

Activity	Description of potential impacts	Discussion of impact, and Mitigation		Probability	Sensitivity of the	Severity of	Duration	Scale /	Significance	
Vegetation Clearance	Impacts on flora SCC	Flora SCC were confirmed on the proposed development site, prior to any vegetation clearance, a thorough rescue and relocation process must be undertaken, with the necessary permits in place, to relocate SCC to adjacent suitable habitat, or demarcate SCC that are not directly in the proposed development footprint, to ensure they are not inadvertently damaged. Relocation of most of the SCC on site will likely be successful, however, population genetics will be impacted (TBC ref xx). 4	Before Mitigation	3 Probable	4 Very sensitive	4 Moderate to High	4 Long Term	2 Site	42	Moderate
			After Mitigation	2 Possible	4 Very sensitive	2 Slight to Moderate	4 Long Term	1 Isolated	22	Low
	Impacts to floral species habitat and diversity	Vegetation clearance in the Eastern Highveld Grassland vegetation unit, will result in unavoidable loss of floral habitat and diversity. Clear demarcation of the activity areas and management of alien invasive species, as well as post-construction rehabilitation will reduce the extent and severity of the impact.	Before Mitigation	4 Highly Probable	3 Sensitive	4 Moderate to High	4 Long Term	2 Site	52	Moderate
			After Mitigation	4 Highly Probable	3 Sensitive	3 Moderate	2 Short to Medium Term	1 Isolated	36	Low
	Impact on Avifauna Diversity and Habitat	Clearance of vegetation will alter the existing avifauna habitat, that is considered moderately sensitive in the eastern highveld grassland vegetation unit. The site must be demarcated adequately to avoid potential loss outside the planned footprint area, reducing impact extent. Rehabilitation of areas between the directly affected footprints will also reduce impact duration.	Before Mitigation	4 Highly Probable	4 Very sensitive	3 Moderate	3 Medium Term	3 Local	52	Moderate
			After Mitigation	4 Highly Probable	4 Very sensitive	2 Slight to Moderate	1 Short Term	2 Site	36	Low
	Impact on Avifauna Species of Conservation Concern	Avifauna SCC may occur in the project area, either permanently for breeding or temporarily while foraging. Vegetation clearance in the Eastern Highveld Grassland will lead to loss of breeding and foraging habitat for these species within the footprint. These species are then expected to migrate to surrounding habitat, increasing competition for resources in adjacent habitats, and reduced species richness. The extent of impacts must be controlled.	Before Mitigation	4 Highly Probable	4 Very sensitive	3 Moderate	3 Medium Term	3 Local	52	Moderate
			After Mitigation	4 Highly Probable	4 Very sensitive	2 Slight to Moderate	2 Short to Medium Term	2 Site	40	Moderate
	Impact on Faunal Habitat and Diversity	Loss of faunal habitat, especially sensitive in Eastern Highveld Grassland (primary grassland). Decrease in available forage in the study area. Mitigation should aim to limit edge effects and manage Alien invasive species. Minimise habitat loss & vegetation clearance beneath PV panels.	Before Mitigation	4 Highly Probable	3 Sensitive	4 Moderate to High	4 Long Term	3 Local	56	Moderate
			After Mitigation	4 Highly Probable	3 Sensitive	1 Slight	4 Long Term	1 Isolated	36	Low
	Impact on Faunal SCC	No Fauna SCC were observed during the specialist site visits, however suitable habitat for faunal SCC exists in the wetland and grassland habitats. Disturbance on the site is expected to result in reduced SCC diversity on the site. Mitigation involves strict management of the impact footprint and environmental awareness training.	Before Mitigation	4 Highly Probable	3 Sensitive	4 Moderate to High	4 Long Term	2 Site	52	Moderate
			After Mitigation	2 Possible	3 Sensitive	3 Moderate	4 Long Term	1 Isolated	22	Low
	Fragmentation of ecosystems	Considering the project footprint to be closely associated with existing mining and agricultural activities in the area and the already fragmented nature of ecosystems, the development is unlikely to exacerbate fragmentation of habitats and ecosystems.	Before Mitigation	1 Unlikely	2 Somewhat sensitive	3 Moderate	4 Long Term	3 Local	12	Insignificant

		unlikely to exacerbate fragmentation of habitats and ecosystems. The development footprint must not be allowed to expand beyond approved areas.	After Mitigation	1 Unlikely	2 Somewhat sensitive	3 Moderate	4 Long Term	2 Site	11	Insignificant
