYOUT C	LAYOUT D	PRIORITY
LAYOUT A	1	5	3	1	0.391
LAYOUT B	1/5	1	1/3	1/5	0.067
LAYOUT C	1/3	3	1	1/3	0.151
LAYOUT D	1	5	3	1	0.391
				CR	1.16%

aurecon

LAYOUTS

- Socio-Economic criteria

RÖSSING URANIUM LIMITED ~Layouts~

SOCIO-ECONOMIC	LAYOUT A	LAYOUT B	LAYOUT C	LAYOUT D	PRIORITY
LAYOUT A	1	3	5	3	0.511
LAYOUT B	1/3	1	3	1	0.197
LAYOUT C	1/5	1/3	1	1/5	0.067
LAYOUT D	1/3	1	5	1	0.224
				CR	4.16%

RioTinto

LAYOUTS

- Environmental criteria

RÖSSING URANIUM LIMITED ~Layouts~

ENVIRONMENTAL	LAYOUT A	LAYOUT B	LAYOUT C	LAYOUT D	PRIORITY
LAYOUT A	1	3	1/3	3	0.238
LAYOUT B	1/3	1	1/5	3	0.121
LAYOUT C	3	5	1	7	0.578
LAYOUT D	1/3	1/3	1/7	1	0.064
				CR	3.71%

aurecon

LAYOUTS

- Strategic criteria

RÖSSING URANIUM LIMITED ~Layouts~

STRATEGIC	LAYOUT A	LAYOUT B	LAYOUT C	LAYOUT D	PRIORITY
LAYOUT A	1	5	5	3	0.565
LAYOUT B	1/5	1	3	1	0.169
LAYOUT C	1/5	1/3	1	1/3	0.074
LAYOUT D	1/3	1	3	1	0.192
				CR	4.87%

RÖSSING URANIUM LIMITED ~Layouts~

RANKING RESULTS ORIGINAL AHP	TECHNICAL	ENVIRONMENTAL	SOCIO-ECONOMIC	STRATEGIC	PRIORITY
RELATIVE WEIGHT	9.67%	37.93%	29.01%	23.38%	100.00%
LAYOUT A	0.391	0.238	0.511	0.565	0.408
LAYOUT B	0.067	0.121	0.197	0.169	0.149
LAYOUT C	0.151	0.578	0.067	0.074	0.271
LAYOUT D	0.391	0.064	0.224	0.192	0.172

RANKING RESULTS IDEAL MODE AHP	TECHNICAL	ENVIRONMENTAL	SOCIO-ECONOMIC	STRATEGIC	FINAL PRIORITY	NORMALISED
RELATIVE WEIGHT	9.7%	37.9%	29.0%	23.4%	100.0%	100.0%
LAYOUT A	1.00	0.41	1.00	1.00	0.78	**412**
LAYOUT B	0.17	0.21	0.39	0.30	0.28	**147**
LAYOUT C	0.39	1.00	0.13	0.13	0.49	**257**
LAYOUT D	1.00	0.11	0.44	0.34	0.35	**183**
					1.89	**1000**