

Action	Time Schedule
Rehabilitated opencast areas will be actively monitored and maintained. This will include, amongst other, removal of grass growth by mowing and baling or controlled grazing and eradication of weeds.	Throughout Operational Phase.
3. Ensure that land that is not used for mining is utilised sustainably.	
The sustainable productive use of land that is not used by the mining activities will be maximised and controlled.	Throughout Operational Phase.
4. Ensure that the final end land use is agreed upon.	
Ensure that the final end land use of Navigation West Section is agreed with the relevant Regulatory Authorities.	During the Operational Phase, but prior to the onset of the Decommissioning Phase.

### 2.3.6 Natural Vegetation

Objective	: To minimise impacts of mining on natural vegetation.
Specific Goals	: Ensure that Red Data species and vegetation within the sensitive vegetation units are conserved and monitored. Ensure that the mining operation has minimum impact on natural vegetation.

Technical / Management Options:	<p>The General Manager or his appointed representative will ensure that the commitments in this EMP are applied. A suitably qualified person will be employed to conduct a vegetation survey on rehabilitated areas and to monitor the status of sensitive vegetation units adjacent to the mining area. The General Manager will ensure that the vegetation surveys and monitoring are conducted on rehabilitated areas and sensitive vegetation units adjacent to the mining area.</p>
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Action	Time Schedule
1. Ensure that Red Data species and vegetation within the sensitive vegetation units are conserved and monitored.	
No development will occur within 30 m of the 1 in 100 year floodline of the seasonal stream or within the wetland habitats of any non-perennial tributaries.	Throughout Life of Mine.
The areas of untransformed terrestrial Grassland and Rocky Grassland vegetation unit, situated adjacent to the seasonal stream in the reserve, will not be developed, but conserved as a buffer.	Throughout Life of Mine.
2. Ensure that the mining operation has minimum impact on natural vegetation.	
Backfilled and rehabilitated workings will be seeded with an	As soon as mined cuts are

Action	Time Schedule
appropriate seed mixture.	rehabilitated.
Vegetation cover inspection of rehabilitated land will be conducted.	Annually during Operational Phase of mining.
All declared alien weeds will be effectively controlled.	Throughout Life of Mine.

### 2.3.7 Animal Life

Objective	: To minimise impacts of mining on animal life.
Specific Goals	: Ensure that the fauna of the site are impacted as little as possible. Monitor the status of the Grass Owls ( <i>Tyto capensis</i> ) in the riparian vegetation associated with the unnamed tributary of the Grootspuit.

#### Technical / Management Options:

The General Manager or his appointed representative will ensure that the commitments in this EMP are applied. A suitably qualified person will be employed to conduct monitoring of the status of animal life on the mine, particularly that of the Grass Owls (*Tyto capensis*).

Action	Time Schedule
1. Ensure that the fauna of the site are impacted as little as possible.	
Activities will be restricted to pre-determined designated areas	Throughout Life of Mine
Construction and operational activities will be limited to as small an area as practically possible	Throughout Life of Mine
Disturbed soil will be immediately rehabilitated with vegetative species typical of the area	Throughout Life of Mine
An environmental awareness programme for the education of the workforce will be instituted	Throughout Life of Mine
A warning and punishment system (such as fining of guilty parties) will be implemented if workers are discovered poaching	Throughout Life of Mine
Movement of heavy vehicles will stringently be restricted to predetermined pathways and designated areas	Throughout Life of Mine
Low speed limits will be implemented for vehicular traffic within the proposed Navigation West Section mining boundary area	Throughout Life of Mine
If the presence of any of the sensitive faunal species or signs thereof are noted, the specialised relocation of the species under the guidance of the relevant authority will be undertaken before continuation of the Operational Phase activities in the affected and immediately surrounding areas	Throughout Life of Mine

Action	Time Schedule
2. Monitor the status of the Grass Owls ( <i>Tyto capensis</i> ) in the riparian vegetation associated with the unnamed tributary of the Grootspuit.	
The status of the Grass Owls adjacent to the unnamed tributary of the Grootspuit will be monitored.	Throughout Life of Mine