Loss of wetland habitat		Seep wetland 2 will be directly affected by the proposed development footprint. Other wetlands may be impacted by edge effects, if not managed. Boundaries of vegetation clearance must be clearly demarcated and not exceeded. Runoff from the development footprint must be controlled. Implement Alien invasive species management plan. Implement rehabilitation plan after construction.	Before Mitigation	4 Highly Probable	4 Very sensitive	3 Moderate	4 Long Term	2 Site	52	Moderate
			After Mitigation	4 Highly Probable	2 Somewhat sensitive	2 Slight to Moderate	2 Short to Medium Term	1 Isolated	28	Low
Increased erosion potential		if not mitigated, erosion is highly likely to occur as a result of construction activities, which would in turn lead to loss of soil resources and siltation of downstream water resources including wetlands, the Leeuwfontein spruit and Olifants River. Erosion prevention measures are relatively easy to implement and must be planned for to reduce the likelihood of the impact occurring. The developer must implement a maintenance schedule for vegetation recovery and implement erosion control measures at steep areas.	Before Mitigation	4 Highly Probable	3 Sensitive	3 Moderate	3 Medium Term	3 Local	48	Moderate
			After Mitigation	1 Unlikely	3 Sensitive	3 Moderate	3 Medium Term	3 Local	12	Insignificant
Topsoil stripping	Loss of topsoil	Topsoil loss on the affected footprint is inevitable but this topsoil could be used in other applications such as rehabilitation of the Mines. If topsoil is lost this will be considered significant. Mitigation should aim to reduce the likelihood of topsoil loss by ensuring topsoil is stripped from affected footprints and either stockpiled (while being protected from erosion) for use in rehabilitation or used directly in rehabilitation of surrounding areas affected by mining. No unnecessary topsoil must be stripped, the footprint of areas to be stripped must be demarcated clearly.	Before Mitigation	4 Highly Probable	3 Sensitive	4 Moderate to High	4 Long Term	3 Local	56	Moderate
			After Mitigation	2 Possible	3 Sensitive	4 Moderate to High	4 Long Term	1 Isolated	24	Low
Loss of land with agricultural potential		About 30 Ha of the total development footprint of approximately 150 ha is currently under cultivation (thus, 20%). The loss, though limited, is unavoidable if the proposed project is to be implemented. The Mine (land owner) may consider making other areas available to local farmers but this is beyond the control of the Applicant.	Before Mitigation	5 Definite	1 Not sensitive	4 Moderate to High	4 Long Term	1 Isolated	50	Moderate
			After Mitigation	3 Probable	1 Not sensitive	4 Moderate to High	4 Long Term	1 Isolated	30	Low
Altered surface water runoff patterns		Surface water ponding is expected in the excavations unless managed. The proposed development is not associated with Major Earthworks and proper construction scheduling and the implementation of stormwater management measures as stipulated in the specialsit report and EMP are assumed.	Before Mitigation	4 Highly Probable	2 Somewhat sensitive	2 Slight to Moderate	3 Medium Term	1 Isolated	32	Low
			After Mitigation	4 Highly Probable	2 Somewhat sensitive	2 Slight to Moderate	3 Medium Term	1 Isolated	32	Low
Excavating	Palaeontology - loss of or damage to fossils	The specialist assessment confirmed that it is unlikely that fossils will be encountered on the site. A Fossil chance-fand protocol should be in place (include in awareness training) and if fossils are	Before Mitigation	1 Unlikely	4 Very sensitive	5 High	5 Permanent	1 Isolated	15	Insignificant

Excavating foundations	potentially occurring on the site.	As in place (includes in awareness training) and if fossils are encountered, a palaeontologist must be contacted immediately to advise.	After Mitigation	1 Unlikely	4 Very sensitive	3 Moderate	5 Permanent	1 Isolated	13	Insignificant
	Safety impacts to humans and animals (open excavations)	Open excavations present safety risks to humans and animals that may gain access to the site. The construction site must be fenced off and access to unauthorised persons prevented. Construction staff and all persons gaining access to the site must have appropriate PPE. Additionally, excavations should be demarcated separately with danger tape or similar visible warnings. As few as possible excavations should be open at any given time.	Before Mitigation	2 Possible	3 Sensitive	5 High	4 Long Term	1 Isolated	26	Low
