

PROJECT PHOENIX

**Public participation process meeting
4th September 2012
17:00
Kumba Cinema Hall**

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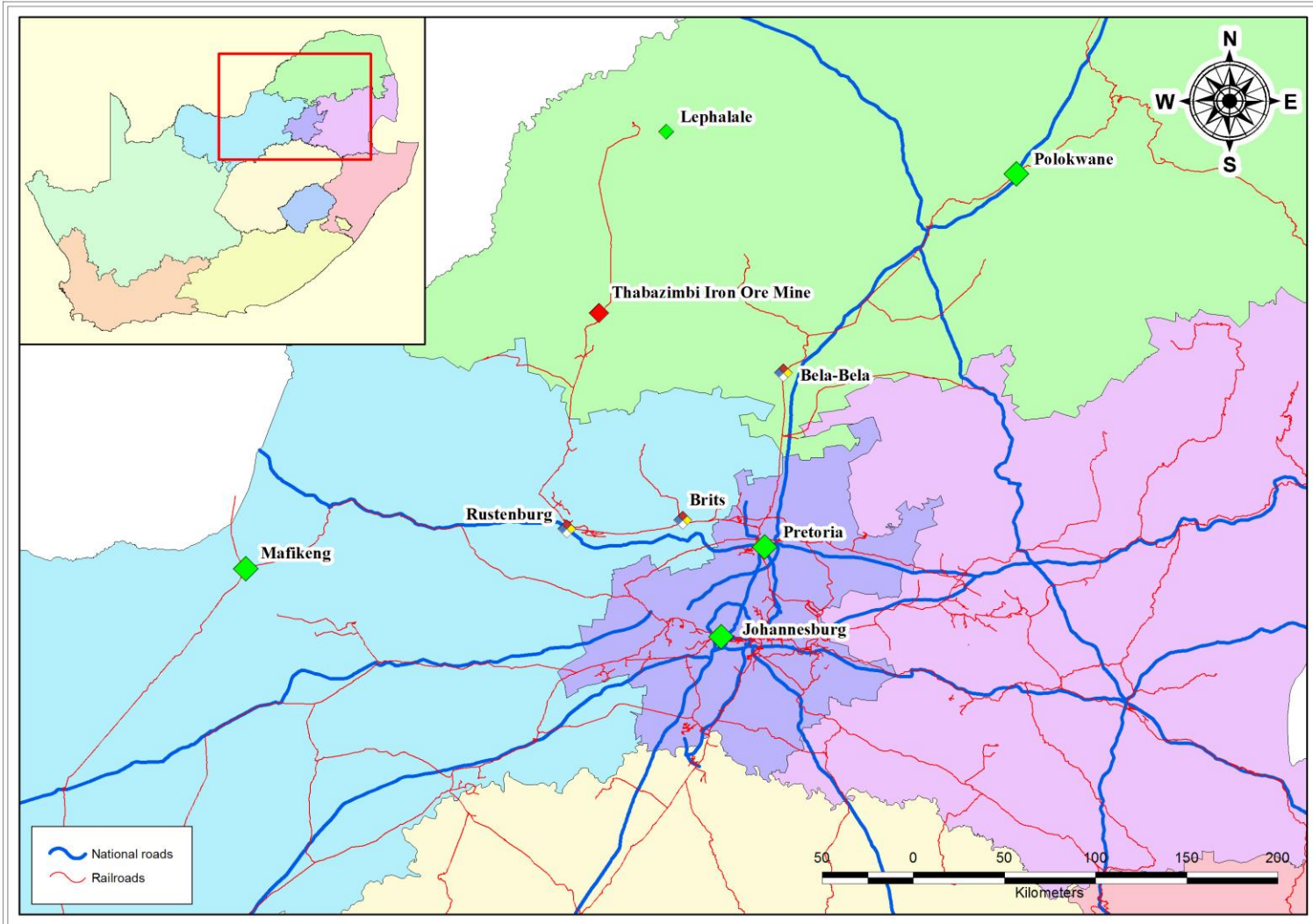
1. Purpose of the meeting
2. Background to the Phoenix project
3. Discussion of various proposed EIA activities
4. Expected impacts
5. Process to be followed
6. Road ahead

