

Project:

PHALABORWA WILDLIFE ACTIVITY HUB

Contracts:

Construction Phase - Mashilo Lambrechts Architects
Kruger National Park

Proponent:



Environmental Control Officer:



ACRONYMS

CMR	Compliance Monitoring Report
DFFE	Department of Forestry, Fisheries and the Environment
DE:	Design Engineer
DWS:	Department of Water and Sanitation
EA:	Environmental Authorisation
ECO:	Environmental Control Officer
EIA:	Environmental Impact Assessment
EM:	Environmental Manager
EMP:	Environmental Management Plan
EMS:	Environmental Management System
EO:	Environmental Officer
EP:	Environmental Planner
I&AP:	Interested and Affected Party
IEM:	Integrated Environmental Management
IEMF:	Integrated Environmental Management Framework
LEDET:	Limpopo Department of Economic Development, Environment & Tourism
PM:	Project Manager
PSP:	Professional Service Provider
SABS:	South African Bureau of Standards
SANPARKS:	South African National Parks
SE:	Site Engineer
SUP:	Sustainable Utilisation Plan

EXECUTIVE SUMMARY

The purpose of this report is to monitor environmental compliance during the Constructional Phase of the project. In this way an environmental standard may be defined, established and contractually enforced during implementation. The Monitoring Report represents a record of whether these environmental standards were adhered to for the duration of the project.

The Environmental Control Officer (ECO) will monitor the project for compliance with the Project Specific Environmental Management Programme (EMPr) which was approved by the Department of Forestry, Fisheries and the Environment (DFFE) together with the conditions contained in the Environmental Authorisation.

Monitoring will take place monthly during the Construction Phase. Completed Monitoring Reports will be submitted to SANParks who will then attend to issues raised. These reports must be kept on record and be made available upon request by any Environmental Authority or I&AP requesting such.

Monitoring Reports will be submitted to the DFFE every month during the construction phase.

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1. METHODOLOGY

A scoring system is being utilised to compile the monitoring report. Each condition of the EA and EMP is being scored on the following basis:

SCORE	DESCRIPTION
3	Best practice/full compliance
2	Satisfactory (viz >50% compliance)
1	Unsatisfactory (viz <50% compliance)
0	Nothing in place

Other abbreviations used:

NOTED -	is used for conditions that cannot be evaluated like statements of fact, or which have not been triggered.
N/A -	is assigned to conditions that are not applicable to that monitoring period.
CNV -	refers to a condition that could not be verified at the time of the compliance site survey.
NLR -	indicates conditions that are no longer relevant to the monitoring phase because a specific activity has ceased indefinitely.
DUP -	indicates that the condition is being duplicated elsewhere in the EA or EMP which creates bias by weighting particular conditions and increases/decreases the compliance score.

The total score, average score and percentage compliance for each aspect (condition) is calculated.

The Summary of Results tabulates the results (total score, average and percentage compliance of each environmental aspect).

Monitoring is being done by way of a drive through site inspection where photographs of the project progress is taken as well as compliance and non-compliance issues - where appropriate.

Interviews are also held with the relevant personnel on site for example site agents, foremen and Health & Safety Officers.

Checklists containing the conditions of the EA and EMP are used to check compliance and scores are allocated to each condition.

Take note that some of the conditions in the EA and EMP are duplicated and creates a bias by weighting particular conditions and increases/decreases the compliance score.

The Conclusion highlights environmental non-compliances (risks) and recommends how these non-compliances might be improved. The non-compliances are also ranked according to priority and a timeframe is given to institute corrective action.

2. PROJECT INFORMATION

Project Name and Reference:

PROPOSED DEVELOPMENT OF THE PHALABORWA WILDLIFE ACTIVITY HUB AND IT ASSOCIATED INFRASTRUCTURE IN
KRUGER NATIONAL PARK

BA-PHALABORWA LOCAL MUNICIPALITY AREA, MOPANI DISTRICT MUNICIPALITY

Project Reference Number: 14/12/16/3/3/1/1936

Proponent:



Project Location:

Kruger National Park North No. 449
Ba-Phalaborwa Local Municipality
Mopani District Municipality
Limpopo

Monitoring Report Number:

2

Date:

11-Oct-22

Name and Particulars of Monitor:

Mr. Anton von Well
Environmental Control Officer - ECO
EAPASA - Registered EAP Ref. 2019/934



3. EA CONDITIONS - SCOPE OF AUTHORISATION

ITEM	DESCRIPTION	SCORE	NOTES / ACTION
1	The Phalaborwa Wildlife Activity Hub and its associated infrastructure in the Kruger National Park within the Ba-Phalaborwa Local Municipality in the Limpopo Province as described above is hereby approved.	NOTED	
2	Authorisation of the activity is subject to the conditions contained in the EA, which forms part of the EA and is binding on the holder of the authorisation.	NOTED	
3	The holder of the authorisation is responsible for ensuring compliance with the conditions contained in the Environmental Authorisation. This includes any person acting on the holder's behalf, including, but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.	NOTED	
4	The activities authorised may only be carried out at the property as described above.	NOTED	
5	Any changes to, or deviations from, the project description set out in the EA must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further Environmental Authorisation in terms of the Regulations.	NOTED	
6	The holder of an EA must apply for an amendment of the EA with the competent authority for any alienation, transfer or change of ownership rights in the property on which the activity is to take place.	NOTED	
7	This activity must commence within a period of five (05) years from the date of issue of the EA. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.	3	This activity commenced within a period of five (5) years from the date of issue of the EA.
8	Construction must be completed within five (05) years of the commencement of the activity on site.	NOTED	
9	Commencement with one activity listed in terms of this EA constitutes commencement of all Authorised activities.	3	Commencement of development took place.

	2
TOTAL SCORE	6
AS AVERAGE	3,0
AS PERCENTAGE	100,0

4. EA CONDITIONS - NOTIFICATION OF EA AND RIGHT TO APPEAL

ITEM	DESCRIPTION	SCORE	NOTES / ACTION
10	The holder of the authorisation must notify every registered interested and affected party, in writing and within 14 (fourteen) calendar days of the date of this EA, of the decision to authorise the activity.	3	The EAP who did the original Impact Assessment Study for this project, notified every registered interested and affected party in writing of the EA that was issued.
11	The notification referred to must- 11.1 specify the date on which the authorisation was issued. 11.2 inform the interested and affected party of the appeal procedure provided for in the national appeal regulations. 11.3 advise the interested and affected party that a copy of the authorisation will be furnished on request: and 11.4 give the reasons of the Competent Authority for the decision.	3	The EAP who did the original Impact Assessment Study for this project, notified every registered interested and affected party in writing of the EA that was issued.