After Mitigation			2 Possible	3 Sensitive	4 Moderate to High	3 Medium Term	1 Isolated	22	Low	
Construction of stormwater management controls	Reduced / altered surface water runoff to remaining catchments	Excavations and retention of potentially polluted stormwater on the development site will lead to reduced surface water reporting to downstream environments, this is expected to be minimal and is preferable to allowing polluted stormwater to discharge into downstream systems.	Before Mitigation	4 Highly Probable	3 Sensitive	2 Slight to Moderate	4 Long Term	3 Local	48	Moderate
			After Mitigation	4 Highly Probable	3 Sensitive	1 Slight	2 Short to Medium Term	1 Isolated	28	Low
	Siltation of downstream environments from erosion	Stormwater that is affected by the construction activities will contain increased silt and potentially also contain other pollutants, and should be retained on site and used for construction, reticulated to the Mine for use in their "dirty water area" or treated and tested before being allowed to run off to surrounding environments (if water quality is acceptable).	Before Mitigation	4 Highly Probable	3 Sensitive	4 Moderate to High	4 Long Term	3 Local	56	Moderate
			After Mitigation	2 Possible	3 Sensitive	4 Moderate to High	3 Medium Term	1 Isolated	22	Low
Construction, including the use of cement and concrete on site	Potential soils, surface- and groundwater pollution from use of cement and chemicals on site	The use of potentially polluting materials on site including cement, chemicals, paint, etc. must be strictly controlled. Spill kits must be available on site and construction workers must be trained how to use them, and what procedures to follow in the event of accidental spills of various types of potential pollutants.	Before Mitigation	4 Highly Probable	3 Sensitive	4 Moderate to High	1 Short Term	1 Isolated	36	Low
			After Mitigation	2 Possible	3 Sensitive	3 Moderate	1 Short Term	1 Isolated	16	Insignificant
Construction Activities	Employment opportunities during construction phase (short-term)	This is a positive impact on the livelihoods of construction phase employees, likely to be appointed by a contractor. Preference must be given to local applicants where the skills are available from within the closest towns (Henrina and Bethal, even though Hendrina is in a different Municipal area, it is the closest town to the site and benefits of the project should accrue to persons in and around Hendrina as well.	Before Mitigation	4 Highly Probable	4 Very sensitive	1 Slight	1 Short Term	3 Local	36	Low
			After Mitigation	4 Highly Probable	4 Very sensitive	1 Slight	1 Short Term	3 Local	36	Low
Presence of construction	Increased littering, potential poaching, potential trespassing and associated safety	Recruitment should be done according to accepted procedures, from a central recruitment office in town and not at the construction site or mine. Preference will be given to employ local persons where possible. Employees will undergo environmental awareness training which must include a prohibition on littering.	Before Mitigation	3 Probable	4 Very sensitive	4 Moderate to High	5 Permanent	3 Local	48	Moderate

workers	concerns, establishment of informal settlements	uncontained fires, poaching and trespassing. Access to the construction site will be strictly controlled. If informal settlement is noted, the developer and land owner must liaise with the police to prevent the establishment of informal settlements.	After Mitigation	2 Possible	4 Very sensitive	4 Moderate to High	1 Short Term	2 Site	22	Low
Construction Activities, vehicle movement and machinery operation	Increased noise and dust from activities on site	Operation of construction vehicles and machinery will be associated with noise and dust. Machinery, vehicles and equipment must be serviced as per manufacturer's specification to prevent noise and emissions resulting from machines being in disrepair. The appointed construction contractor should commit to this stipulation. Dust monitoring at the Mine will continue and detect if increased unacceptable dust is generated by construction activities. Dust suppression via watering truck (preferably using the Mine's water source) must be implemented as necessary. Construction activities must be restricted to day-time.	Before Mitigation	3 Probable	3 Sensitive	3 Moderate	1 Short Term	3 Local	30	Low
			After Mitigation	2 Possible	3 Sensitive	2 Slight to Moderate	1 Short Term	3 Local	18	Insignificant