1. PURPOSE OF THE MEETING

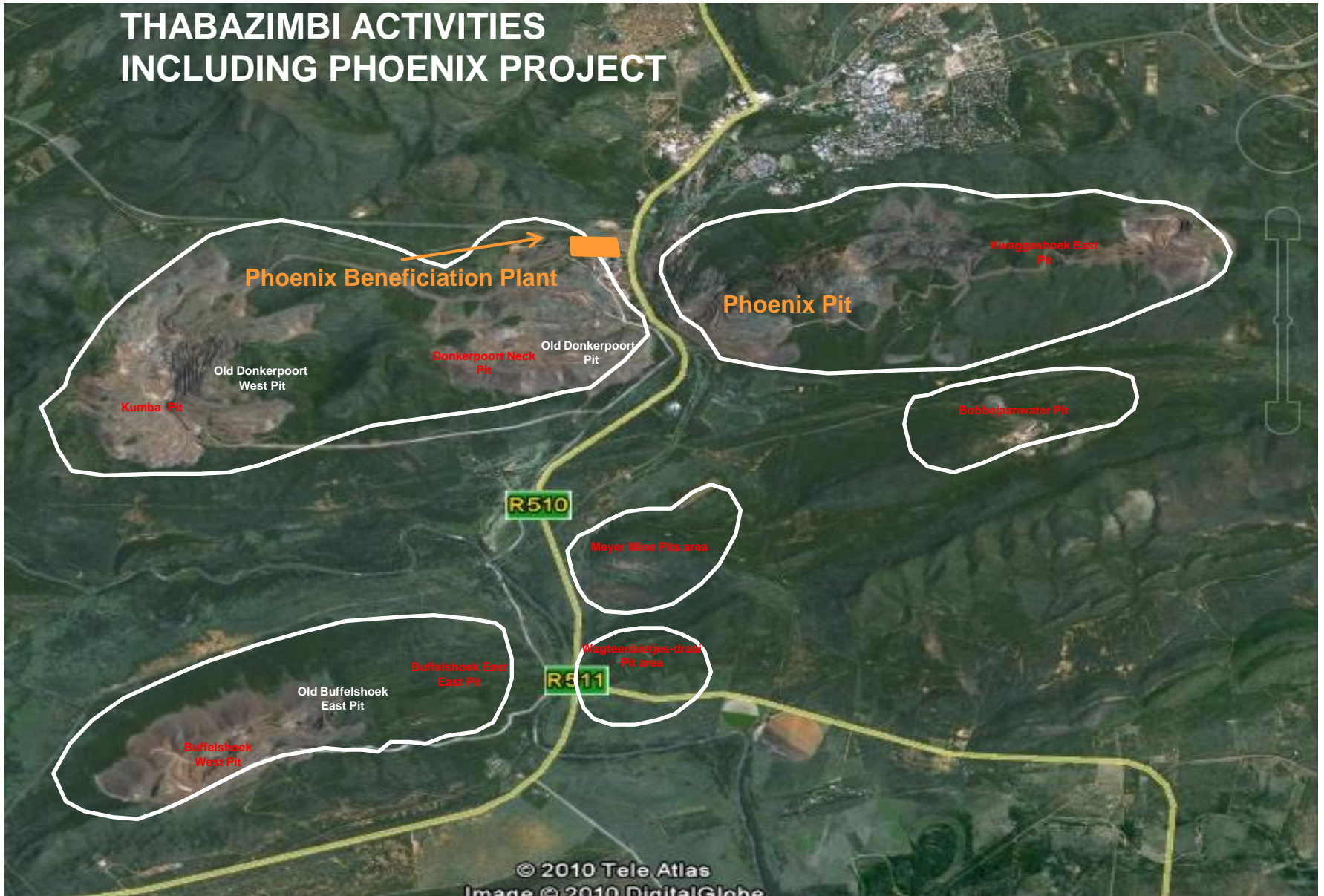
- Present the proposed Phoenix project to the public & organs of state,
- Present the process to be followed as part of the EIA
- Allow the public & organs of state the opportunity to ask questions on the project.

2. BACKGROUND TO THE PHOENIX PROJECT

LOCALITY MAP



THABAZIMBI ACTIVITIES INCLUDING PHOENIX PROJECT



Underground operations



Open cast operations



Background to the mining activities at Thabazimbi:

- 1919 - Prospecting started
- 1931 - The mine officially opened as an underground mine
- 1997 - Underground operations were discontinued.

Activities from 1931 to date ...

- Underground tunnels : 447,4 km
- Ore produced : 156 Mt
- Waste : 708 Mt
- The mine is constantly busy with exploration to extend the life of the mine
- Approved life of mine – end of 2016.

MOTIVATION FOR THE PHOENIX PROJECT

- The LOM of the Thabazimbi mine is reaching its end in 2016. Kumba is investigating possibilities to extend the LOM by at least 20 years by exploiting the large low grade iron ore resources in the form of banded ironstone formations (BIF).

