

Activity	Aspect	Impact / Risks	Description	Significance	Nature of Impact	Probability	Sensitivity of the Aspect	Severity of the Impact	Duration	Scale / Extent	Significance (without Mitigation)	Management Actions	Probability	Sensitivity of the Aspect	Severity of the Impact	Duration	Scale / Extent	Significance (with Mitigation)	Time periods for implementation of Mitigation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring
Rehabilitation of currently degraded habitat and AIP clearance of already proliferated areas	Ecology	Positive impact - restored ecological functioning	Some ecological functioning will be restored that has been lost due to AIP proliferation and historic habitat transformation	It is highly likely at least some ecological functioning will be restored once reclamation is complete and areas rehabilitated. This could have a site-wide positive effect, permanently after rehabilitation has been implemented.	Positive	Highly Probable	3 Sensitive	3 Moderate	5 Permanent	2 Site	52 Moderate	Ensure concurrent and subsequent implementation of the rehabilitation plan to ensure this positive impact is realized	Highly Probable	3 Sensitive	4 Moderate to High	5 Permanent	2 Site	56 Moderate	Rehabilitation plan to be in place prior to activities commencing and implemented throughout all phases.	As per rehabilitation plan	Annual as part of FP Report and EMP Audits	ECO and External Specialist.
Presence of the Fairview TSF and RWD	Groundwater	Deterioration of groundwater quality	Leachate of contaminants from waste facilities i.e. tailings storage facilities as well as return water dams.	Leachate of contaminants will definitely occur and should be managed accordingly. Groundwater is regarded as a sensitive receptor within the greater study area. Groundwater contamination can affect the local catchment in the long term if not prevented through mitigation.	Negative	5 Definite	3 Sensitive	3 Moderate	4 Long Term	3 Local	65 High	An appropriate barrier system in line with the waste assessment results will be implemented to minimise the risk of contamination migration to local aquifers. Continuation of groundwater monitoring by evaluating the regional water quality to serve as early warning mechanism for implementation of mitigation measures. Effectiveness of alternative barrier systems such as seepage capturing/ scavenger boreholes and/or cut-off trenches down-gradient of waste facilities should be evaluated in order to constrain the migration of contaminants from site. Ensure that rehabilitation is properly conducted and in accordance with best practice guidelines as well as the approved mine closure and rehabilitation plan. Alternative remedial options to reduce tailings footprint recharge and effective infiltration, which will lead to an increase in leachate volumes, should form part of the mine closure and rehabilitation strategy. It is recommended that alternative water supply sources or compensation measures should be investigated for nearby users impacted on.	Highly Probable	3 Sensitive	3 Moderate	4 Long Term	3 Local	52 Moderate	Barrier system designed and approved prior to construction and installed with construction of TSF. Monitoring as per IWUL. Rehabilitation concurrent where possible. Adaptive management as required.	Water monitoring as per IWUL. Rehabilitation Monitoring as part of annual financial provision.	Monthly or as per IWUL, and annually as part of Financial Provision	Independent specialist and Engineering Team
Vegetation removal from TSF footprint	Ecology	Loss of Flora SCC	SCC were identified in the area regardless of the modified vegetation.	The impact will definitely occur, duration of the impact is considered permanent. The impact will be isolated to the affected portion of the site. SCC is considered sensitive. The impact severity will be high as vegetation will be removed from the footprint completely.	Negative	5 Definite	4 Very sensitive	4 Moderate to High	5 Permanent	1 Isolated	70 High	The impact can't be avoided and may result in isolated losses of SCC (which should be associated with a permit before activities commence). Relocation of SCC to suitable unaffected surrounding habitat should be attempted to mitigate the impact.	5 Definite	4 Very sensitive	3 Moderate	2 Medium Term	1 Isolated	50 Moderate	Permit applications and relocation of SCC to be implemented before activities on site commence.	Success of relocation to be monitored as per conditions imposed by permit.	As per permit	Ecologist