	Traffic impacts: deteriorating road conditions, road safety impacts	Delivery of construction materials to site, increase staff travelling to site (construction and operational phases) will be associated with increased road traffic. The Halfgewonnen Road is already experiencing more significant truck volumes due to the Mines in the immediate vicinity, and occasional temporary closures to enable blasting activity by the Mines, causing nuisance impacts to the surrounding farmers. Scheduling of deliveries and provision of transport services to staff can alleviate the impact of increased traffic volumes. All road safety rules must be adhered to. Additional safety signs are recommended to prevent road traffic accidents.	Before Mitigation	4 Highly Probable	5 Irreplaceable	5 High	1 Short Term	3 Local	56	Moderate
			After Mitigation	2 Possible	5 Irreplaceable	2 Slight to Moderate	1 Short Term	2 Site	20	Low
Construction Activities	Damage to or destruction of heritage resources	Graves and heritage buildings were identified in the proximity of the site, these should be preserved in-situ. It is recommended that the sites be clearly demarcated and that their presence and importance be included in the awareness training to prevent inadvertent damage.	Before Mitigation	4 Highly Probable	5 Irreplaceable	5 High	5 Permanent	1 Isolated	64	High
			After Mitigation	1 Unlikely	5 Irreplaceable	3 Moderate	5 Permanent	1 Isolated	14	Insignificant
Construction Activities	Alteration of visual resource	Visual impacts are inevitable but not expected to be significant given the existing mining activities in the region and short duration of construction-phase impacts.	Before Mitigation	4 Highly Probable	1 Not sensitive	2 Slight to Moderate	1 Short Term	3 Local	28	Low
			After Mitigation	4 Highly Probable	1 Not sensitive	2 Slight to Moderate	1 Short Term	2 Site	24	Low
Completion of construction	Loss of short-term employment that was associated with construction	It is expected that construction-phase employees will mostly be appointed by contractor and thus possibly could be re-deployed to continue employment on another construction project. Expectations of employees must be managed professionally.	Before Mitigation	4 Highly Probable	4 Very sensitive	1 Slight	1 Short Term	3 Local	36	Low
			After Mitigation	4 Highly Probable	4 Very sensitive	1 Slight	1 Short Term	3 Local	36	Low
Establishment of the battery storage facility	Potential impacts associated with the storage of hazardous substances	Battery storage facility will be pre-assembled and installed on site and it must be guaranteed by the supplier / installer that the necessary safety precautions and pollution (leak) prevention measures are implemented. Temporary storage and use of potentially hazardous substances like diesel, cement, chemicals etc. must be controlled and only authorised, trained personnel allowed to access such materials. Spill kits must be available on	Before Mitigation	3 Probable	3 Sensitive	4 Moderate to High	4 Long Term	3 Local	42	Moderate
			After Mitigation	1 Unlikely	3 Sensitive	4 Moderate to High	4 Long Term	1 Isolated	12	Insignificant

Re-establishment of vegetation between the project infrastructure	Potential for establishment of alien invasive species on disturbed areas	Areas that are not physically affected by infrastructure should be re-vegetated by seeding with indigenous seed mix (or not disturbed at all, where possible). The establishment of viable and self-sustaining vegetation communities on site will prevent to a large degree the establishment of alien invasive species. A qualified person with knowledge of the area should inspect the site post-construction, and periodically during the operational phase, and identify alien species that may have established, and advise the developer and land owner of appropriate measures to eradicate such species. This should be included in an alien invasive species control plan to be maintained by the Developer's ECO.	Before Mitigation	4	Highly Probable	3	Sensitive	4	Moderate to High	4	Long Term	3	Local	56	Moderate
			After Mitigation	2	Possible	3	Sensitive	4	Moderate to High	2	Short to Medium Term	1	Isolated	20	Low
Presence of the Solar PV Facility and supporting infrastructure	Visual Impact on landscape character and sense of place	With the study area being situated within a rural area with limited receptors present within 2 km, and the relatively low height of the proposed PV structures in comparison to the existing mining structures, the proposed PV facilities are expected to have a moderately low visual impact on the landscape character within the region.	Before Mitigation	4	Highly Probable	3	Sensitive	2	Slight to Moderate	3	Medium Term	3	Local	44	Moderate