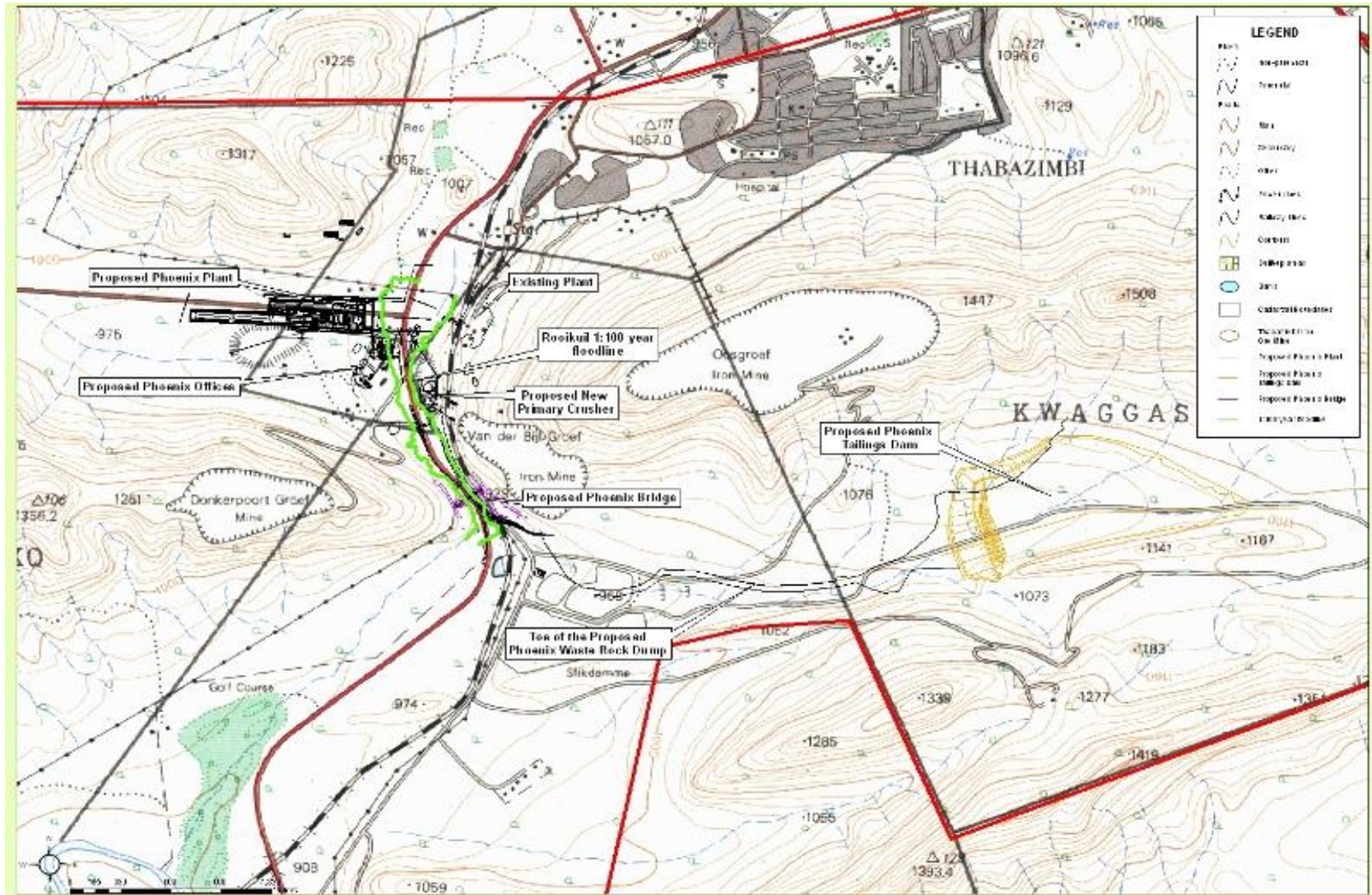
The above two factors give rise to the Phoenix Project.

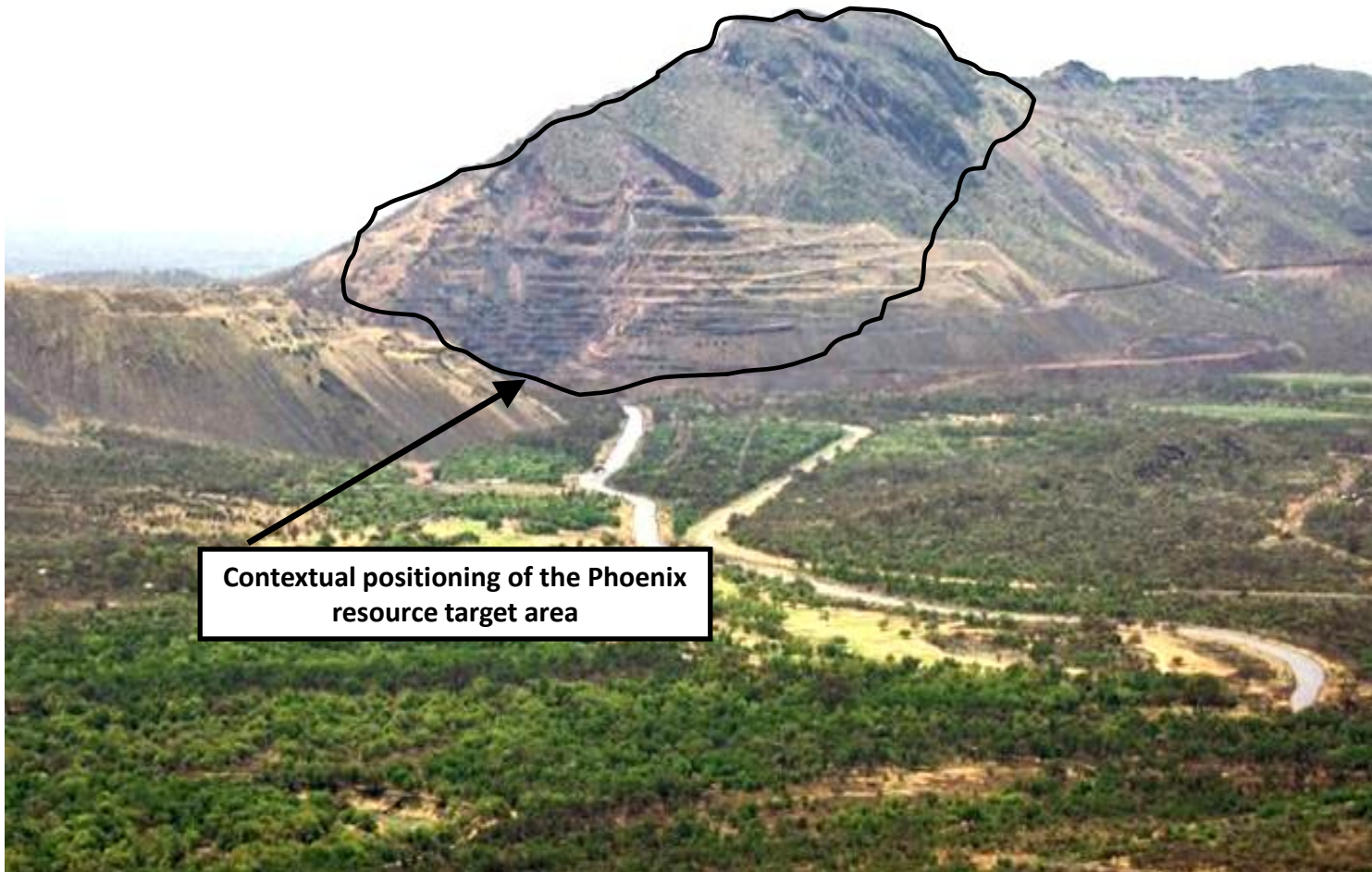
- The current operational plant at Thabazimbi is not equipped to treat the banded ironstone earmarked for the Phoenix Plant.
- The Phoenix Project will ensure utilisation of material that has previously been classified as sub-standard material.
- Beneficiation of ore that has been classified as material that cannot be beneficiated by the existing plant or that has not been removed from the pit areas due to the nature of the material.

