

APPENDIX D: DETAILED ASSESSMENT OF POTENTIAL IMPACTS

Detailed assessment of potential impacts

Decommissioning and rehabilitation of each drill site was undertaken once drilling of each site was completed (as outlined in Section 3.1). This assessment therefore focusses on potential residual impacts/risks as a result of the rehabilitation phase only. Potential environmental and socio-economic residual impacts/risks have been identified by SLR. The sequence in which these issues are listed are in no order of priority or importance. The criteria used to rate each impact is outlined in Section 7.6.

The potential impacts/risks have been assessed against the Wolvekraal Kareepoort prospecting right closure objective which is to return any areas disturbed by prospecting activities to the pre-project state. It should be noted that there are there are third party land uses such granite quarrying at the drill sites as well as within the broader prospecting right area (Section 7.4.1). The environmental impacts of this land use remain the responsibility of the quarry operators and landowner. Therefore, these impacts have not been taken into account as part of the assessment.

A summary of the impact assessment is provided in Section 11.1 of the main report. The assessment of the unmitigated scenario takes into account that decommissioning and rehabilitation activities have already been implemented in line with the management measures outlined in the approved prospecting EMPr. The mitigated scenario is where additional mitigation measures are deemed necessary.

ISSUE: LOSS OF FLORA AND FAUNA THROUGH LACK OF OR POOR REHABILITATION

Description of impact

A lack of or poor rehabilitation at the drill sites would result in the loss of flora and fauna at the drill sites. This could cause a proliferation of alien invasive species and have edging effects on surrounding areas.

Assessment of impact

Vegetation and related habitat and faunal species within the prospecting right area has been influenced to varying degrees by livestock grazing and granite quarrying. The prospecting activities disturbed relatively small pieces of land (less than 0.04 ha per drill site). As part of rehabilitation, the drill sites were cleared of waste and contaminated soils and the soils were prepared for re-vegetation.

According to the 2016 EMPr performance assessment, drill sites completed prior to 2013 were fully re-vegetated and no further maintenance or aftercare activities were deemed necessary. The re-establishment of vegetation at drill sites⁵ (completed between 2013 and 2014) was still in progress at the time and required maintenance and aftercare.

A site verification undertaken to all drill sites within the prospecting right area in June 2020, concluded that the vegetation had re-established to a satisfactory level and the pre-prospecting land use for these drill sites was achieved. It is however possible that post-drilling third party land uses (such as livestock grazing) may have influenced the status of the vegetation at drill site 7780, and this was noted during the Final EMPr Performance Assessment undertaken in support of this closure application.

There is no further maintenance or monitoring required for the drill sites. Therefore, the loss of flora and fauna through a lack of or poor rehabilitation is considered to be of **VERY LOW** significance even without mitigation (see table below).

Mitigation and monitoring

No additional mitigation or monitoring is deemed necessary.

TABLE: IMPACT/RISK SUMMARY – FLORA AND FAUNA

⁵ Drill Site BH8225 and BH7872

Issue: Loss of flora and fauna through lack of or poor rehabilitation		
Phases: Closure		
Criteria	Without Mitigation	With Mitigation
Intensity	Low change or disturbance (L)	Low change or disturbance (L)
Duration	Short term (L)	Short term (L)
Extent	A part of the site (VL)	A part of the site (VL)
Consequence	Low	Low
Probability	Conceivable (L)	Conceivable (L)
Significance	Very Low	Very Low
Nature of cumulative impacts	Ongoing livestock grazing and granite quarrying within the prospecting right area would contribute to cumulative impacts on the flora and fauna.	
Degree to which impact can be reversed	Over time, with controlled livestock grazing and cultivation any potential impacts could be reversed.	
Degree to which impact may cause irreplaceable loss of resources	Very Low	
Degree to which impact can be mitigated	Possible	
Residual impacts	None expected.	