## 2.3.8 Surface Water

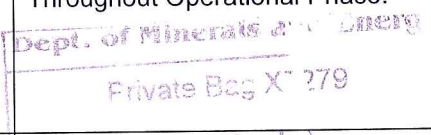
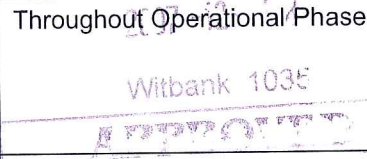
### 2.3.8.1 General

Objective	: To reduce impacts of mining on surface water run-of patterns, and thus loss of MAR within all catchments (surface water quantity).
Specific Goals	: <p>Ensure that minimum clean rainfall water is contaminated within opencast pit area at the mine.</p> <p>Ensure that clean runoff reporting to the opencast pit is minimised.</p> <p>Storm water management measures that will be implemented during the Construction Phase will be maintained during the Operational Phase to ensure their fitness for use for the original intended purpose.</p> <p>An appropriate person will be appointed by the mine to accept responsibility for ensuring the integrity of the water management system at all times.</p> <p>Ensure that the surface water management measures for the Navigation West Section; South Block are designed by a suitably qualified person.</p> <p>Ensure that compliance with the requirements of the NWA, 1998 (Act 36 of 1998) and Regulations GN 704, dated June 1999, there under is achieved.</p> <p>Ensure that the impacts on sensitive landscapes such as the wetlands and pan within the Navigation West Section boundary area are managed appropriately.</p>

#### Technical / Management Options:

The General Manager or his appointed representative will ensure that the mining plan is followed, and that rehabilitated areas conform to the proposed rehabilitation design. The General Manager or his appointed representative will ensure that the push-up berms are constructed around the open cuts to divert clean runoff water around the workings. The General Manager or a responsible person appointed by the General Manager will inspect the water containment and surface water management structures on a monthly basis to monitor the integrity of the system and to conduct a performance assessment from which preventive actions and corrective actions can be formalised.

Action	Time Schedule
1. Ensure that minimum clean rainfall water is contaminated within opencast pit area at the mine.	
The mining will be conducted according to the mining plan i.e.	As per mining plan during

Action	Time Schedule
preceding cuts are filled and rehabilitated. This will reduce the size of the void resulting in less rainfall water being in contact with contaminating material in the open cuts. Only three cuts will be opened at any given time.	Operational Phase of the mine.
2. Ensure that clean runoff reporting into the opencast pit is minimised.	
All clean water will be diverted around the mining area. The mine will maintain these diversion berms / trenches to ensure that no blockages occur.	On a weekly basis during Operational Phase
The surface diversion berms and drains will be kept free from any obstructions (debris) to ensure that the efficiency is not affected. Changes to the layout of the storm water control measures will be implemented, if required, to accommodate actual conditions and to enhance the efficiency of the management system	Once a week during Operational Phase , on a daily basis during the rainy season, especially after storm events
Repair of damages due to erosion and scouring of areas should be performed following storm events. Normal continuous maintenance throughout Life of Mine will also be performed for all slopes, berms and points of discharge (i.e. clearing of silts and sediments washed into drains, erosion marks will be filled up again, berms will be kept in tact, etc.)	Following storm events. Normal maintenance should be undertaken on a weekly basis during Operational Phase
3. Storm water management measures that will be implemented during the Construction Phase will be maintained to ensure their fitness for use for the original intended purpose.	
Ensure that the storm water management measures that will already have been implemented during the Construction Phase are not only maintained but also upgraded or extended if required, to accommodate actual conditions	Throughout Operational Phase. 
Concurrent rehabilitation (i.e. the backfilling of opencast voids) will be undertaken in such a manner as to ensure slopes that promote free-draining surfaces and erosion needs to be monitored and repaired	Throughout Operational Phase. 
An application for Exemption from Regulation GN 704(4)(c), dated June 1999, under the NWA, 1998 (Act 36 of 1998) will be submitted to the DWAF for the backfilling of the opencast voids.	Prior to December 2007. Conditions of approval of the requested Exemption will be implemented throughout Life of Mine
Surface subsidence and differential settlement will be repaired by backfilling and sloping operations. Damming of water on the surface will be limited	Throughout the operational and Decommissioning Phases
No excessive ponding will be allowed on rehabilitated areas.	Survey done after backfilling and rehabilitation of mined out cuts.
Continuous managing, improvement and monitoring of the water balance will be undertaken to identify risk areas and excess water volumes, and for reporting on conditions on a monthly	Throughout Operational Phase