- Phoenix Project was re-started in 2009.
- Project Phoenix involves the mining of banded ironstone and using improved processing technologies. All activities will take place within the existing mining right area.
- Project Phoenix exploration involves drilling and bulk sampling.
 - The exploration for Project Phoenix - in old underground tunnels & above ground.
 - Above ground exploration - drilling and a bulk sampling process whereby the material will be removed and treated in the pilot plants.

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- The bulk sample will be blasted and taken by means of conventional loading and hauling mining methods.
 - Approximately 750 000 t of material (ore and waste rock) will be removed as a bulk sampling. This will take place mainly in the Vanderbijl pit area.
 - Two pilot plants namely JIG (crushing & screening) and a High Density Separation will be constructed.
 - The results from the pilot plants will be used to support final feasibility study for the Phoenix Project.

PHOENIX PLANT & ASSOCIATED INFRASTRUCTURE





Contextual positioning of the Phoenix
resource target area

PROJECT PHASES



3. DISCUSSION OF VARIOUS PROPOSED EIA ACTIVITIES

PROPOSED PHOENIX ACTIVITIES (EIA ACTIVITIES)

- Two slimes and one return water pipelines of 150mm (each) and length of 6km delivering slimes from the plant to the slimes dam and return water from the slimes dam which will cross the Rooikuispruit resulting in impediment and diversion of the flow of water and alteration of the bed and banks in the Rooikuispruit.
- Construction of slimes dam number 5.
- Two 150mm diameter (each) slimes pipelines delivering slimes from plant to the slimes dam with a combined throughput of more than 120ℓ per second.
- Conveyor structures crossing the Rooikuispruit transporting ore from the plant load out station approximately 1 kilometer and crossing Rooikuispruit from the crusher to the plant.
- Levelling (altering) of the Rooikuispruit bed to improve the water flow, and lining of the Rooikuispruit to prevent seepage from the spruit into Van der Bijl pit.
- Construction of 132Kv power line crossing over the Rooikuispruit.

PROPOSED PHOENIX ACTIVITIES (EIA ACTIVITIES)

- Bridge support structures crossing over the R510 Thabazimbi northern road to provide access from Van der Bijl pit to Donkerpoort crossing the Rooikuilsspruit.
- Construction of an additional railway siding to accommodate the new ore beds.
- Construction of 6,5 km haul roads within the mining area with a width of 23 m.
- Various existing and future infrastructure e.g. haul roads, waste rock dumps and slimes dam facilities that alter storm water drainage lines originating in the Kwaggashoek, Van der Bijl, Bobbejaanwater, Donkerpoort, Buffelshoek and Meyer mine areas that require a water use license.

PROPOSED PHOENIX ACTIVITIES (EIA ACTIVITIES)