	2
TOTAL SCORE	6
AS AVERAGE	3,0
AS PERCENTAGE	100,0

5. EA CONDITIONS - COMMENCEMENT OF THE ACTIVITY

ITEM	DESCRIPTION	SCORE	NOTES / ACTION
12	The authorised activity shall not commence until the period for the submission of appeals has lapsed as per the National Appeal regulations, 2014, and no appeal has been lodged against the decision. In terms of section 43(7), an appeal under section 43 of the National Environmental Management Act, Act 107 of 1998, as amended will suspend the Environmental Authorisation or any revision or condition attached thereto. In the instance where an appeal is lodged you may not commence with the activity until such time that the appeal has been finalised.	3	The appeal period has lapsed.

	1
TOTAL SCORE	3
AS AVERAGE	3,0
AS PERCENTAGE	100,0

6. EA CONDITIONS - MANAGEMENT OF THE ACTIVITY

ITEM	DESCRIPTION	SCORE	NOTES / ACTION
13	The final layout plan title: Proposed development of the Phalaborwa Wildlife Activity Hub, Kruger National Park, Limpopo Province (Preferred Layout), prepared by Enviroworks dated February 17 is approved.	NOTED	
14	The Environmental Management Programme (EMPr) compiled by Enviroworks that was integrated as part of the BAR dated October 2018, is approved.	NOTED	
15	Changes to the approved EMPr must be submitted in accordance to the EIA Regulations applicable at the time.	NOTED	
16	The Department reserves the right to amend the approved EMPr should any impacts that were not anticipated or covered in the BAR be discovered.	NOTED	

0

TOTAL SCORE	N/A
AS AVERAGE	
AS PERCENTAGE	

7. EA CONDITIONS - FREQUENCY AND PROCESS OF UPDATING THE EMPR

ITEM	DESCRIPTION	SCORE	NOTES / ACTION
17	The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 24 below, indicate insufficient mitigation of environmental impacts associated with the undertaking of the activity, or insufficient levels of compliance with the EA or EMPr.	NOTED	
18	The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.	NOTED	
19	The updated EMPr must be submitted to the Department for approval together with the environmental audit report, as per regulation 34 of GN R982 of 4 December 2014, as amended. The updated EMPr must have been subjected to a public participation process, which process has been agreed to by the Department, prior to the submission of the updated EMPr to the Department for approval.	NOTED	
20	In assessing whether to grant approval of an EMPr which has been updated as a result of an audit, the Department will consider the processes prescribed in Regulation 35 of GN R982 of 4 December 2014 as amended. Prior to approving an amended EMPr, the Department may request such amendments to the EMPr as it deems appropriate to ensure that the EMPr sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity.	NOTED	
21	The holder of the authorisation may apply for an amendment of an EMPr, if such amendment is required before an audit is required. In assessing whether to grant such approval or not, the Department will consider the processes and requirements prescribed in Regulation 37 of GN R982 of 4 December 2014, as amended.	NOTED	

0

TOTAL SCORE	N/A
AS AVERAGE	
AS PERCENTAGE	

8. EA CONDITIONS - MONITORING

ITEM	DESCRIPTION	SCORE	NOTES / ACTION
22	The holder of the authorisation must appoint an experienced Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures referred to in this EA are implemented and to ensure compliance the the provisions of the approved EMPr.	3	Mr. Anton von Well from AGES Limpopo (Pty) Ltd has been appointed as the ECO for this project. Mr. Anton von Well is a registered EAP at EAPASA.
22.1	The ECO must be appointed before the commencement of any authorised activities.	3	Mr. Anton von Well was appointed as the ECO for this project, prior any commencement of any authorised activities.
22.2	Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring of the Department.	3	The name and contact details of Mr. Anton von Well was submitted to the Director: Compliance Monitoring of the Department on 25 July 2022.
22.3	The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.	NOTED	
22.4	The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.	NOTED	

	3
TOTAL SCORE	9
AS AVERAGE	3,0
AS PERCENTAGE	100,0

9. EA CONDITIONS - RECORDING AND REPORTING TO THE DEPARTMENT

ITEM	DESCRIPTION	SCORE	NOTES / ACTION
23	All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the department in terms of the EA, must be submitted to the Director: Compliance Monitoring of the Department at Directorcompliance@environment.gov.za.	3	Compliance monitoring reports are submitted monthly to the Director: Compliance Monitoring of the Department during the construction phase.
24	The Holder of the EA must, for the period during which the EA and EMPr remains valid, ensure that project compliance with the conditions of the EA and EMPr are audited, and that the audit reports are submitted to the Director: Compliance Monitoring of the Department at Directorcompliance@environment.gov.za.	3	Compliance monitoring reports are submitted monthly to the Director: Compliance Monitoring of the Department during the construction phase.
25	The frequency of auditing and of submission of the environmental audit reports must be as per the frequency indicated in the EMPr, taking into account the processes for such auditing as prescribed in Regulation 34 of GN R982 of 4 December 201, as amended.	3	Compliance monitoring reports are submitted monthly to the Director: Compliance Monitoring of the Department during the construction phase.
26	The holder of the authorisation must in addition submit an environmental audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and a final environmental audit report within 30 days of completion of rehabilitation activities.	NOTED	An environmental audit report will be submitted to the Department within 30 days of completion of the construction phase.
27	The environmental audit reports must be compiled in accordance with Appendix 7 of the EIA Regulations, 2014, as amended, and must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the EA conditions as well as the requirements of the approved EMPr.	NOTED	
28	Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and Competent Authority in respect of this development.	NOTED	Compliance monitoring reports will be kept on site and made available for inspection.

3

TOTAL SCORE	9
AS AVERAGE	3,0
AS PERCENTAGE	100,0

10. EA CONDITIONS - NOTIFICATIONS TO AUTHORITIES

ITEM	DESCRIPTION	SCORE	NOTES / ACTION
29	A written notification of commencement must be given to the Department no later than fourteen (14) days prior to the commencement of the activity. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number.	3	The ECO has notified the Department that commencement will take place on 16 August 2022. Site handover. Another email was sent on 18 August to the Department notifying them of the site handover meeting that took place.