Operation of the Fairview TSF and reclamation of historic dumps	Air Quality	Atmospheric Pollution	Material handling, wind erosion on exposed areas, vehicle dust entrainment on roads, truck loading & offloading operations and vehicle and machinery are expected to cause increased Dust fallout, PM10 and PM2.5.	Of the modelled impacts, increase in 24Hr PM10 concentrations is considered the most significant. The impact was modelled to be local, highly probable, barely reversible, resulting in a low loss of resources in the medium term (0-5 years) and is cumulative to other existing air quality impacts. Impact magnitude was modelled as moderate.	Negative	Highly Probable	3 Sensitive	3 Moderate	3 Medium Term	3 Local	48 Moderate	Water sprays at material handling operations & exposed areas, develop & implement an internal management plan for dust from TSFs (topsoil, vegetation, wind breaks etc.), immediate clean-up of any spillages of reclaimed material. Haul roads should be clearly defined and ideally, treated for dust suppression (i.e. by water truck). Material should be covered for transport where possible. Control the number of trucks on the road, weight of trucks and travelling speed (20-40km/h max). Maintain vehicles and machinery as per specification.	5 Definite	4 Very sensitive	3 Moderate	2 Short to Medium Term	1 Isolated	50 Moderate	Vehicle maintenance, as per manufacturer. Dust suppression as per site conditions. TSF rehabilitation throughout all phases (concurrent). Visual inspection of TSF side slopes and other exposed areas, spills etc.	Dust monitoring (buckets, monthly) and PM10 and PM2.5 Monitoring (continuous). Visual inspection of TSF side slopes and other exposed areas, spills etc.	Monthly (for dust) with annual reporting no NAES	ECO and contractor
Vegetation removal for Little Kent & Kidson, Old Fairview Plant WRD and Fairview Top slimes dam	Ecology	Loss of Habitat and Flora SCC	These dumps overlap in places with watercourse vegetation unit, intact woody community and Montane grasslands. Some SCC were encountered near Fairview Top Slimes Dam.	The impact will definitely occur and the vegetation is considered more sensitive. Severity will be relatively high and if not rehabilitated could be medium-term. Impacts are expected to be isolated.	Negative	5 Definite	4 Very sensitive	4 Moderate to High	3 Medium Term	1 Isolated	60 High	Permits for relocation of SCC must be obtained before reclamation can commence. Rehabilitation (including shaping and re-vegetation of areas) must be done concurrently with reclamation. Erosion control measures must prevent downstream siltation.	5 Definite	4 Very sensitive	3 Moderate	1 Short Term	1 Isolated	45 Moderate	Rehabilitation Plan to be completed before the commencement of construction. Rehabilitation to be implemented concurrently.	Rehabilitation monitoring will form part of the annual FP Reporting and annual EMP audits.	Annual	Independent specialist
Construction of the Fairview TSF and RWD	Air Quality	Atmospheric Pollution	Increased Dust Fallout, PM10 and PM2.5 may be experienced.	It is highly probable the impact will occur on a local scale. Impact Duration is short term (only as long as heavy construction lasts)	Negative	Highly Probable	3 Sensitive	5 High	3 Medium Term	3 Local	56 Moderate	Compile and implement (internally) a dust fallout management plan for the construction phase - consider the use of wind barriers, limit the size of clearing and earthmoving management, water spraying where practical etc.	Highly Probable	3 Sensitive	3 Moderate	2 Medium Term	2 Site	40 Moderate	Completion of plan before activities commence, PM10 and PM2.5 Monitoring (continuous) construction activities	Dust monitoring (buckets, monthly) and PM10 and PM2.5 Monitoring (continuous)	Dust monitoring, PM10 and PM2.5 Monitoring (continuous)	ECO and contractor
Vegetation removal from TSF and RWD footprint	Ecology	Loss of Habitat	The footprint associated with the Old Bramber TSF contains no vegetation. The area between the Old Bramber TSF and existing BRP TSF was identified as heavily modified habitat.	The impact will definitely occur, duration of the impact is considered permanent. The impact will be isolated to the affected portion of the site. Habitat in the vegetation Unit is not sensitive. The impact severity will be high as vegetation will be removed from the footprint completely.	Negative	5 Definite	1 Not sensitive	4 Moderate to High	5 Permanent	1 Isolated	55 Moderate	The impact can be reversed/offset to some extent with rehabilitation of other degraded habitat, and re-vegetation of the TSF side-slopes.	5 Definite	1 Not sensitive	3 Moderate	3 Medium Term	1 Isolated	40 Moderate	Rehabilitation Plan to be completed before the commencement of construction.	Mine ECO to approve rehabilitation plan. Annual assessment of rehabilitation in accordance with the FP Regulations.	Annual	Independent specialist