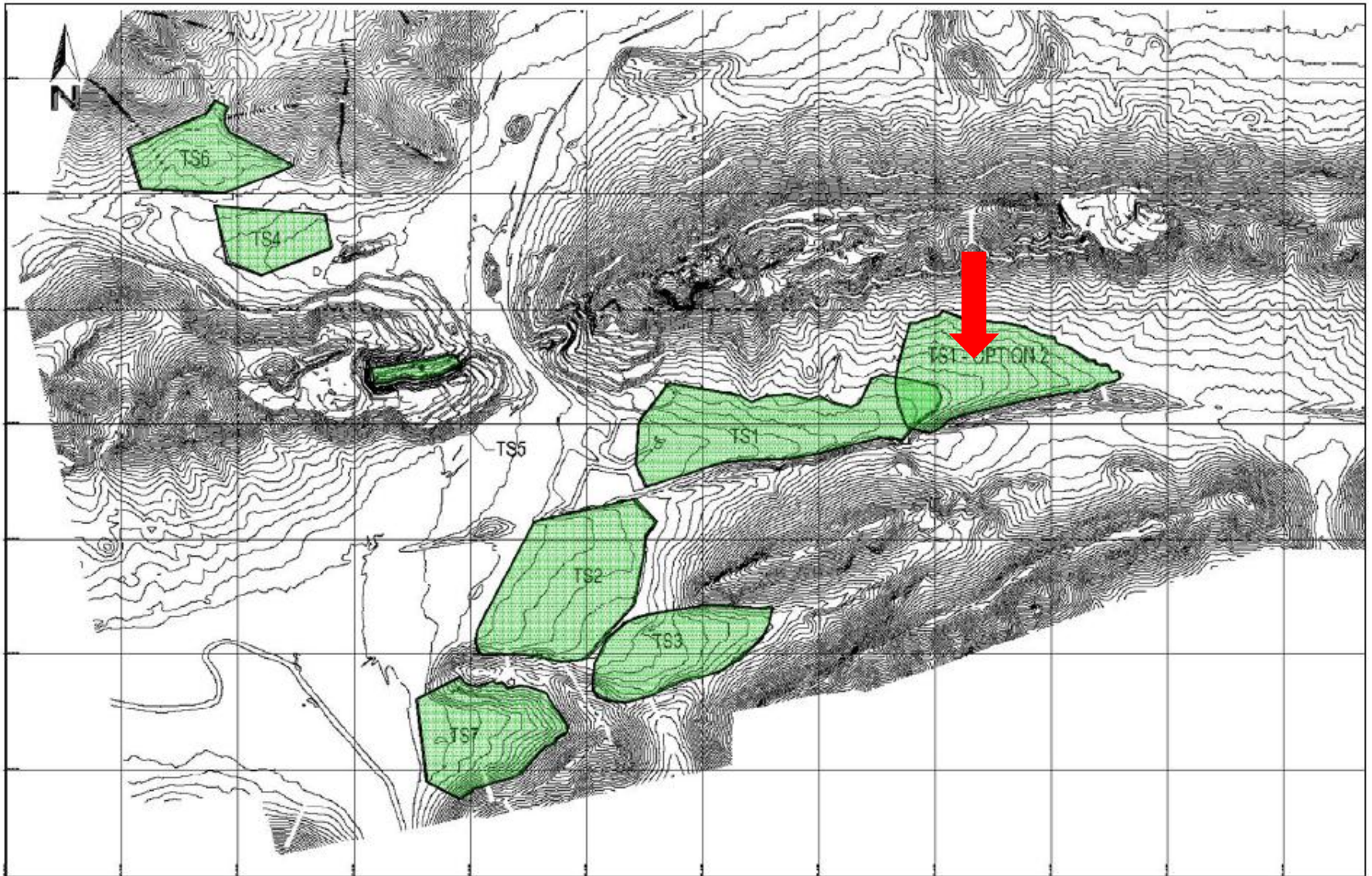
Pipelines consisting of two slimes and one return water pipelines with diameter of 150mm (each) and length of ± 6 kilometers for the purpose of delivering slimes from the new plant to the slimes dam and return water from the slimes dam which will cross the Rooikuilspruit resulting in impediment and diversion of the flow of water and alteration of the bed and banks in the Rooikuilspruit.



AngloAmerican

PROPOSED PHOENIX ACTIVITIES (EIA ACTIVITIES)

Construction of slimes dam number 5.



PROPOSED PHOENIX ACTIVITIES (EIA ACTIVITIES)

Construction of ± 6 kilometers, two 150mm diameter (each) slimes pipelines delivering slimes from the new plant to the slimes dam and one 150mm diameter return water pipeline with a combined throughput of more than 120ℓ per second.