ISSUE: LOSS OF PRE-PROSPECTING LAND USES THROUGH LACK OF OR POOR REHABILITATION

Description of impact

A lack of or poor rehabilitation at the drill sites would result in the loss of pre-prospecting land uses. This could affect the livelihoods of communities who rely on the land for subsistence purposes. In addition, this could result in on-going dust emissions from exposed areas which could cause a nuisance to surrounding land uses.

Assessment of impact

The current post-prospecting land uses within the prospecting right area include natural bushveld, livestock grazing, granite quarrying and cultivation. The prospecting activities disturbed relatively small pieces of land (less than 0.04 ha per drill site). As part of rehabilitation, the drill sites were cleared of waste and contaminated soils and the soils were prepared for re-vegetation. At all drill sites, a standpipe and/or concrete beacon marks the location of the drilled borehole. This is to allow for easy identification of the site as a prospecting drill site.

The pre-prospecting land uses within the prospecting right area comprised of mixture of natural bushveld, cultivation, grazing, degraded grassland (disturbed by agricultural activities). Similar land uses post-prospecting still occur at the drill sites and within the broader prospecting right area, however, the extent and intensity of these land uses may have increased in recent years subsequent to the completion of exploration drilling.

The environmental impacts and liabilities for these land uses remains the responsibility of quarry operators and landowners/land users. Therefore, this assessment focuses only on the impacts associated with loss of pre-prospecting land uses as a result of prospecting.

According to the 2016 EMPr performance assessments, drill sites completed prior to 2013 were fully re-vegetated and no further maintenance or aftercare activities were deemed necessary. The re-establishment of vegetation at drill sites⁶ (completed between 2013 and 2014) was still in progress at the time and required maintenance and aftercare.

⁶ Drill Site BH8225 and BH7872

A site verification undertaken to all drill sites within the prospecting right area in June 2020, concluded that the vegetation had re-established to a satisfactory level and the pre-prospecting land use for these drill sites was achieved. It is however possible that post-drilling third party land uses (such as livestock grazing) may have influenced the status of the vegetation at drill site 7780, and this was noted during the Final EMPr Performance Assessment undertaken in support of this closure application.

As the drill sites have re-vegetated successfully, the pre-prospecting land uses on and surrounding the drill sites can continue. Therefore, the loss of pre-prospecting land uses through a lack of or poor rehabilitation is considered to be of **VERY LOW** significance even without mitigation (see table below).

Mitigation and monitoring

No additional mitigation or monitoring is deemed necessary.

TABLE: IMPACT/RISK SUMMARY – LAND USE

Issue: Loss of pre-prospecting land use through lack of or poor rehabilitation		
Phases: Closure		
Criteria	Without Mitigation	With Mitigation
Intensity	Low change or disturbance (L)	Low change or disturbance (L)
Duration	Short term (L)	Short term (L)
Extent	A part of the site (VL)	A part of the site (VL)
Consequence	Low	Low
Probability	Conceivable (L)	Conceivable (L)
Significance	Very Low	Very Low
Nature of cumulative impacts	Ongoing livestock grazing, and cultivations within the drill site areas would contribute to cumulative impacts on land uses.	
Degree to which impact can be reversed	Over time, with controlled livestock grazing and cultivation, pre-mining land uses could continue indefinitely.	
Degree to which impact may cause irreplaceable loss of resources	Very Low	
Degree to which impact can be mitigated	Possible	
Residual impacts	None expected.	

ISSUE: CHANGE IN THE VISUAL LANDSCAPE OF THE AREA

Description of impact

A lack of or poor rehabilitation could alter the natural visual landscape and result in scaring.

Assessment of impact

The landscape is semi-urban in nature and dominated by natural bushveld, livestock grazing and cultivation. As part of rehabilitation, the drill sites were cleared of waste and contaminated soils and the soils were prepared for re-vegetation. At all drill sites, a standpipe and/or concrete beacon marks the location of the drill hole. This is to allow for easy identification of the site as a prospecting drill site.