Action	Time Schedule
base	
All activities associated with the Operational Phase will be conducted outside the 1 in 100-year flood plane of the adjacent watercourse	Throughout the operational and Decommissioning Phases
4. An appropriate person will be appointed by the mine to accept responsibility for ensuring the integrity of the water management system at all times	
Monitoring of the surface water volumes and infrastructure will be undertaken, in accordance with the surface water monitoring programme.	Commencing during Construction Phase and will continue throughout the operational and Decommissioning Phases
5. Ensure that the surface water management measures for the Navigation West Section; South Block are designed by a suitably qualified person.	
A suitably qualified person will be appointed prior to the commencement of the Construction Phase of the Navigation West Section; South Block for the design of appropriate surface water management measures.	Prior to the Construction Phase of the Navigation West Section; South Block.
The surface water management measures for the Navigation West Section; South Block will be designed to comply with legislative requirements.	Prior to the Construction Phase of the Navigation West Section; South Block.
The surface water management measures for the Navigation West Section; South Block will be implemented according to the design specifications.	During the Construction Phase of the Navigation West Section; South Block.
6. Ensure that compliance with the requirements of the NWA, 1998 (Act 36 of 1998) and Regulations GN 704, dated June 1999, there under is achieved.	
The conditions of the approved Integrated Water Use Licence (IWUL), under the NWA, 1998 (Act 36 of 1998) will be implemented.	Throughout Operational Phase.
Compliance to the condition of the IWUL will be audited annually, and reported to the DWAF.	Annually, throughout Operational Phase.
Compliance with Regulations GN 704, titled "Regulations on use of water for mining and related activities aimed at the protection of water resources", dated June 1999, under the NWA, 1998 (Act 36 of 1998), will be audited annually, and reported to the DWAF.	Annually, throughout Operational Phase.
7. Ensure that the impacts on sensitive landscapes such as the wetlands and pan within the Navigation West Section boundary area are managed appropriately.	
The management measures stipulated in Section 2.2.11 will be stringently implemented.	During Construction Phase and throughout Life of Mine.

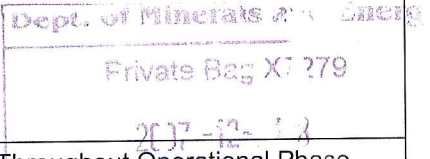
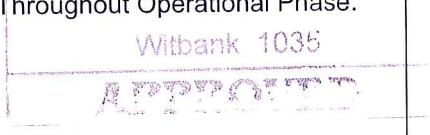
Objective	:	To reduce impacts of mining on surface water quality
Specific Goals	:	The potential for contaminated water generation will be minimised.

Affected water will be captured and contained in the purpose-built dirty water containment facilities.

Surface water monitoring will be implemented to verify whether the surface water management measures implemented are sufficient to mitigate the possible impacts.

#### Technical / Management Options:

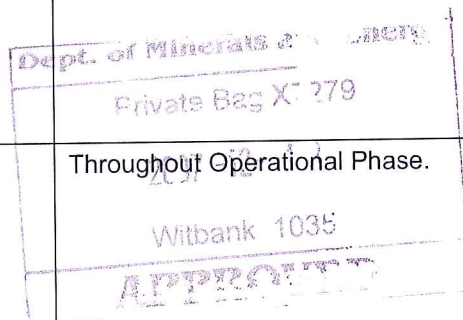
The General Manager or his appointed representative will ensure that the mining plan is followed, and that rehabilitated areas conform to the proposed rehabilitation design. The General Manager or his appointed representative will ensure that the push-up berms are constructed around the open cuts to divert clean runoff water around the workings. The General Manager or a responsible person appointed by the General Manager will inspect the water containment and surface water management structures on a monthly basis to monitor the integrity of the system and to conduct a performance assessment from which preventive actions and corrective actions can be formalised.