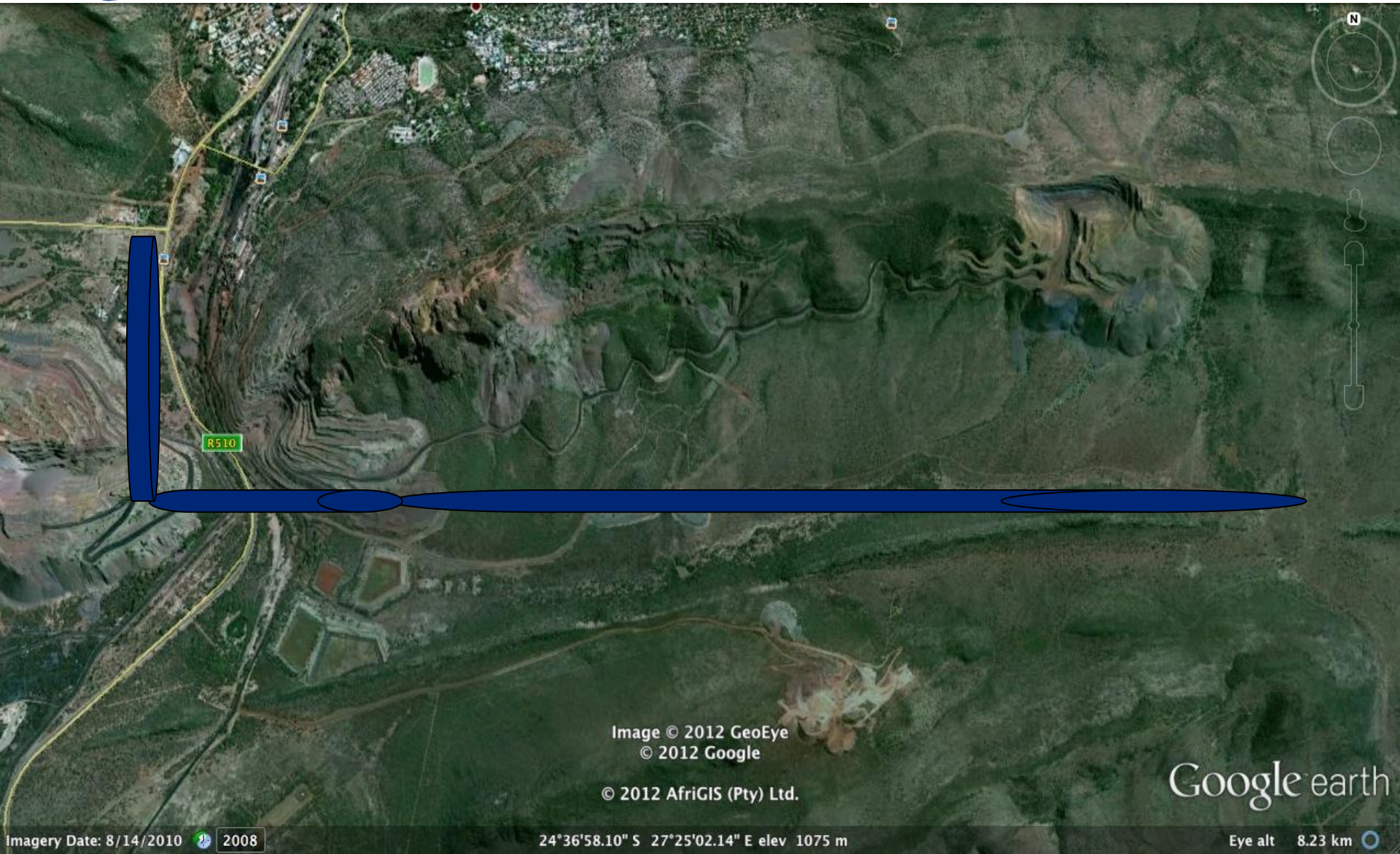


Image © 2012 GeoEye
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Google earth

Imagery Date: 8/14/2010 2008

24°36'58.10" S 27°25'02.14" E elev 1075 m

Eye alt 8.23 km

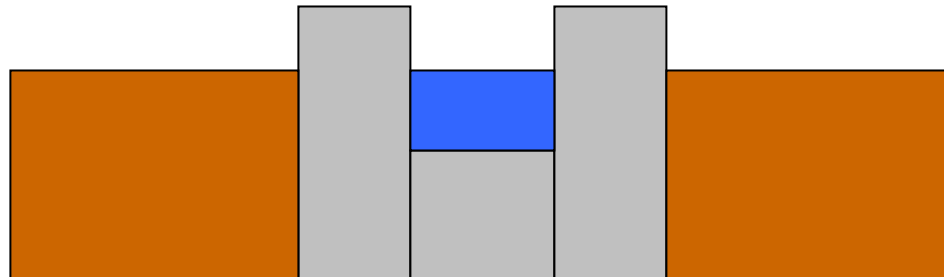
PROPOSED PHOENIX ACTIVITIES (EIA ACTIVITIES)

Conveyor structures crossing the Rooikuispruit transporting ore from the plant load out station approximately 1 kilometer and crossing Rooikuispruit from the crusher to the plant approximately 4 kilometres in length resulting in impediment and diversion of the flow of water and alteration of the bed and banks in the Rooikuispruit.

PROPOSED PHOENIX ACTIVITIES (EIA ACTIVITIES)