1

TOTAL SCORE	3
AS AVERAGE	3,0
AS PERCENTAGE	100,0

11. EA CONDITIONS - OPERATION OF ACTIVITY

ITEM	DESCRIPTION	SCORE	NOTES / ACTION
30	A written notification of operation must be given to the Department no later than fourteen (14) days prior to the commencement of the activity operational phase.	NOTED	A written notification of operation will be given to the Department no later than fourteen (14) days prior to the commencement of the activity operational phase

0

TOTAL SCORE	N/A
AS AVERAGE	
AS PERCENTAGE	

12. EA CONDITIONS - SITE CLOSURE

ITEM	DESCRIPTION	SCORE	NOTES / ACTION
31	Should the activity ever cease or become redundant, the holder of EA must undertake the required actions as prescribed by legislation at the time and comply with all relevant regulations administered by any relevant and competent authority at that time.	NOTED	

0

TOTAL SCORE	N/A
AS AVERAGE	
AS PERCENTAGE	

13. EA CONDITIONS - SPECIFIC CONDITIONS

ITEM	DESCRIPTION	SCORE	NOTES / ACTION
32	A permit must be obtained from the relevant nature conservation agency for the removal or destruction of any indigenous protected and endangered plant and animal species if required.	NOTED	A permit will be obtained from the relevant nature conservation agency for the removal or destruction of any indigenous protected and endangered plant and animal species when required.
33	No temporary accommodation or temporary storage facilities must be placed within 100m of any watercourse, including drainage lines and dams.	3	No temporary accommodation or temporary storage facilities are placed within 100m of any watercourse, including drainage lines and dams.
34	Ablution facilities must be placed outside of the 1:100 year floodline of a watercourse.	3	No ablution facilities are placed within the 1:100 year floodline of a watercourse.
35	No exotic plants may be used for rehabilitation purposes. Only indigenous plants occurring within a ten (10) kilometre radius of the development site must be utilised.	NOTED	
36	Vegetation clearing must be kept to an absolute minimum. Mitigation measures must be implemented to reduce the risk of erosion and the invasion of alien species.	3	Vegetation clearing are kept to the minimum. Areas which must be cleared for the development are demarcated.
37	Construction must include design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of stormwater run-off.	NOTED	
38	An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate.	NOTED	
39	Any solid waste, which will not be recycled, must be disposed of at a landfill licensed in terms of Section 20(b) of the National Environment Management Waste Act, 2008 (Act No. 59 of 2008). No waste material may be left on site after construction.	NOTED	
40	If any evidence of archaeological sites or remains (e.g., remnants of stone-made structures, indigenous ceramics, bone, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ ash concentrations), unmarked human burials, fossils or other categories of heritage resources are found during construction, the South African Heritage Resources Agency (SAHRA) must be alerted immediately, and a professional archaeologist or palaeontologist, must be contacted to inspect the findings.	NOTED	

41	The recommendations of the EAP in the Basic Assessment Report dated October 2018 and the specialist studies attached must be adhered to. In the event of any conflicting mitigation measures and conditions of the Environmental Authorisation, the specific condition of this Environmental Authorisation will take preference.	NOTED	
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3

TOTAL SCORE	9
AS AVERAGE	3,0
AS PERCENTAGE	100,0

14. EA CONDITIONS - GENERAL

ITEM	DESCRIPTION	SCORE	NOTES / ACTION
42	<p>A copy of the EA, the audit and compliance monitoring reports, and the approved EMPr, must be made available for inspection and copying</p> <ul style="list-style-type: none"> - at the site of the authorised activity - to anyone on request - where the holder of the EA has a website, on such publicly accessible website 	3	Copies of the relevant documents are on site.
43	<p>National Government, provincial government, local authorities or committees appointed in terms of the conditions of the EA or any other public authority shall not be held responsible for any damages or losses suffered by the holder of the authorisation or his/her successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the holder of the authorisation with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.</p>	3	<p>The ECO has notified the Department that commencement will take place on 16 August 2022. Site handover.</p> <p>Another email was sent on 18 August to the Department notifying them of the site handover meeting that took place.</p>

2

TOTAL SCORE	6
AS AVERAGE	3,0
AS PERCENTAGE	100,0

15. EMPr - CONSTRUCTION PHASE

ITEM		DESCRIPTION	SCORE	NOTES / ACTION
1	Permits and Authorisations	The Developer must have the following permits on commencement: - Environmental Authorisation - Water Use License - Environmental Management Program	2	The Developer is to have the following permits on commencement: - Environmental Authorisation - Environmental Management Program
2	Site Layout Planning	Draw up and submit for approval a Site Layout Master Plan. This plan must show the final positions and extent of all permanent and temporary site structures and infrastructure.	3	Drawings were issued to the contractors.
		The planning for layout must be done in consultation with the ECO.	3	The planning for layout was done in consultation with the ECO.
		The contractor may not deface, paint, damage or mark any natural features situated in or around the site for survey or other purposes.	NOTED	
		No servicing of vehicles must be permitted on site, unless for emergency purposes.	NOTED	
		Stockpiles should not be situated such that they obstruct pathways.	NOTED	
		Place infrastructure as far as possible on sites that have already been transformed.	NOTED	
3	Construction Programme/ Schedule	Draw up and sign off a project schedule with all contributing parties and service providers to commit to a timeline during which time construction milestones will be completed.	3	Monthly progress meetings are held to monitor the progress of the construction phase.
		Communicate any deviation from this schedule with all parties, so as to provide parties with sufficient opportunity for alternative arrangements to be made.	3	Monthly progress meetings are held to monitor the progress of the construction phase.
		Establish a risk register to identify and monitor potential factors which may result in setbacks/ delays on tasks within the project schedule.	3	A risk register is compiled with every progress meeting.
		Hold management meetings with representatives of the project manager, contractor, engineer and other contributing parties to monitor and anticipate changes.	3	Monthly progress and technical meetings are held to monitor the progress of the construction phase.
		Should circumstances/ incidents arise which may pose a risk to the project schedule, the construction contractor, and engineer and ECO are to keep records of this and the latter communicate this in the ECO Bi-Weekly Audit Checklist.	NOTED	
4.1	Site Establishment	No natural surfaces are to be marked other than using droppers, beacons or other artificial object.	3	Pegs and danger tape were used as beacons to mark the construction areas.