Action	Time Schedule
1. The potential for contaminated water generation will be minimised.	
Clean water will be separated from dirty water.	Commencing during Construction Phase and will continue throughout the operational and Decommissioning Phases.
The extent of dirty water areas will be minimised.	Commencing during Construction Phase and will continue throughout the operational and Decommissioning Phases.
The contaminated water generated on site will be contained within the dirty water management system and will not be discharged (or allowed to flow) to clean downstream areas. Isolation barrier berms for the mine area, Tip area and haul roads will be provided.	Throughout Operational Phase. 
The potential for contaminated water generation will be minimised. All in-pit water make will be directed towards a sump area or contained in a temporary in-pit hold impoundment, to limit surface pollution and to provide water for dust suppression and re-use.	Throughout Operational Phase. 
The retained contaminated water will either be used for dust suppression, allowed to evaporate, or be transferred to the dirty water management system of Navigation Section. The volume of contaminated water used for dust suppression will be controlled to ensure that excessive ponding or runoff is not generated.	Throughout Operational Phase.

Action	Time Schedule
Dust suppression will be undertaken in dedicated areas, particularly areas within the dirty water management area, thus reducing the possible contamination of soils with contaminated water.	Throughout Operational Phase.
The location and sizes of the impoundments will be managed and maintained to ensure that contaminated water emanating from within the affected mine area is contained, in accordance with the water balance.	Throughout Operational Phase
No construction, repair or maintenance of any water management facilities or roads will be undertaken with any material (such as coal residue) that may cause pollution of water resources.	Throughout Operational Phase.
The mined-out strips will be progressively rehabilitated and the drainage patterns will be reinstated.	Throughout the operational and Decommissioning Phases.
Investigation and verification of the probability of decant to surface will be undertaken, and a solution will be developed that meets the overall decant handling strategy for Landau Colliery.	During Operational Phase.
Detailed specific surface water management measures for the Navigation West Section, South Block will be designed by a suitably qualified person once the mine plan for the South Block has progressed sufficiently, but prior to the onset of any construction or related activities in the South Block area.  Once the appropriate surface water management measures to enable compliance with all applicable legislative requirements have been completed, the mine will update its EMP document accordingly.	During Operational Phase, prior to Construction Phase of the South Block.
No contaminated water from the diesel tank will be discharged.	Throughout Operational Phase.
All contaminated water reporting in the bunded area will be drained to an oil separator.	Throughout Operational Phase.
Separated hydrocarbons will be disposed of in accordance with the relevant legislation.	Throughout Operational Phase.
Operation of the hydrocarbon storage facilities will be checked on a regular basis, to ensure that they are in working order, and to ensure that any malfunctions or irregularities are attended to and / or repaired as soon as possible.	On a weekly basis, throughout Operational Phase.
2. Affected water will be captured and contained in the purpose-built dirty water containment facilities.	
Affected water will be captured and contained in the purpose-built Pollution Control Pond, Evaporation Pond and in-pit impoundments.	Throughout Operational Phase.
The dirty water management facilities such as the Pollution Control Pond and the Evaporation Pond will be operated in such a manner as to ensure that the available capacity and freeboard	Throughout Operational Phase.

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Action	Time Schedule
required by the applicable regulations are adhered to at all times.	
Spillages of any material that may cause pollution of surface water resources, such as carbonaceous material, outside of the isolated dirty water management areas, will be regularly removed and mitigation measures implemented when necessary.	Throughout Operational Phase.
To avoid excessive coal spillages on the proposed haul roads, trucks will be restricted to within applicable weight limitations and suitable management measures enforced, such as reduced speed limits and covering of the coal trucks.	Throughout Operational Phase.
Hydrocarbon pollution management measures, such as oils traps, will be required and will be implemented and maintained in the workshop area.	Throughout Operational Phase.
The management measures pertaining to the storage and disposal of domestic and hazardous waste described in the EIA will be implemented to avoid any possible contamination of surface water resources or soils.	Throughout Operational Phase.
No discharges of water containing waste to the receiving water body will be allowed without the required authorisation(s) to do so.	Throughout Operational Phase.
The domestic waste water (sewage) generated at the Navigation West Section will be pumped via a purpose intended pipeline constructed during the Construction Phase, to the existing sewage treatment plant located at the operational Navigation Section of Landau Colliery for treatment and appropriate disposal, discharge or re-use.	Throughout Operational Phase.
The effectiveness of the process water return pipeline and domestic waste water pipeline, which will have been buried during the Construction Phase, will have been constructed to operate under pressure and also, through utilisation of flow meters, it is intended to reduce the risk of spillages and thus possible pollution incidents.	Throughout Operational Phase.
3. Surface water monitoring will be implemented to verify whether the surface water management measures implemented are sufficient to mitigate the possible impacts.	
It will be ensured that the water quality downstream of the site does not exceed any of the relevant target water quality guidelines for all water user categories as prescribed in the South African Water Quality Guidelines, dated 1996, due to the Operational Phase activities associated with the proposed Navigation West Section.	Throughout Operational Phase.
The monitoring of surface water that will have initiated prior to commencement of the Construction Phase will continue throughout the Operational Phase..	Throughout Operational Phase.