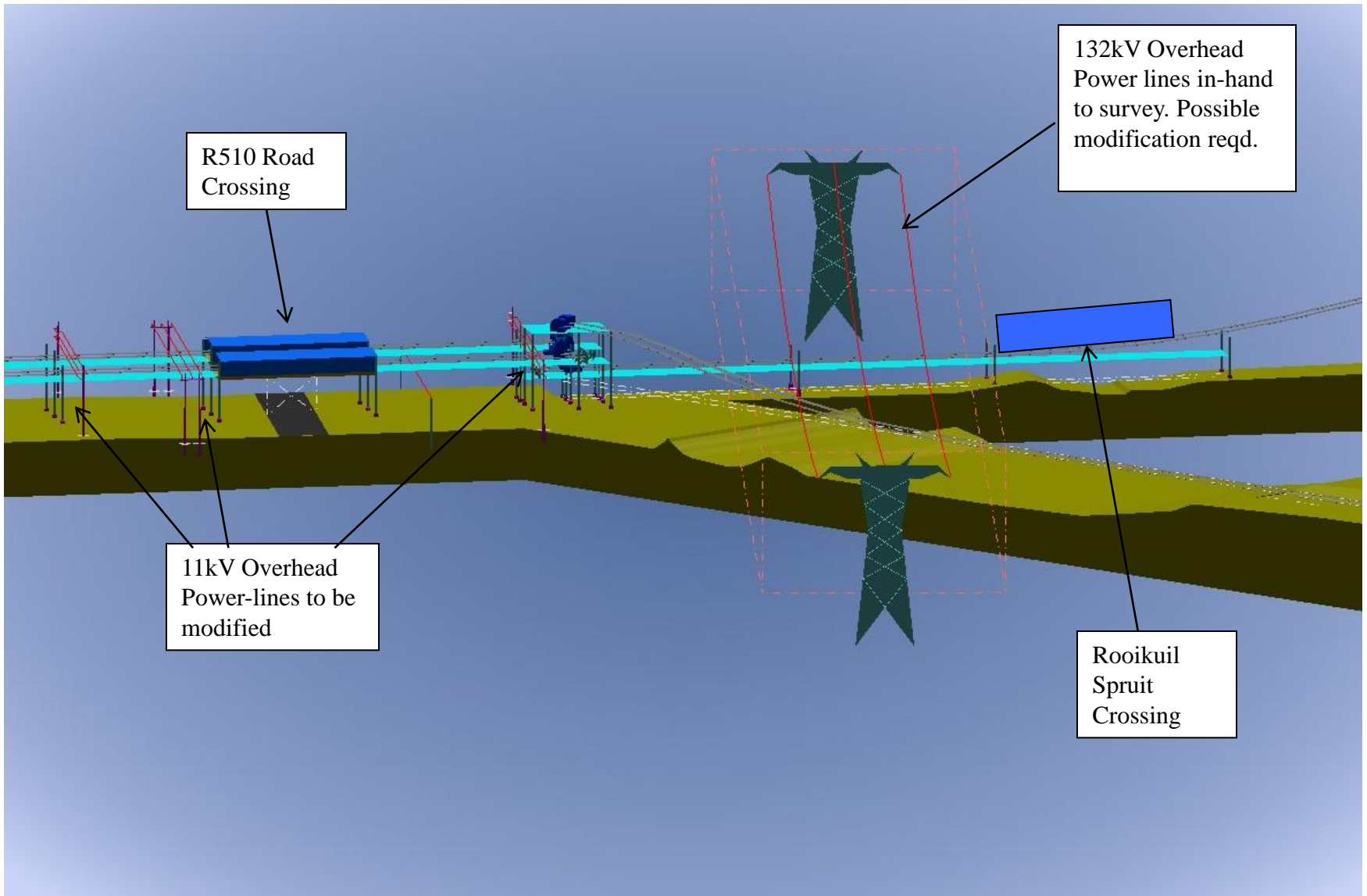
Levelling (altering) of the Rooikuilspruit bed to improve the water flow, and lining of the Rooikuilspruit to prevent seepage from the spruit into Van der Bijl pit.

The potential lining of the Rooikuitspruit near the proposed Phoenix Plant to improve flow characteristics of the watercourse



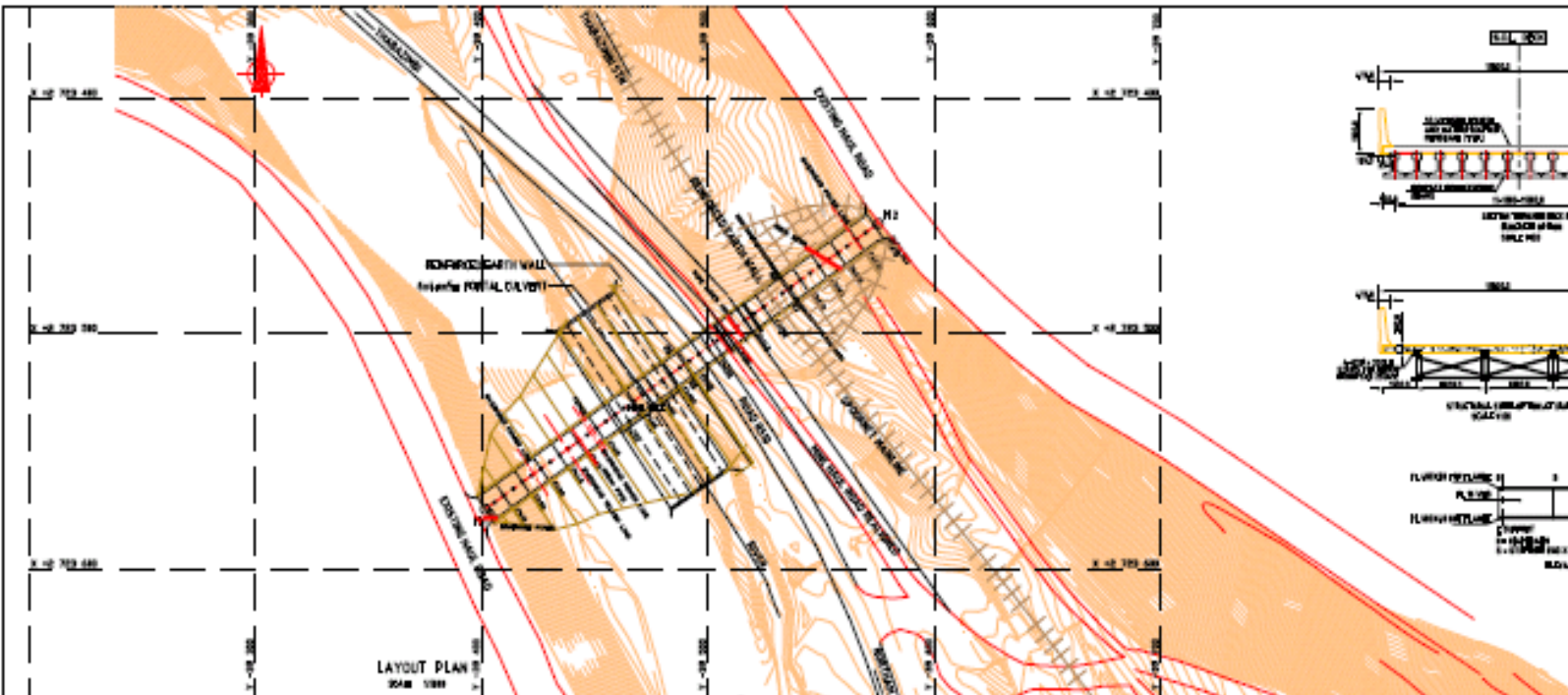
PROPOSED PHOENIX ACTIVITIES (EIA ACTIVITIES)