	Ensure the upkeep of demarcation boundaries throughout the period of construction until rehabilitation has been completed.	NOTED	
	Construction areas must be fenced.	NOTED	
	After the final layout has been approved, conduct a thorough footprint investigation to detect and map (by GPS) any protected plant species and active animal burrows.	3	A thorough footprint investigation was done after the construction area was pegged.
	Protected plant species must be relocated where possible.	3	Protected trees were marked and development is taking place around the protected trees.
	Keep areas affected to a minimum, strictly prohibit any disturbance outside the demarcated foundation footprint area.	3	The construction area and laydown area are pegged and construction will only take place in the demarcated areas.
	Clear as little indigenous vegetation as possible, aim to maintain vegetation where it will not interfere with the construction or operation of the development, rehabilitate an acceptable vegetation layer according to rehabilitation recommendations of the relevant EMP'r, if possible.	3	Vegetation clearing are kept to the minimum. Areas which must be cleared for the development are demarcated.
	Indigenous vegetation unique to the area must be used during landscaping activities.	NOTED	
	There should be a preconstruction environmental induction for all construction staff on site to ensure that basic environmental biodiversity principles are adhered to.	2	SANParks did an environmental induction for some of the construction staff.
	Where the ECO deems it necessary (e.g. sensitive, natural areas) the ecologist appointed to do the vegetation study will be utilized.	3	The construction area and laydown area are pegged and construction will only take place in the demarcated areas.
	Restoration measures will be required to reinstate functionality in the disturbed soil and vegetation.	NOTED	Restoration measures will be implemented during rehabilitation of disturbed areas.
	Impacts to sensitive sites (drainage lines) should be avoided.	3	No construction is taking place in sensitive areas.
	No vegetation may be gathered for the purpose of creating fire.	3	No vegetation is gathered for the purpose of creating fire.
4.2	Site Establishment		
	In the absence of a distinguishable topsoil layer, strip the uppermost 300 mm of soil.	3	150 mm of the topsoil layer is stripped.
	Stockpile topsoil separately from subsoil, in heaps no higher than 2m.	NOTED	
	Topsoil stockpiles are to be kept free of weeds.	NOTED	
	Limit unnecessarily prolonged exposure of stripped areas and stockpiles	NOTED	

		Topsoil stockpiles to be placed on a levelled area and measures to be implemented to safeguard the piles from being washed away in the event of heavy rains/ storm water.	NOTED	
		Topsoil need to be stored in designated areas only. This need to be planned and indicated on the site-layout plan.	NOTED	
		Retain vegetation and soil in position for as long as possible, removing it immediately ahead of construction/ earthworks in that area.	NOTED	
		Strip and stockpile herbaceous vegetation, overlying grass and other fine organic matter along with the topsoil.	NOTED	
		Ensure that topsoil is not mixed with subsoil and/or any other excavated material.	NOTED	
		Temporarily stored topsoil must be re-applied within 6 months, topsoil stored for longer need to be managed according to a detailed topsoil management plan.	NOTED	
		Topsoil must be used in all rehabilitation activities, and may not be compacted to ensure that its plant support capacity remain of high quality.	NOTED	
		No topsoil may be stored within a watercourse.	NOTED	
		Do not strip topsoil when it is wet.	NOTED	
		Do not mix topsoil obtained from different sites, unless the ECO gives permission.	NOTED	
5	Earth-Works	Cut and fill areas must be identified by the Engineer and protection measures provided through an appropriate method and technology.	NOTED	
		Dispose of excess material at a registered solid waste landfill site (Phalaborwa Landfill Site as per the Basic Assessment Report).	NOTED	
		Shaping and trimming operations are to be planned to allow for topsoil application, with provision for the specified depth of reapplied topsoil made.	NOTED	
6	Site Infrastructure Placement and Operation	Locate all structures and storage areas, including offices, workshops and stores in approved locations are per the Site Layout Plan.	NOTED	
		The camp with storage and laydown areas are to be kept secure and neat with access control measures adopted during construction.	NOTED	
		Clearly define which activities are to occur within which areas of the site by erecting signage.	NOTED	
		All hazardous substances, such as fuel, oil, diesel, paint, etc., must be stored in a secondary containment system (trays or bund) which is capable of storing at least 110% of the liquid capacity. If bund areas are used, it should be sealed to avoid seepages.	NOTED	

		A vehicle service area should be in place, for vehicle repairs, in such way that no spillages will occur into the environment.	NOTED	
7.1	Construction Site Operations - Security & Fencing	Be responsive to open or closed status of gates.	NOTED	
		New or the upkeep of fences should align to ensure safety of animals and maintain a reliable boundary area.	NOTED	
		Limit clearing of vegetation for fencing to the removal of trees and shrubs within 1 m of the fence line. All undergrowth should be maintained.	3	Protected trees were marked along the new fenceline of the development area. These trees will not be removed.
		Should construction activity require the removal of fences or gates to execute tasks, this must be replaced as soon as possible following completion.	NOTED	
7.2	Construction Site Operations - Existing Services & Infrastructure	Take cognisance of the position of existing services and infrastructure (e.g. roads, pipelines, power lines and telephone services) that may get damaged due to construction activities.	3	The engineer indicated the existing services on their plans.
		Ensure that existing services are not damaged or disrupted unless required by the contract and with the permission of the project manager.	3	The engineer indicated the existing services on their plans.
		In the event that infrastructure is damaged or services interrupted during construction, it will be done at the expense of the Contractor and shall receive top priority over all other activities.	NOTED	
7.3	Construction Site Operations - Traffic	Abnormal loads should be timed to avoid times of year when traffic volumes are likely to be higher, as would be expected over national holidays, weekends and school holiday periods.	NOTED	
		Vehicles used for transport of materials and sand must be fitted with tarpaulins to prevent the release of such material or items onto road surfaces.	NOTED	
		Any damage to public roads is to be reported to the management authority and repaired to its original condition.	NOTED	
		Transport of materials should be limited to the least amount of trips possible.	NOTED	
		Abnormal loads should not be transported after dark.	3	No access into Kruger National Park after hours is allowed.
7.4	Construction Site Operations - Traffic	After the final layout has been approved, conduct a thorough footprint investigation (walk-through) to detect and map (by GPS) all protected plant species, which have to be removed and animal burrows present within the project site.	3	Protected trees were marked. Development will take place around these trees. These trees will form part of the development.
		Animal burrows must be monitored by the ECO prior to construction for activity/presence of animal species. If detected, such animals must be removed and relocated by a qualified professional/contractor.	2	No animal burrows were identified during walk through.
		During construction create designated turning areas and strictly prohibit any off-road driving or parking of vehicles and machinery outside designated areas.	NOTED	