Movement of vehicles to and from reclamation activities	Employee safety	Accidents / collisions on mountain roads	Vehicle movement in the mountainous terrain is dangerous due to steep slopes, light turns with lack of visibility.	If not mitigated, it is highly probable that employee safety will be negatively affected, considering the mountainous terrain. If the impact manifests it may be of high severity, permanent nature on an irreplaceable aspect (loss of life). Such impact would have a local extent and is regarded as high. Mitigation reduces the impact likelihood.	Negative	Highly Probable	5 Irreplaceable	5 High	5 Permanent	3 Local	72 High	Ensure the road upgrades on the mountain roads include adequate safety measures (mirrors, line-of-sight where possible, speed-reducing-measures). Implement driver training. Prevent pedestrian use of roads in this area.	2 Possible	5 Irreplaceable	5 High	5 Permanent	3 Local	36 Low	Prior to reclamation commencing, safety measures and training must be in place	Records of training, visual inspection of safety measures	Monthly ECO Reports	ECO
Construction of the new Fairview TSF and Reclamation of the Historic Dumps	Ecology	Proliferation of alien invasive species	AIPs are always prone to establish on previously disturbed areas.	AIPs are highly likely to establish if not prevented. The general habitats are regarded as sensitive and impact severity could be moderate if not managed. Unmanaged the impact could well be permanent and affect the local ecological systems	Negative	Highly Probable	3 Sensitive	3 Moderate	5 Permanent	3 Local	56 Moderate	The impact can best be managed by prevention and pro-active management where prevention is not successful. Spread of AIPs should be prevented by ensuring their eradication immediately and ensuring effective disposal of such plants so as not to spread. The AIP Management Plan must be compiled to address identification, management and disposal of AIPs.	Highly Probable	3 Sensitive	2 Slight to Moderate	2 Short to Medium Term	2 Site	36 Low	Compile and commence with implementation of AIP Management plan before activities commence. Implementation will be during and for at least 2 years after reclamation activities have occurred and at least 2 years after the Fairview TSF has reached its capacity.	As per AIP Management Plan	As per AIP Management Plan, expected to be the responsibility of the ECO, and independent specialist as part of annual EMP Audits.	
Presence of new Fairview TSF	Community Safety	TSF Failure	The TSF is being designed by qualified engineering teams to acceptable standards. However, there is always some possibility of failure which could result in loss of life and severe environmental impacts.	If the impact occurs it could result in loss of life (permanent loss of an irreplaceable aspect impacting on a local scale). The probability of this occurring is however regarded as low.	Negative	2 Possible	5 Irreplaceable	5 High	5 Permanent	3 Local	36 Low	There is always a risk of failure of impoundment infrastructure. All relevant engineering standards to be implemented in design and construction. Monitoring to be undertaken to ensure stability of infrastructure and prevent failure, which would impact downstream land uses and people.	2 Possible	5 Irreplaceable	5 High	5 Permanent	3 Local	36 Low	Monitoring as per Engineer designs of TSF and as prescribed by managing engineers.	Monitoring as per Engineer designs of TSF and as prescribed by managing engineers.	As per Engineer recommendation	Engineering Team
Construction and presence of the new Fairview TSF	Visual Resources	Alteration of the Visual Resource	Any activity on a site causes a change to the visual resource in an area. TSF construction at the site that previously housed a TSF, against the backdrop of an existing TSF is not expected to contradict the expectation of viewers.	The new TSF will definitely alter the visual resource, which is not regarded as sensitive against the backdrop of the other TSFs and mining infrastructure in this area. The severity of the impact will be slight to moderate (at most) considering the existing New Bramber TSF. The impact will be permanent and likely be visible on a local scale	Negative	5 Definite	1 Not sensitive	2 Slight to Moderate	5 Permanent	3 Local	55 Moderate	Implementation of the Mine's rehabilitation plan will lessen impact severity and duration to an extent (the TSF will still be present but blend in with surroundings). Careful consideration to night-time lighting can also reduce impact severity and extent at night.	