According to the 2016 EMPr performance assessments, drill sites completed prior to 2013 were fully re-vegetated and no further maintenance or aftercare activities were deemed necessary. The re-establishment of vegetation at drill sites (completed between 2013 and 2014) was still in progress at the time and required maintenance and aftercare.

A site verification undertaken to all drill sites within the prospecting right area in June 2020, concluded that the vegetation had re-established to a satisfactory level and the pre-prospecting land use for these drill sites was achieved. It is however possible that post-drilling third party land uses (such as livestock grazing) may have influenced the status of the vegetation at drill site 7780, and this was noted during the Final EMPr Performance Assessment undertaken in support of this closure application.

During a drive through the prospecting right area in June 2020, prospecting drill sites were not obvious in the landscape and no visible scarring was noted. Therefore, the change in the landscape is considered to be **INSIGNIFICANT** even without mitigation (see table below).

Mitigation and monitoring

No additional mitigation or monitoring is deemed necessary.

TABLE: IMPACT/RISK SUMMARY – VISUAL LANDSCAPE

Issue: Change in the visual landscape of the prospecting right area		
Phases: Closure		
Criteria	Without Mitigation	With Mitigation
Intensity	Negligible change or disturbance (VL)	Negligible change or disturbance (VL)
Duration	Very short term (VL)	Very short term (VL)
Extent	A part of the site (VL)	A part of the site (VL)
Consequence	Very Low	Very Low
Probability	Unlikely (VL)	Unlikely (VL)
Significance	Insignificant	Insignificant
Nature of cumulative impacts	Ongoing livestock grazing, and cultivation within the drill site areas would contribute to have cumulative impacts on landscape.	
Degree to which impact can be reversed	With adequate controlled livestock grazing and cultivation, the pre-prospecting landscape could continue indefinitely.	
Degree to which impact may cause irreplaceable loss of resources	Not applicable.	
Degree to which impact can be mitigated	Not required.	
Residual impacts	None expected.	

ISSUE: NEGATIVE AND POSITIVE SOCIO-ECONOMIC IMPACTS

Description of impact

Closure of the Wolvekraal Kareepoort prospecting right has the potential to result in both negative and positive socio-economic impacts.

Assessment of impact

The closure of the Wolvekraal Kareepoort prospecting right would prevent Afplats from undertaking any further prospecting activities. As the nature of prospecting activities is to determine the presence of exploitable mineral resources and is not associated with generating a revenue, social related benefits are thus not applicable. With Afplats abandoning and exiting from the prospecting project, the mineral resource becomes available for third party applications. Given that the prospecting activities ceased in 2014, the loss of income for contractors which would have resulted in loss of temporary employment opportunities for the communities is considered to be insignificant. This is mainly because, there has not been any income generated as contractors have not been on site for 5 years. Moreover, given the scope and scale of prospecting activities, it is expected that such loss in income would be limited.

When considering the potential negative socio-economic impacts together with the opportunity that is created for third party applicants the overall impact is considered to be of **VERY LOW** significance even without mitigation (see table below).

Mitigation and monitoring

No additional mitigation or monitoring is deemed necessary.

TABLE: IMPACT/RISK SUMMARY – SOCIO-ECONOMIC

Issue: Negative and positive socio-economic impacts in the prospecting right area		
Phases: Closure		
Criteria	Without Mitigation	With Mitigation
Intensity	Negligible change or disturbance (VL)	Negligible change or disturbance (VL)
Duration	Short term (L)	Short term (L)
Extent	Affecting immediate neighbours (M)	Affecting immediate neighbours (M)
Consequence	Low	Low
Probability	Conceivable (L)	Conceivable (L)
Significance	Very Low	Very Low
Nature of cumulative impacts	No cumulative impacts expected.	
Degree to which impact can be reversed	With adequate communication structures negative impacts can be controlled and positive impacts can be enhanced.	
Degree to which impact may cause irreplaceable loss of resources	Not applicable.	
Degree to which impact can be mitigated	Possible.	
Residual impacts	None expected.	