		Ensure that runoff from compacted or sealed surfaces is slowed down and dispersed sufficiently to prevent accelerated erosion from being initiated (storm water and erosion management plan required).	NOTED	
		Ensure adequate drainage where roads cross drainage lines or ephemeral tributaries.	NOTED	
		Monitor the establishment of (alien) invasive species and remove as soon as detected, before regenerative material can be formed.	NOTED	
		Abnormal loads and machinery should avoid movement over gravel roads during and immediately after rainfall events, so as to limit destruction of road surfaces and sedimentation of downhill rivers/streams.	NOTED	
		All vehicles must be road-worthy, be maintained to prevent fuel or oil leaks and drivers are to be licensed appropriately for the driving of their assigned vehicle. Drivers responsible for the transportation of personnel must be specifically licensed to do so.	NOTED	
		Construction vehicles may not leave the designated roads and tracks, whilst U-Turns are prohibited on all roads.	NOTED	
		Signage is to be placed on vehicles at all times.	NOTED	
		All construction vehicles should adhere to construction sites and avoid off road to minimise impact on vegetation and soil.	NOTED	
		After decommissioning, if access roads or portions thereof will not be of further use to the landowner, remove all foreign material and rip area to facilitate the establishment of vegetation, followed by a suitable revegetation program.	NOTED	
		Construction-related vehicles and machinery may not operate on site without reflective safety signage, car-top lights and reflective personnel gear.	NOTED	
7.5	Construction Site Operations - Erosion	Disturb as little ground area as possible, stabilize that area as quickly as possible, control drainage through the area, and trap sediment on site.	3	The development area was demarcated. Clearing of vegetation is only taking place within this area.
		Conserve topsoil with its leaf litter and organic matter, and re-apply this material to local disturbed areas to promote the growth of local native vegetation.	NOTED	
		The installation of the stormwater system must take place as soon as possible after commencement of the construction activities, to attenuate stormwater from the construction as well as the operational phase.	NOTED	
		Ensure that runoff from compacted or sealed surfaces is slowed down and dispersed sufficiently to prevent accelerated erosion from being initiated.	NOTED	

		Apply erosion control measures before the rainy season begins and after each season of construction, preferably immediately following construction.	NOTED	
		Maintain and reapply erosion control measures until vegetation is successfully established. Do soil chemistry tests if necessary to determine available soil nutrients.	NOTED	
7.6	Construction Site Operations - Handling of waste	An adequate number of scavenger proof litter bins are to be placed throughout the site. Two waste bins; at least; must be present, one (1) for hazardous waste and one (1) for general waste at each working station. Dumping of waste on site is prohibited.	NOTED	
		Waste sorting and separation should form part of the environmental induction and awareness programme, to encourage personnel to collect waste paper, glass and metal waste separately	NOTED	
		Keep all work sites including storage areas, offices and workshops neat and tidy.	3	Offices and laydown area are neat and tidy.
		Dedicate a demarcated and signposted storage area on site for the collection of construction waste.	NOTED	
		All domestic waste is to be removed from site and disposed of at a registered solid waste landfill site; as mentioned in the Basic Assessment Report.	NOTED	
		Care should be taken to ensure that no waste fall off disposal vehicles on-route to the landfill. If needed, a tarpaulin can be utilised.	NOTED	
		The burning or burying of solid waste on site is prohibited. Do not burn PVC pipes or other plastic materials, as this is regarded as hazardous waste.	NOTED	
		Littering by construction workers shall not be permitted.	NOTED	
		Workers from the immediate area need to be encouraged to take their waste with them at the end of each day.	NOTED	
		General refuse/rubbish shall be removed from site on a weekly basis to an approved registered landfill site or as soon as the waste bins are reaching full capacity.	NOTED	
		Minimise waste by sorting waste into recyclable and non-recyclable waste.	NOTED	
		Ablution facilities must be serviced by a registered service provider, cleaned at least once a week, and safe disposal slips must be on file at the site office.	NOTED	
		A bi-weekly (twice a week) litter patrol of the entire site shall be conducted by the designated Environmental Control Officer (ECO).	NOTED	
		Hazardous waste must be sorted general waste and disposed of at a hazardous treatment facility, records and proof of disposal must be kept.	NOTED	

		A register must be kept of the quantities of waste disposed and proof of disposal must be available at the site office.	NOTED	
7.7	Construction Site Operations - Sewage waste	Provide portable chemical ablution facilities, situated at convenient locations in proximity to work areas. This must be in relation to the quantity of users on site, with 1 ablution facility per 15 users and for each gender.	NOTED	Existing toilet facilities at the Phalaborwa Gate are currently use.
		Locations for the placement of ablution facilities include the workshop and areas for resting and eating.	NOTED	
		Do not locate a site ablution facility within the 1:100 year flood line, or within a distance of 100m of any drainage lines.	NOTED	
		Ablution facilities are to be maintained and cleaned regularly to ensure functionality and an adequate level of hygiene.	NOTED	
		Drinking water facilities, comprising of a water tank with a manual tap can be combined with hand washing facilities near site ablution.	NOTED	
		Only toilet paper is to be flushed down the chemical ablution facility. Personnel are to be informed on sanitary implementation as part of the environmental awareness.	NOTED	
7.8	Construction Site Operations - Dust generation	Implement dust suppression measures by watering (or acceptable methods) areas to be cleared as well as already exposed surfaces with damaged soil particles, particularly during dry, windy periods.	3	A water cart is used to dampen the cleared areas.
		Ensure all vehicles remain on designated roads.	NOTED	
		Dust masks are to be supplied to workers.	NOTED	
		The transfer of soil or aggregate should be done over the shortest possible distance.	NOTED	
		Access roads are to be kept clean.	3	Access roads are kept clean.
		Surface material that is scraped off during construction should be conserved and used for rehabilitation. Any spoil material must be disposed of in a manner that appears natural.	NOTED	
		After construction decommissioning, if access roads or portions thereof will not be of further use to the landowner, remove all foreign material and rip the area to facilitate the establishment of vegetation, followed by a suitable revegetation program.	NOTED	
		Blasting and earthmoving may be required during construction, excavations will expose the soil to wind and water erosion. Appropriate stormwater structures and monitoring should be in place to prevent siltation of nearby watercourses.	NOTED	
		Lay-down area(s) should be screened with shade cloth in an earth tone or other appropriate neutral colour.	NOTED	

		Site offices and structures should be limited to one location and carefully situated to reduce visual intrusion. Roofs should be grey and non-reflective.	3	Site offices are limited to one location.
		Lights within the construction camp should face directly downwards (angle of 180°).	NOTED	
		Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare.	NOTED	
		Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact.	NOTED	
		The minimum amount of topsoil and vegetation should be removed during construction, and should be conserved and used for final rehabilitation.	NOTED	
7.9	Construction Site Operations - Noise generation	Should multiple activities result in the excessive generation of noise, it should be strived to coordinate the incidence of these at the same time.	NOTED	
		Fit machinery with silencers.	NOTED	
		All stationary noisy equipment such as compressors and pumps should be contained behind acoustic covers, screens or sheds where possible.	NOTED	
		The regular inspection and maintenance of equipment must be undertaken to ensure that all components function optimally.	NOTED	
		Vehicles should avoid use of the reverse gear as far as possible so as to avoid the sounding of sirens. This should not be considered for temporary access routes as disturbance of adjacent vegetation is to be avoided.	NOTED	
		Where recurrent use of machinery is frequent, machines should be shut down during intermediate periods.	NOTED	
		Unless otherwise specified by the ESA, normal working hours will apply (i.e. from 07H00–18H00, Mondays to Fridays).	3	The contractors adhering to the normal working hours.
		No loud music is permitted on site or in the camp.	NOTED	
		Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during working hours and after hours.	NOTED	
		Vehicles are to abide by speed restrictions on access roads and limit trip generation so as to minimise disturbance to surrounding land users.	NOTED	
7.10	Construction Site Operations - Fire prevention	The potential risk of veld fires is heightened by windy conditions in the area, specifically during the dry, windy winter months.	NOTED	