5 Definite	1 Not sensitive	1 Slight	3 Medium Term	2 Site	35 Low	Rehabilitation can only be done at the end of life of the facility though cladding of side slopes should be done concurrently to operations if possible.	The impact is inevitable and does not require monitoring apart from annual rehabilitation monitoring as part of the Mine's Financial Provision Reporting.	Annual	Independent specialist
Vegetation removal for reclamation of #1 Shaft, Main Reef, Store Reef, House Reef Waste Rock #1 & Wagon Road	Ecology	Loss of Habitat	The vegetation units within which these dumps fall are considered heavily modified. No SCC were identified in these footprints.	The impact will definitely occur. The vegetation is not considered sensitive even though impact severity will be moderate-high. Duration could be medium-term if not mitigated, but should be limited to the dump footprints.	Negative	5 Definite	1 Not sensitive	4 Moderate to High	3 Medium Term	1 Isolated	45 Moderate	The impact is unavoidable, but reversible with the implementation of rehabilitation measures once dump reclamation has concluded.	5 Definite	1 Not sensitive	4 Moderate to High	1 Short Term	1 Isolated	35 Low	The ECO and Project manager must ensure that rehabilitation of affected areas occurs concurrently with reclamation.	Rehabilitation monitoring will form part of the annual FP Reporting and annual EMP audits.	Annual	Independent specialist
Reclamation of the historic dumps	Visual Resources	Alteration of the Visual Resource	The visual character of the BNR in the vicinity of the historic dumps is already changed by the presence of the dumps. The physical act of reclamation will be visually intrusive but likely improve the visual resource in the long term (once rehabilitation has been undertaken).	Reclamation activities will alter the visual resource, which is sensitive within the BNR. Severity is expected to be rather high but duration is not extensive and the topography will probably limit the zone of visual influence.	Negative	5 Definite	3 Sensitive	4 Moderate to High	1 Short Term	1 Isolated	45 Moderate	Ensure the affected footprints are limited as far as possible and that adequate and concurrent rehabilitation (including shaping and re-vegetation) is implemented. No night-time activities should be allowed.	5 Definite	3 Sensitive	2 Slight to Moderate	1 Short Term	1 Isolated	35 Low	Rehabilitation to be implemented concurrently.	Monthly ECO Reports and Annual rehabilitation monitoring	Monthly and Annually	ECO and external ecologist / rehabilitation specialist
Proposed new TSF and associated infrastructures area	Surface Water	Reduction of catchment yield	Reduction of catchment yield as a result of the footprint areas of the associated infrastructure as the footprint areas will no longer form part of the natural downstream catchment thereby potentially resulting in a decrease of runoff downstream	The impact is definite (as containment of dirty water on site is a legal requirement). Because the affected area is relatively small, impact magnitude and aspect sensitivity as rated low even though the impact will be long term.	Negative	5 Definite	1 Not sensitive	1 Slight	4 Long Term	1 Isolated	35 Low	The only way to mitigate the mentioned impacts is to not proceed with the construction of the Fairview TSF and RWD. Therefore, the impact rating for pre and post mitigation measures will remain unchanged. However it should also be noted that the project footprint area makes up less than 0.5% of the total quarterly catchment area of X23F (309 km ²) and will therefore result in a negligible loss in runoff. Therefore the impact rating is low. Dirty water catchment area should be minimized wherever possible.	5 Definite	1 Not sensitive	1 Slight	4 Long Term	1 Isolated	35 Low	Dirty water catchment area should be minimized wherever possible.	Include flow measurements in surface water monitoring program of strategic points	Quarterly (or as per IWUL)	ECO