Construction of 132Kv power line crossing over the Rooikuilspruit. The support structures of the power line can result in impediment and diversion of the flow of water and alteration of the bed and banks in the Rooikuilspruit. The route, length and servitude width will be a subject of alternative assessment.



PROPOSED PHOENIX ACTIVITIES (EIA ACTIVITIES)

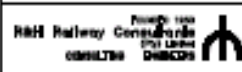
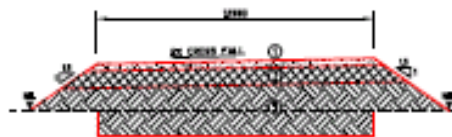
Bridge support structures crossing over the R510 Thabazimbi northern road to provide access from Van der Bijl pit to Donkerpoort crossing the Rooikuilspruit resulting in impediment and diversion of the flow of water and alteration of the bed and banks in the Rooikuilspruit.



COORDINATE LIST L027			
PROPOSED BRIDGE ABUTMENTS			
ABUT	1-0000	1-0000	
A1	-00000	000000	
A2	-00000	000000	
A3	-00000	000000	
A4	-00000	000000	



- LAYER DESCRIPTIONS**
- WEARING COURSE LAYER - TYPICAL WITH 100mm MINIMUM DRAINAGE COURSE
 - BASE LAYER: 100mm LAYER OF GRAVEL / 100mm LAYER OF CONCRETE / 100mm LAYER OF CONCRETE / 100mm LAYER OF CONCRETE / 100mm LAYER OF CONCRETE
 - SURFACE LAYER: 100mm LAYER OF CONCRETE / 100mm LAYER OF CONCRETE / 100mm LAYER OF CONCRETE



KUMBA RESOURCES
PHOENIX PROJECT
THABAZIMBI

HAUL ROAD OPTIMIZATION
PROPOSED BRIDGE
100mm CONCRETE & STEEL OPTIONS

REVISION NO.	REVISION DESCRIPTION	BY	CHKD	DATE	REVISION	BY	CHKD	DATE	REVISION	BY	CHKD	DATE	REVISION	BY	CHKD	DATE
1	ISSUED FOR DISCUSSION PURPOSES															
2	DESIGN CHANGES															
3	FINAL DESIGN															

LAYOUT AND SECTIONS		
PROJECT No.	REVISION No.	REV
5005	100	003
G001		001

PROPOSED PHOENIX ACTIVITIES (EIA ACTIVITIES)

Construction of an additional railway siding to accommodate the new ore beds.

PROPOSED PHOENIX ACTIVITIES (EIA ACTIVITIES)

Construction of 6, 5 km haul roads within the mining area with a width of 23 meters.

PROPOSED PHOENIX ACTIVITIES (EIA ACTIVITIES)

Various existing and future infrastructure e.g. haul roads, waste rock dumps and slimes dam facilities that alter storm water drainage lines originating in the Kwaggashoek, Van der Bijl, Bobbejaanwater, Donkerpoort, Buffelshoek and Meyer mine areas that require a water use license.

4. EXPECTED IMPACTS

Construction phase

- Noise (structures)
- Dust (structures)
- Traffic (bridge, conveyor, pipelines and siding)
- Fauna and Flora (RKS leveling, pipeline construction)
- Surface water run-off (crossing of drainage lines, RKS leveling, haul roads)
- Topography (haul roads)
- Archaeology
- Visual impact (structures)
- Soil (pipelines, haul roads)



Operational phase

- Surface water run-off (crossing of drainage lines, RKS leveling, haul roads)
- Topography (haul roads)
- Visual impact (mining activities, structures)
- Soil (pipelines, haul roads)
- Land use and land capability (all activities)
- Mining (road closure, blasting)



Decommissioning and closure phase

- Surface water run-off (crossing of drainage lines)
- Topography (discard dumps, waste rock dumps)
- Land use and land capability (all activities)

5. PROCESS TO BE FOLLOWED

The following process will be followed:

- Public participation process until 17 September 2012
- Submission of Scoping Report November 2012
- Commencement of specialist studies September 2012 – March 2013
- Submission of EIAR & EMP April 2013

List of specialist studies:

- Economic study,
- Air Quality study,
- Biodiversity (fauna & flora study),
- Blasting & vibration study,
- Climate study,
- Geo-hydrology study,
- Hydrology study,
- Noise study,
- Visual study,
- Traffic study,
- Heritage study,
- Paleontological study,
- Social impact study.

6. ROAD AHEAD

THANK YOU