		Assume acceptable precautions to guarantee that fires are not started as a result of works on site as specified below: the Contractor will be held responsible for any damage to structures or property on or neighbouring the Site as a result of any fire caused by personnel.	NOTED	
		Contractor should ensure that construction related activities that pose a potential fire risk, such as welding etc., are properly managed and confined to areas where the risk of fires has been reduced. Measures to reduce the risk of fires include clearing working areas and avoiding working in high wind conditions when the risk of fires is greater. In this regard special care should be taken during the high risk dry, windy winter months.	NOTED	
		Contractor should provide fire-fighting training to selected construction staff and take cognisance of the Veld and Forest Fire Act, Act No. 101, 1998.	NOTED	SANParks did an environmental induction for some of the construction staff.
		As per the conditions of the Code of Conduct, in the event of a fire being caused by construction workers and or construction activities, the appointed contractors must compensate farmers for any damage caused to their farms. The contractor should also compensate the fire-fighting costs borne by farmers and local authorities.	NOTED	
		Equip vehicles and site structures with fire extinguishers. Rubber beaters should also be stored on site.	NOTED	
		No open fires are allowed anywhere on site.	NOTED	
		Storage of fuel or chemicals under trees is not permitted.	NOTED	
		Gas and liquid fuel is not to be stored in the same place.	NOTED	
		Smoking may only occur within a 3m radius from designated areas.	NOTED	
		Personnel must be adequately trained in the handling of firefighting equipment.	NOTED	
		Fuel, diesel, oil, or any other flammable substance should be stored 6m away from the smoking area.	NOTED	
7.11	Construction Site Operations - Local Communities	Where possible, the Employer should make it a requirement for contractors to implement a 'locals first' policy for construction jobs, specifically semi and low-skilled job categories. This will reduce the potential impact that this category of worker could have on local family and social networks.	NOTED	
		The Employer should consider the establishment of a Monitoring Forum (MF) for the construction phase. The MF should be established before the construction phase commences and should include key stakeholders, including representatives from the local community, local councillors, farmers, and the contractor. The role of the MF would be to monitor the construction phase and the implementation of the recommended mitigation measures. The MF should also be briefed on the potential risks to the local community associated with construction workers.	NOTED	

		The Employer and the contractors should, in consultation with representatives from the MF, develop a Code of Conduct for the construction phase. The code should identify what types of behaviour and activities by construction workers are not permitted. Construction workers that breach the code of good conduct should be dismissed. All dismissals must comply with the South African labour legislation.	NOTED	
		The Employer and the contractor should implement an HIV/AIDS awareness programme for all construction workers at the outset of the construction phase.	NOTED	
		The movement of construction workers on and off the site should be closely managed and monitored by the contractors. In this regard the contractors should be responsible for making the necessary arrangements for transporting workers to and from site on a daily basis.	NOTED	
		The contractor should make necessary arrangements to enable workers from outside the area to return home over weekends and or on a regular basis during the 12-18 month construction phase. This would reduce the risk posed by non-local construction workers to local family structures and social networks.	NOTED	
		The contractor should make the necessary arrangements for ensuring that all non-local construction workers are transported back to their place of residence once the construction phase is completed. This would reduce the risk posed by non-local construction workers to local family structures and social networks.	NOTED	
		No construction workers, will be permitted to stay overnight on the site. Security personnel will be housed in the vicinity of the site.	3	No construction workers stay overnight on site.
7.12	Construction Site Operations - Soil & water contamination	Concrete can be mixed on mixing trays only and not on exposed soil. Concrete must be mixed only in areas which have been specially demarcated for this purpose (preferable where no natural vegetation occur).	NOTED	
		Concrete mixing to be carried out away from sensitive areas and on impermeable surfaces.	NOTED	
		Material Safety Data Sheets (MSDSs) should be available on site for all chemicals and hazardous substances to be used on-site, including information on their ecological impacts and how to minimise the impacts in case of leakage.	NOTED	
		All spillage must be cleaned up immediately after they have occurred.	NOTED	
		Hazardous substances, including but not limited to fuel and oil, must be stored in spill containment facilities at least 30 m away from the buffer area surrounding any water bodies on site to avoid pollution.	NOTED	

	Spillage of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bioremediation or disposed of at a facility for the substance concerned. Disturbed land must be rehabilitated and seeded with vegetation seed naturally occurring on site.	NOTED	
	Do not locate any ablution facilities, sanitary convenience, septic tank or French drain within the 1:100 year flood line, or within a horizontal distance of 100m (whichever is greater) of a watercourse or drainage line.	NOTED	Existing toilet facilities at the Phalaborwa Gate are currently use.
	Vehicles and machinery must be regularly serviced to avoid leakages.	2	No vehicle leakages were observed.
	No uncontrolled discharges from the site or working area to depressions may be permitted. All discharge points will require approval from the Environmental Site Agent (ESA).	NOTED	
	No water courses may be used to clean equipment, or for bathing. All cleaning operations should take place off site at a location where waste water can be disposed of correctly.	NOTED	
	The discharge of any pollutants such as cement, concrete, lime, chemicals, etc. into the natural environment and the storm water system must strictly be prohibited.	NOTED	
	Fuel and chemical storage should be done within a designated area only, which is properly bund and able to contain 110% of the capacity of fuel or chemicals stored within.	NOTED	
	Construction vehicles must be inspected every morning before work commence to ensure that no leakages do occur.	2	No vehicle leakages were observed.
	All personnel must receive induction on how to report spillages, contain them and treat them accordingly.	NOTED	
	Spill kits must be available at each working station.	2	A spill kit is available on site.
	Drip trays must be placed beneath all construction equipment that is stationary on site or within the site camp.	2	Drip trays are on site.
	Hazardous waste must be stored in bins with a lid in a demarcated waste area, and must be disposed of at a hazardous treatment facility with records on file.	NOTED	
7.13	Construction Site Operations - Water conservation		
	Re-use water where possible.	NOTED	
	Implement rain catchment strategies.	NOTED	
	Prevent leakages at taps and hoses by means of maintenance.	NOTED	
	Use buckets of water to clean tools instead of running water.	NOTED	
	Capture and reuse stormwater runoff for site cleaning, truck washing and dust suppression.	NOTED	