Action	Time Schedule
Surface water monitoring will be integrated in a total monitoring programme that includes all relevant disciplines (groundwater, air, soils, vegetation, topography, etc.) and will not be seen in isolation.	Throughout Operational Phase.
The existing monitoring programme at Landau Colliery will be extended to also include the requirements for the proposed Navigation West Section, which were described in the report titled, "A Division of Anglo Operations Ltd. Landau Colliery. Navigation West Block Opencast. Inputs to the Environmental Impact Assessment and Environmental Management Programme for the Landau Colliery EMPR. Navigation West Opencast (North Block). Surface Water". Report No: IPC/NAVWEST/P1/2006/01, dated February 2007, compiled by Introcon Consultants cc.	Throughout Operational Phase.

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### 2.3.8.2 Flood Events

Objective	: To minimise impacts of floods on water pollution control structures.
Specific Goals	: Ensure that all pollution control structures do not impact on surface water during flood events

#### Technical / Management Options:

The Pollution Control Pond and Evaporation Dam have been designed to cater for a 1:50 year rainfall event. The diversion trenches will be constructed to channel water from a 1:50 year rainfall event. The General Manager or his appointed representative will ensure that all pollution control structures maintenance checks and repairs are conducted timeously.

Action	Time Schedule
1. Ensure that all pollution control structures do not impact on surface water during flood events.	
All pollution control structures will be inspected after a flood rainfall event for signs of erosion. Water levels will be checked to ensure that the operational capacities are maintained	24 hours after a flood rainfall event.
All damages and erosion will be rectified	Within 24 hours of discovery.
Ensure that compliance with the requirements of the Regulations GN 704 on the use of water for mining and related activities	Throughout the Construction and Operational Phases.
Should an event greater than a 1:50 year flood event occur, and it is necessary for the mine to discharge contaminated water, emergency authorisation from the DWAF will be applied for prior to the commencement of such discharge. Monitoring of the surface water quality within the receiving water bodies will take place following	During a flood larger than a 1:50 year event.  Monitoring will be undertaken

Action	Time Schedule
such discharge, and the integrity of the surface water management infrastructure will be inspected and repaired immediately, where necessary. If the data from the monitoring of affected water bodies following an extreme event greater than a 1:50 year storm event indicates that the impacts of the discharge of contaminated water from Navigation West Section are significant, suitable rehabilitation and remediation action will be taken as soon as possible after the flood to mitigate any damage that may have been caused as a result of the discharging of contaminated water.	following a flood larger than a 1:50 year event.  If necessary, rehabilitation will be undertaken following a flood larger than a 1:50 year event.

### 2.3.8.3 Dewatering and Discharge

Objective	: To minimise impacts of poor water quality on the environment.
Specific Goals	: Ensure that contaminated storm water captured in the opencast pit does not impact on the environment.

#### Technical / Management Options:

The General Manager or his appointed representative will ensure that water within the pit is not discharged but collected within the in-pit impoundments, and when these are filled, the contaminated water in the pit will be pumped to Navigation Section, either for treatment at the existing treatment Plant at Navigation and re-use, or for treatment at the SACE water treatment Plant for the sale of water.

Action	Time schedule
1. Ensure that water captured in the opencast pit does not impact on the environment	
All in-pit water make will be kept within an in-pit hold impoundment as far as possible, and excess water make will be pumped to the existing Navigation Section for treatment at either the existing Navigation treatment Plant or at the SACE water treatment Plant, or alternatively underground mine storage will be considered.	In the process of mining throughout Life of Mine

### 2.3.9 Groundwater

Objective	: To minimise impacts resulting from mining on groundwater.
Specific Goals	: Minimise the impact of the Navigation West Section mining activities on groundwater quality and availability.  Minimise seepage to groundwater and thus minimise groundwater contamination and prevent degeneration of groundwater quality.  Ensure that groundwater monitoring is implemented.  Implement surface water management measures.