New TSF construction & operation	Land Use	Reduced Land Capability	The site was previously used for a TSF and land capability is only reduced in the additional 6.5 Ha affected between the existing New Bramber TSF and reclaimed Bramber TSF, which area is not regarded as sensitive.	The impact will definitely occur but only on the isolated footprint between the two TSFs which is not considered sensitive and impact magnitude is considered slight.	Negative	5 Definite	1 Not sensitive	1 Slight	4 Long Term	1 Isolated	35 Low	No mitigation available or required, the affected land (6.5 Ha between the original Bramber and New Bramber TSFs) will be the only land affected.	5 Definite	1 Not sensitive	1 Slight	4 Long Term	1 Isolated	35 Low	Site demarcation and employee awareness training before activities commence. Implementation throughout all phases	Visual monitoring by ECO	Monthly ECO Reports	ECO
Construction of tailings facility using material from tailings footprint.	Aquatic Ecology	Alteration of adjacent riparian habitat and drainage lines	Removal of vegetation and topsoil where cover remains, increased dust generation due to increased areas of exposed soils, vehicular movement leading to soil disturbances, increased AIPs, altered runoff patterns, sedimentation and water quality impact.	Vegetation and topsoil removal will definitely occur, but only on the small portion of land between the existing and proposed TSF. This could very likely lead to dust, erosion and sedimentation if not managed. Such water quality impacts could extend to a local scale	Negative	Highly Probable	3 Sensitive	3 Moderate	3 Medium Term	3 Local	48 Moderate	The non-perennial drainage lines should be demarcated and defined as areas which no activity is to take place and any activities must be confined the already disturbed footprint. All exposed soil must be protected for the duration of the construction phase in order to prevent erosion and sedimentation of the adjacent non-perennial drainage lines; and during construction activities, the topsoil and vegetation should be stockpiled separately from other material outside of the applicable zone of regulation and be maintained for use in rehabilitation.	3 Probable	3 Sensitive	3 Moderate	3 Medium Term	2 Site	33 Low	Demarcation of site to be done before other activities commence. Erosion protection throughout all phases.	Monthly ECO Reports including photographs of demarcation and erosion prevention measures	Monthly	ECO
Reclamation of historic dumps from the MRA that overlaps with the Nature Reserve	Land Use	Perceived change in land use from conservation to mining	At a distance, the historic dumps within the nature reserve are not identified by the layman as such. Reclamation activities will most likely look out of place to tourists and conservationists.	The issue of conflicting land uses is deemed very sensitive and the severity will be moderate - high. It is anticipated that the impact will be of short duration and isolated due to screening afforded by vegetation and topography.	Negative	Highly Probable	4 Very sensitive	4 Moderate to High	1 Short Term	1 Isolated	40 Moderate	Ensure adequate public consultation to manage public perception and expectation (avoid surprise). Ensure the area is adequately rehabilitated and limit affected footprint as far as possible to reduce impact severity.	Highly Probable	3 Sensitive	3 Moderate	1 Short Term	1 Isolated	32 Low	Consultation as part of application phase (pre-construction). Rehabilitation concurrent to reclamation.	Complaints Register at Mine	Annual EMP Audits	Independent specialist

Construction and operation of Fairview TSF	Hydrogeology	Groundwater contamination	Contaminants stored in the TSF can be leached out and since the underlying soils are recharge soils, the contaminated leachate can easily enter the groundwater.	If not mitigated it is very likely that contaminants will leach out from the TSF and contaminate groundwater, which is very sensitive in the area, will take a long time to recover and can affect the larger catchment.	Negative	Highly Probable	4	Very sensitive	4	Moderate to High	4	Long Term	4	Regional	64	High	Prevent recharge through soil. An engineered solution, like a liner, that prevents contaminated leachate from entering the soil and leaching into the groundwater is essential. Monitor soil at bedrock interface.	2	Possible	4	Very sensitive	2	Slight to Moderate	2	Short to Medium Term	2	Site	20	Low	Engineered solution as part of design phase. Construction to be supervised. Monitoring boreholes to be established before construction commences. Quarterly groundwater monitoring should suffice.	Quarterly groundwater monitoring.	Quarterly (or as per IWUL)	ECO for sampling, analysis at SANAS accredited laboratory. Data interpretation and reporting to be done by suitably qualified independent specialist.	