		Make sure that sediment, concrete, sand and rubbish does not end up going down the stormwater drain. Cover or filter stormwater inlets and drains.	NOTED	
		Require workers to use a broom rather than a hose to clean paths and gutters. If water use is necessary, use high pressure hoses which are both water efficient and more effective cleaners.	NOTED	
7.14	Construction Site Operations - Health & Safety	Ensure that PPE is available to Personnel.	3	The personnel are issued with PPE.
		Adhere to the Occupational Health and Safety Act.	NOTED	
		Keep the first aid kit stocked.	NOTED	
		Issue all workers with necessary health and safety items.	3	Workers are issued with safety items.
		Potentially hazardous areas must be demarcated with danger tape.	NOTED	
		Appropriate signage must be placed to caution employees and contractors not to enter certain structures without authorisation.	2	Appropriate warning signage are on site.
		Regular safety inspections must be conducted to ensure that participants are equipped with necessary safety equipment.	NOTED	
		All construction personnel to wear hard hats and reflector jackets at all times.	3	The personnel are issued with PPE.
7.15	Construction Site Operations - Heritage Resources	Should any heritage resources (including but not limited to fossil bones, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts or bone remains, structures and other built features, rock art and rock engravings) be exposed during excavation for the purpose of construction, construction in the vicinity of the finding must be stopped. A trained palaeontologist or heritage specialist must be notified to assess the finds, and this must then be reported to the applicable heritage authority.	NOTED	
		Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the heritage authority. A registered heritage specialist must be called to the site for inspection and removal once authority to do so, has been given.	NOTED	
		Excavations must be limited to the footprint area and be maintained in a narrow corridor.	NOTED	

<p>All operations of excavation equipment must be made aware of the possibility of the occurrence of sub-surface heritage features and the following procedures must be followed:</p> <ul style="list-style-type: none"> a. All construction in the immediate 50 m vicinity radius of the site must cease, b. The heritage practitioner must be informed as soon as possible, c. In the event of obvious human remains SAPS must be notified, d. Mitigation measures (such as refilling, etc.) must not be attempted, e. The area in a 50 m radius of the find must be cordoned off with hazard tape. 	NOTED	
<p>Public access must be limited and the area must be placed under guard.</p>	3	The public do not have access to the construction site.
<p>The Furnace area must be protected and declared a no-go area until the developer appoints a suitably qualified archaeologist to conduct a Phase 2 archaeological assessment of the terrain and to draw up a heritage management plan for the site.</p>	NOTED	
<p>The appointed archaeologist must apply for a valid permit from SAHRA to excavate the furnace for display and educational purposes.</p>	NOTED	

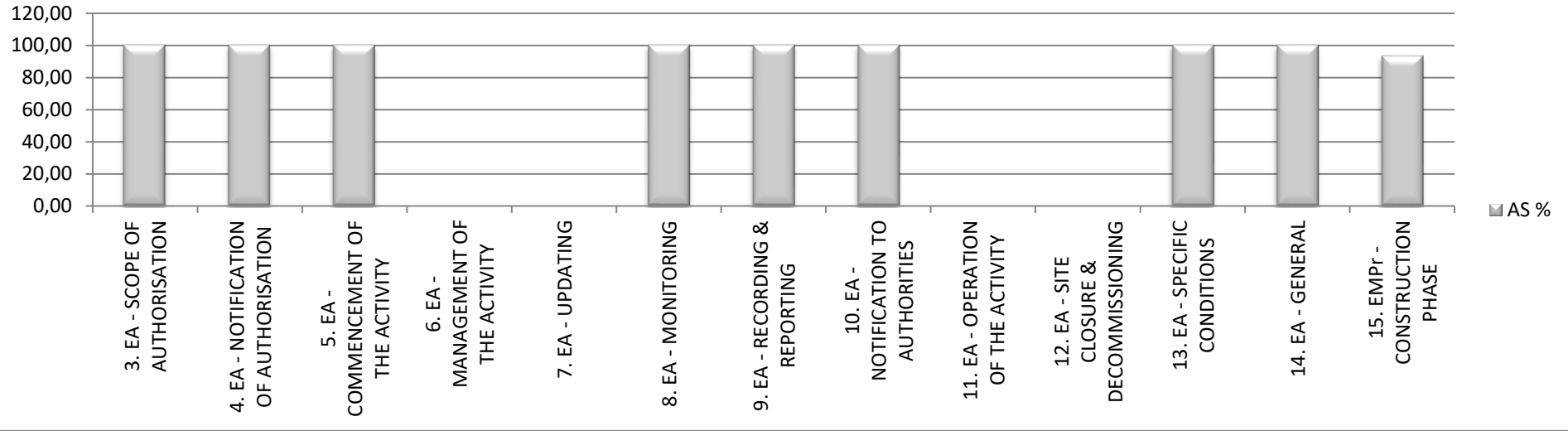
39

TOTAL SCORE	109
AS AVERAGE	2,8
AS PERCENTAGE	93,2

16. SUMMARY OF RESULTS

COMPLIANCE WITH:	TOTAL SCORE	COUNT	AS AVERAGE	AS %	COMMENTS
3. EA - SCOPE OF AUTHORISATION	6,00	1,00	3,00	100,00	Construction commenced within 5 years from approval.
4. EA - NOTIFICATION OF AUTHORISATION	6,00	1,00	3,00	100,00	Registered I&AP's were notified of Environmental Authorisation
5. EA - COMMENCEMENT OF THE ACTIVITY	3,00	1,00	3,00	100,00	The appeal period has lapsed. Construction may commence.
6. EA - MANAGEMENT OF THE ACTIVITY	N/A				Should changes be made in the EMPr then DFFE will be notified.
7. EA - UPDATING	N/A				No updating on EMPr currently.
8. EA - MONITORING	9,00	1,00	3,00	100,00	An ECO has been appointed.
9. EA - RECORDING & REPORTING	9,00	1,00	3,00	100,00	Compliance monitoring reports will be made available to DFFE.
10. EA - NOTIFICATION TO AUTHORITIES	3,00	1,00	3,00	100,00	DFFE was informed of commencement of the construction phase.
11. EA - OPERATION OF THE ACTIVITY	N/A				DFFE will be notified when operational phase commence.
12. EA - SITE CLOSURE & DECOMMISSIONING	N/A				No site closure or decommissioning currently.
13. EA - SPECIFIC CONDITIONS	9,00	1,00	3,00	100,00	The specific conditions will be monitored during construction.
14. EA - GENERAL	6,00	1,00	3,00	100,00	DFFE was informed of commencement of the construction phase.
15. EMPr - CONSTRUCTION PHASE	39,00	1,00	109,00	93,16	
TOTAL	90,00	9,00	14,78	99,24	