Minimise the extent of disturbance to the aquifer.

#### Technical / Management Options:

The General Manager or his appointed representative will ensure that contaminated water within the pit is not discharged into a water resource but pumped into the in-pit impoundments. If the in-pit impoundments are full, the excess in-pit water will be pumped to the Navigation Section for treatment and possibly re-use. The Mine Manger or his appointed representative will ensure that the groundwater-monitoring programme is implemented.

Action	Time Schedule
1. Minimise the impact of the Navigation West Section mining activities on groundwater quality and availability.	
Opencast areas will be rehabilitated as soon as available to reduce the availability of oxygen and volume of infiltration thereby reducing the possible generation of AMD.	Throughout the Operational Phase.
Preceding cuts will be filled and rehabilitated to reduce void size. Only three cuts will be open at any given time.	As per mining plan during Operational Phase of the mine.
Backfilling of the voids as part of concurrent rehabilitation will be according to sequential layering of carbonaceous material with highest pollution potential at the bottom of the pit.  The appropriate application for an Exemption from Regulation GN 704(4)(c), dated June 1999, will be submitted to the DWAf, Regional Office.	As open cuts are mined but  During the Construction Phase, as part of the updated IWULA.
2. Minimise seepage to groundwater and thus minimise groundwater contamination and prevent degeneration of groundwater quality.	
Dirty water will be contained in fit-for-purpose holding facilities. The Pollution Control Pond will be constructed using a HDPE liner to promote water tightness and minimise the volume of contaminated water seepage to the groundwater.	Commencing during the Construction Phase, and continuing throughout Operational Phase.
The Pollution Control Pond and the Evaporation Pond will be checked for damages and seepage due to cracks or any other faults.	On a weekly basis for the first six months and then every month.
3. Implement surface water management measures.	
Prevent contact of clean runoff water with coal.	Throughout the Operational Phase.
Contain all dirty water in the Pollution Control Pond, the Evaporation Pond and in the in-pit impoundments.	Throughout the Operational Phase.
Berms will be implemented and maintained to divert clean runoff water around dirty water management areas.	Throughout the Operational Phase.

Action	Time Schedule
All clean water runoff diversion systems will be maintained and a push up berm will be constructed upslope of the pit. This berm will divert runoff water from the pit area, and will move as mining progresses.	As per storm water diversion plan during Operational Phase of the mine.
4. Ensure that groundwater monitoring is implemented.	
Boreholes will be monitored for groundwater level and quality to assess the impacts on the groundwater.	On a quarterly basis.
The results of the water quality monitoring will be used to verify the rate of movement of the groundwater pollution plume, as well as to update the water balance.  The numerical model can be calibrated using such data and different management and rehabilitation options should be evaluated.	On a quarterly basis.  Updating of the water balance will be undertaken annually.  Calibration of the numerical model will be undertaken every two years, or when project changes are considered.  Evaluation of rehabilitation options will be undertaken annually.
The in-pit water table will be monitored in order to verify the predicted rate of decant after Closure. The monitoring results will be used as a design parameter for the proposed Closure water management measures. It therefore provides an opportunity to obtain measured values against the current conservative prediction of < 20 m <sup>3</sup> /h.	During Operational Phase.
Appropriate management measures will be designed for decant management once the volume of decant can be confirmed.	During Operational Phase.
5. Minimise the extent of disturbance to the aquifer.	
If it is found that the yield and quality of the groundwater of surrounding users are affected, an alternative water resource will be provided to replace the loss.	If necessary, during Operational Phase.

### 2.3.10 Air Quality

Objective	: To minimise the impacts of mining on local air quality.
Specific Goals	: Ensure that impacts from dust and diesel fumes generated by machinery on local air quality are minimised.  Ensure that impacts from dust generated by blowing wind on local air quality are minimised.  Ensure that impacts from dust generated by blasting on local air quality are minimised.  Implement an air quality monitoring programme.