Movement and use of heavy vehicles and machinery	Groundwater	Deterioration of groundwater quality	Mobilisation and utilisation of mine heavy vehicle and machinery on site may cause groundwater hydrocarbon pollution.	It is highly probable that spillages and resultant contamination will occur if not mitigated. Groundwater is considered sensitive. Impact severity will be moderate-high given the small amount of hydrocarbons and chemicals on site but the impact could be long term and extend to the local catchment.	Negative	Highly Probable	3	Sensitive	4	Moderate to High	4	Long Term	3	Local	56	Moderate	Construction vehicles and mine heavy machinery must be serviced and maintained regularly in order to ensure that oil spillages are limited. Refuelling of mine vehicles should be done at the existing Fairview Mine fuel bay. Further to this spill kits must be readily available in case of accidental spillages.	2	Possible	4	Very sensitive	2	Slight to Moderate	3	Medium Term	1	Isolated	20	Low	Servicing as per manufacturer's specification. Refuelling as necessary. Spill kit availability throughout all phases.	Monthly ECO Reports	Monthly	ECO	
Construction of the new Fairview TSF and Reclamation of the Historic Dumps	Ecology	Habitat deterioration	Poorly managed edge effects leading to habitat degradation in downstream environment	It is highly likely the impact will occur if not mitigated, and the vegetation units are regarded as sensitive. Impact Severity could be moderate and long-term if not mitigated. The larger site could be affected.	Negative	Highly Probable	3	Sensitive	3	Moderate	4	Long Term	2	Site	48	Moderate	With adequate mitigation, like demarcating the site, preventing erosion and subsequent downstream siltation of the watercourse vegetation, the impact can be avoided.	2	Possible	2	Somewhat sensitive	2	Slight to Moderate	4	Long Term	2	Site	20	Low	Before construction can commence	Site demarcation, erosion management to be checked weekly by the ECO.	Weekly	ECO	
Recover of dumps and transport of material to Fairview Plant	Aquatic Ecology	Pollution, dust, compaction of soils, altered runoff patterns.	Increased vehicle operation carries inherent risk of compaction of soils, chemical spills/leaks and increased dust	If not mitigated, impacts are highly likely and the environment is regarded as very sensitive. Impacts will be of moderate severity and last as long as the reclamation activity, impacts are expected to be limited to the site.	Negative	Highly Probable	4	Very sensitive	3	Moderate	2	Short to Medium Term	2	Site	44	Moderate	All vehicle maintenance and refuelling to be done at existing facilities at Fairview and not on site. If emergency refuelling or maintenance is required, all work must be done outside the 100m zone of regulation from drainages and on impermeable surfaces (such as drip trays), the content then disposed of at the existing waste streams at Fairview and not dumped on site. Roads must be rehabilitated once no longer in use. Implement dust suppression as required.	2	Possible	4	Very sensitive	3	Moderate	2	Short to Medium Term	1	Isolated	20	Low	Emergency response plan, including environmental incidents, to be compiled before activities commence, implemented throughout all phases.	Dust monitoring, Monthly ECO Monitoring	Monthly	ECO	
Proposed new Fairview TSF, RWD and associated infrastructures area.	Surface Water	Sedimentation of downstream water resources	During construction loose or disturbed material such as soil and debris may be washed into downstream drainages/ watercourses during normal to heavy infrequent rainfall events. This will result in sedimentation of the downstream affected drainage /watercourse. Although the monthly rainfall anticipated within the project area is relatively low, larger storm events having a higher recurrence interval may occur.	Erosion and sedimentation will probably occur if not managed and can have a moderate to high impact on the local catchment in the medium term.	Negative	3	Probable	4	Very sensitive	4	to High	3	Medium Term	3	Local	42	Moderate	The clean runoff from the upstream clean water catchment is to be diverted away from the construction as per GN704. Within the cleared area along the downstream boundary, temporary ditches are to be constructed along with a temporary excavated storage area (outside of the regulated zone). All dirty water runoff will then be captured and contained within the temporary storage area where it will be evaporated. Clearing of vegetation must be limited to the development footprint so as to avoid disturbance of new areas as well as reducing erosion potential.	2	Possible	4	Very sensitive	2	Slight to Moderate	3	Medium Term	1	Isolated	20	Low	Temporary stormwater management measures to be established prior to construction commencing.	Surface and Groundwater monitoring as per IWUL, Monthly ECO Reporting.	Monthly	ECO for sampling, analysis at SANAS accredited laboratory. Data interpretation and reporting to be done by suitably qualified independent specialist.