% COMPLIANCE



17. CONCLUSION

The table below indicates the amount of conditions for which the contractor is complying or not complying:

	Total number of conditions	Number of conditions monitored	SANPARKS	
			Compliant	Non-Compliant
3. EA - SCOPE OF AUTHORISATION	9	2	2	0
4. EA - NOTIFICATION OF AUTHORISATION	2	2	2	0
5. EA - COMMENCEMENT OF THE ACTIVITY	1	1	1	0
6. EA - MANAGEMENT OF THE ACTIVITY	4	0	0	0
7. EA - FREQUENCY	5	0	0	0
8. EA - MONITORING	5	3	3	0
9. EA - RECORDING & REPORTING	6	3	3	0
10. EA - NOTIFICATION TO AUTHORITIES	1	1	1	0
11. EA - OPERATION OF THE ACTIVITY	1	0	0	0
12. EA - SITE CLOSURE & DECOMMISSIONING	1	0	0	0
13. EA - SPECIFIC CONDITIONS	10	3	3	0
14. EA - GENERAL	2	2	2	0
15. EMPr CONSTRUCTION PHASE	182	39	39	0
TOTAL	229	56	56	0

Thus the percentage compliance with regard to the amount of conditions (performance) being monitored is as follows:

SANParks:

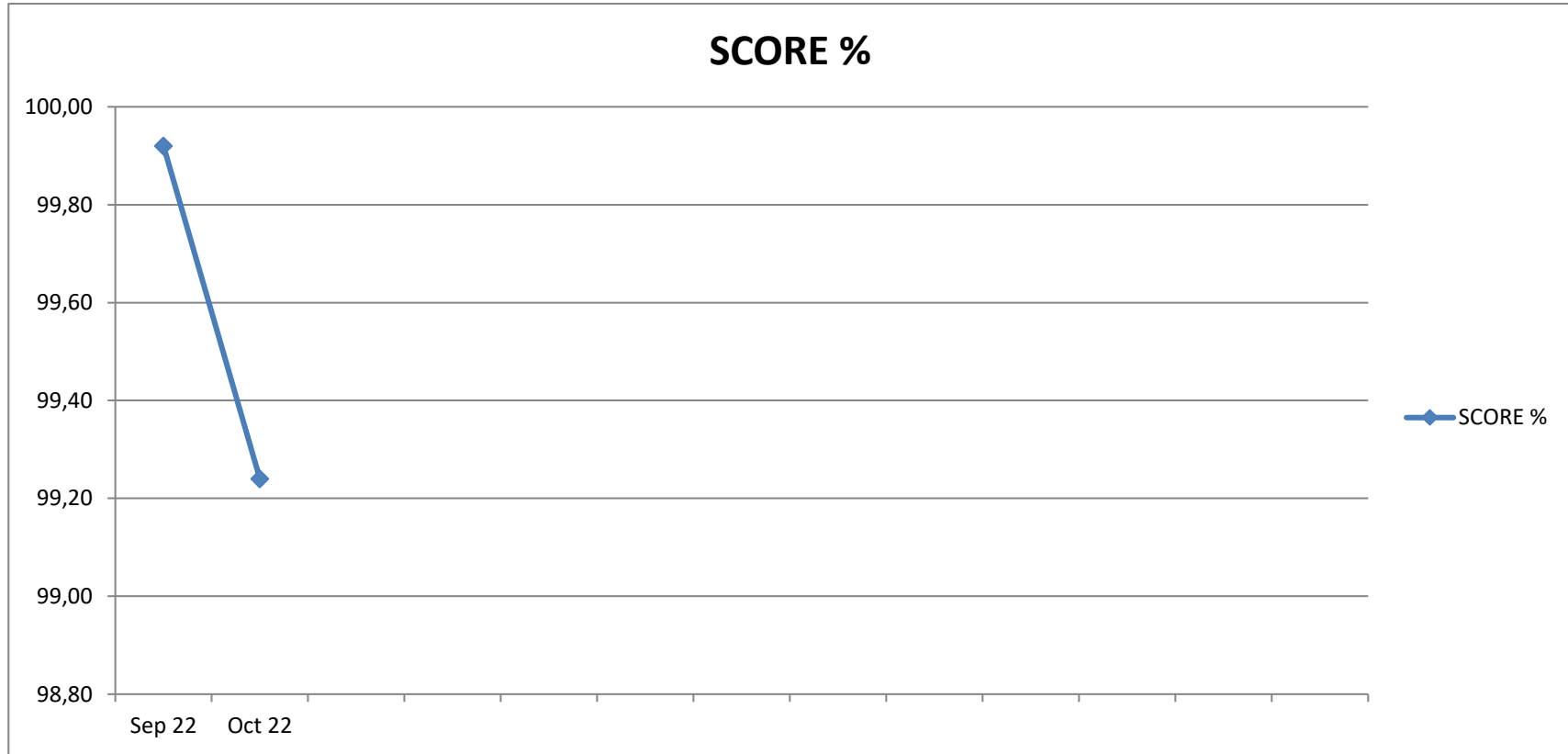
$$56/56 \times 100 = 100,00\%$$

SANParks:

56 out of 56 conditions were scored as compliant and 0 conditions were non-compliant.

13. COMPARISON OF AVERAGES

MONTH	Sep 22	Oct 22											
SCORE %	99,92	99,24											



14. PHOTO RECORD



The laydown areas are fenced.



The laydown areas are fenced.



Spill kit and dust bins are on site.



Storage areas are demarcated.



Apple Leaf Tree (*Philenoptera violacea*) is a protected tree and will not be removed.






Apple Leaf Tree (*Philenoptera violacea*) is a protected tree and will not be removed.



Existing roads will be used where possible.



Existing roads will be used where possible.

	<p>Apple Leaf Tree (<i>Philenoptera violacea</i>) is a protected tree and will not be removed.</p>		<p>Leadwood Tree (<i>Combretum imberbe</i>) is a protected tree and will not be removed.</p>
	<p>Mainly Mopani Trees (<i>Colophospermum mopane</i>) will be removed for site clearing.</p>		<p>Areas were demarcated which may be cleared.</p>
	<p>Only demarcated areas were cleared.</p>		<p>Only demarcated areas were cleared.</p>
	<p>Stockpile of removed vegetation.</p>		<p>Stockpile of removed vegetation.</p>



The water pipeline is marked.



Excavated water pipeline.



Workers are issued with PPE.



Workers are issued with PPE.



Warning signs are used on construction site.



Warning signs are used on construction site.