			After Mitigation	4	Highly Probable	3	Sensitive	1	Slight	3	Medium Term	2	Site	36	Low
	Visual intrusion of the Project infrastructure and visual absorption capacity (VAC) impacts	The VAC of the study area and surrounds is determined to be medium, which illustrates the ability of the surrounding area to absorb or conceal some visual impacts. Due to the relatively low height of the proposed structures, the undulating terrain and the limited sensitive receptors in the area, the proposed PV facilities are not expected to lead to a significant level of visual intrusion on the surrounding landscape.	Before Mitigation	4	Highly Probable	3	Sensitive	3	Moderate	3	Medium Term	3	Local	48	Moderate
			After Mitigation	3	Probable	3	Sensitive	2	Slight to Moderate	3	Medium Term	2	Site	30	Low
Potential impacts to avifauna habitat and avifauna SCC	The layout has been adjusted to avoid the wetland habitat in line with preliminary specialist recommendation. However, portions of Eastern Highveld Grassland will still be affected, reducing breeding and foraging habitat for Avifauna SCC, who are expected to migrate to adjacent habitat and increasing competition for resources in adjacent habitats. Potential electrocutions and collisions are also likely if not mitigated.	Before Mitigation	4	Highly Probable	4	Very sensitive	4	Moderate to High	5	Permanent	4	Regional	68	High	
		After Mitigation	3	Probable	4	Very sensitive	4	Moderate to High	4	Long Term	3	Local	45	Moderate	
Maintenance of the Solar PV Facility and supporting infrastructure	Water Use; potentially polluted water runoff to downstream environments, erosion and siltation of downstream environments	Minimal water and compressed air will be used to clean the solar panels. The source of water must be confirmed by the developer, it is assumed that water from the Mines or Usuthu-pipeline can be used. If additional abstraction is required, this must first be licensed in terms of the NWA. Affected (potentially polluted) water will be retained by the stormwater management facilities on site, and either re-used, or treated to acceptable standards prior to controlled release (to prevent erosion) to the surrounding environment.	Before Mitigation	4	Highly Probable	3	Sensitive	4	Moderate to High	4	Long Term	3	Local	56	Moderate
			After Mitigation	2	Possible	3	Sensitive	2	Slight to Moderate	4	Long Term	1	Isolated	20	Low
Dismantling of the facility and associated infrastructure.	Safety risks, visual impacts, increased dust and noise, pollution potential from affected runoff	All of the management measures associated with the construction phase will also apply to decommissioning of the facility at the end of its operational life. The visual impact of the facility will be removed in the long term. Dust suppression, maintenance and safety measures must remain in place until the site is entirely rehabilitated.	Before Mitigation	4	Highly Probable	4	Very sensitive	4	Moderate to High	2	Short to Medium Term	2	Site	48	Moderate
			After Mitigation	2	Possible	4	Very sensitive	2	Slight to Moderate	1	Short Term	1	Isolated	16	Insignificant
Removal of materials from site and disposal thereof	Potential for illegal disposal causing pollution	The contractor(s) appointed for the decommissioning and rehabilitation activities must commit to the disposal of materials at registered sites and provide proof thereof to the developer. Salvageable materials may be sold to interested parties where	Before Mitigation	3	Probable	4	Very sensitive	4	Moderate to High	1	Short Term	3	Local	36	Low

disposal thereof		these are not hazardous.	After Mitigation	1	Unlikely	4	Very sensitive	2	Slight to Moderate	1	Short Term	1	Isolated	8	Insignificant
Re-vegetation of the site	Potential for establishment of alien invasive species	Post-demolition, the site must be rehabilitated (compacted areas ripped, topsoil re-instated and the area vegetated with indigenous seed mix) to prevent alien species from colonising the area. Post-rehabilitation monitoring will also be required. A detailed rehabilitation strategy is included in this EIA Report.	Before Mitigation		Highly Probable	4	Very sensitive	3	Moderate	4	Long Term	3	Local	56	Moderate
			After Mitigation	3	Probable	4	Very sensitive	3	Moderate	2	Short to Medium Term	1	Isolated	30	Low