**Technical / Management Options:**

The General Manager or his appointed representative will ensure that all machinery are maintained and in good repair.

The General Manager or his appointed representative will ensure that dust suppression is undertaken as per the prescribed stipulations.

Action	Time Schedule
1. Ensure that impacts from dust and diesel fumes generated by machinery on local air quality is minimised	
All machinery employed on site will be in good repair, and well maintained.	Throughout Operational Phase and Life of Mine.
All machinery will be fitted with the correct exhaust systems, which will be maintained and in good repair.	Throughout Operational Phase and Life of Mine.
All trucks transporting material from the proposed mining operation will be required to obey a maximum 40 km / h speed limit. This will reduce the generation of dust on the haul roads.	Throughout Operational Phase and Life of Mine.
Movement of vehicles will be restricted to areas where dust suppression will be undertaken, as far as practical.	Throughout Operational Phase and Life of Mine.
Contaminated water will be re-used for dust suppression within isolated dirty water management areas. Where this is ineffective, alternative dust suppression methods will be investigated and implemented.	Throughout Operational Phase and Life of Mine.
2. Ensure that impacts from dust generated by blowing wind on local air quality is minimised.	
The size of exposed areas subject to dust generation will be minimised.	During Operational Phase and throughout Life of Mine.
Dust suppression will be undertaken during the Operational Phase on haul roads and stockpiling areas where movement of machinery may generate dust.	Twice daily throughout Life of Mine and if necessary frequency will increase.
Approximately 40 m <sup>3</sup> of contaminated water will be allocated for dust suppression that will be implemented by means of a water cart.	Daily, more frequently if need be.
Water for dust suppression purposes will be obtained from the process water circuit at Navigation West Section.	During Operational Phase and throughout Life of Mine.
Continuous rehabilitation of available surface land use areas will be performed on schedule, with special emphasis on re-vegetation, to limit areas exposed to wind erosion.	During Operational Phase and throughout Life of Mine.
The rehabilitated workings will be seeded with a recommended seed mix. This will reduce dust generation.	As soon as open cuts are rehabilitated.
3. Ensure that impacts from dust generated by blasting on local air quality is minimised.	
Blasting holes will be stemmed prior to blasting.	During Operational Phase

Action	Time Schedule
	and throughout Life of Mine.
4. Implement an air quality monitoring programme.	
A highly effective and accurate air quality monitoring programme will be implemented, which will include data collection, modelling and emission measurements. The results of the monitoring programme will be measured against applicable air quality criteria.	During Operational Phase and throughout Life of Mine.

### 2.3.11 Sensitive Landscapes

Objective	: To minimise the potential impacts on aspects associated with the wetlands forming part of the Navigation West Section.
Specific Goals	: Ensure that impacts on wetland areas that will not be mined through are limited. Ensure that impacts of mining at Navigation West Section do not result in loss of animal life. Ensure that monitoring of the flora and fauna located within sensitive habitats (e.g. rocky grassland and riparian wetland) adjacent to the mining area commences during the Construction Phase. Ensure that the conservation management plan for the selected off-site sensitive landscape to be conserved is implemented efficiently, since the on-site pan will be destroyed.

#### Technical / Management Options:

A suitably qualified ecologist will conduct a Red Data scan prior to the commencement of construction to establish whether or not Red Data species (floral and / or faunal) are present within the planned area of surface disturbance, as well as to determine the course of action to be taken in the event that such Red Data or protected species are present within the study area.

The Environmental Coordinator will ensure that monitoring of all animal species inhabiting area adjacent to the planned mining and surface land use areas of Navigation West Section commences during the Construction Phase.

Action	Time Schedule
1. Ensure that impacts on wetland areas that will not be mined through are limited.	
Mining activities will be restricted in the vicinity of the unnamed tributary of the Grootspuit, situated partially over the south-east of the proposed Navigation West Section; South Block.	During Operational Phase, prior to the commencement of the Construction Phase of the South Block.
The mine plan for the mining of the Navigation West Section; South Block will be reconsidered to be in line with the restriction to mine further than 100 m of a watercourse (Regulation 4(a) of GN 704, dated June 1999, under the NWA, 1998 (Act 36 of 1998)).	During Operational Phase, prior to the commencement of the Construction Phase of the South Block.