Reclamation of Historic Dumps	Surface Water	Siltation of water resources	Reclamation of the dump sections located within the drainage/stream can lead to the siltation of the surface water resources.	Unmanaged, it is highly likely the impact will occur but impact magnitude is considered Moderate, over the short to medium term (negated once the material is removed) and relatively isolated.	Negative	Highly Probable	4	Very sensitive	3	Moderate	2	Short to Medium Term	1	Isolated	40	Moderate	Ensure that the rehabilitation of the drainage/stream occurs concurrently with the reclamation of the dump. Ensure that the surface profile of the drainage/stream section is rehabilitated to promote natural runoff drainage and avoid ponding of water within the rehabilitated area. Silt mats are recommended to be installed along the downstream drainage section.	2	Possible	4	Very sensitive	3	Moderate	2	Short to Medium Term	1	Isolated	20	Low	Rehabilitation of drainages to be implemented concurrently, as soon as possible.	Surface water monitoring as per IWUL, Aquatic Biomonitoring to include sediment analysis	Monthly or as per IWUL, Biomonitoring annually.	ECO for sampling, analysis at SANAS accredited laboratory. Data interpretation and reporting to be done by suitably qualified independent specialist. Biomonitoring to be undertaken by suitable specialist.	
Reclamation of Historic Dumps	Hydrogeology	Erosion	Plant cover removal during reclamation can expose soil to rainfall, increasing the risk of erosion. The dumps are on shallow recharge soils.	Care should be taken during restoration and rehabilitation phases to cover the rock with topsoil. Compaction would be very detrimental for infiltration which is essential to prevent erosion. The impact is probable, of medium duration over the hillslope.	Negative	3	Probable	4	Very sensitive	2	Slight to Moderate	3	Medium Term	2	Site	33	Low	Avoid compaction. Remedy where compaction has occurred. Rehabilitate sites adequately in line with recommendations of the detailed rehabilitation plan.	2	Possible	4	Very sensitive	2	Slight to Moderate	2	Short to Medium Term	2	Site	20	Low	Compaction to be remedied as soon as area no longer in use. Demarcate sites before activities commence.	Visual monitoring by ECO	Monthly ECO Reports	ECO
Road upgrades	Hydrogeology	Runoff leading to erosion	Roads are on shallow recharge soils (generally). Compaction should be avoided as this would lead to decreased infiltration and increase the risk of erosion.	Unmitigated, compaction is probable over larger than necessary portions of the site. Erosion impacts are expected to be of medium term and moderate significance.	Negative	3	Probable	4	Very sensitive	2	Slight to Moderate	3	Medium Term	2	Site	33	Low	Storm water outflow should be released into material that will decrease the energy and disperse the water to prevent erosion from the point.	2	Possible	4	Very sensitive	2	Slight to Moderate	3	Medium Term	1	Isolated	20	Low	Stormwater management measures of upgraded roads to be initiated (temporary and permanent as relevant)	Visual monitoring by ECO	Monthly ECO Reports	ECO
Vegetation clearance and stripping of soils for road upgrades and recovery of material from historic dumps	Soils, land use and capability	Loss of topsoil	Areas affected by widening of access tracks and in the immediate vicinity of the dumps targeted for reclamation will be cleared and compacted.	It is considered unlikely that much topsoil remains on the road footprints, or on the historic dumps. Isolated losses are still possible, but once the areas are rehabilitated the impact will be mostly negated.	Negative	2	Possible	3	Sensitive	2	Slight to Moderate	4	Long Term	1	Isolated	20	Low	Reclamation of the historically dumped material will expose underlying topsoil resources which may recover. Very little topsoil remains on site, apart from topsoil already stockpiled for use in rehabilitation activities	2	Possible	3	Sensitive	2	Slight to Moderate	3	Medium Term	1	Isolated	18	Insignificant	Site demarcation and topsoil stripping and stockpiling prior to activities commencing.	Monthly ECO Reports	Monthly	ECO