

Nxuba Wind Energy Facility, Eastern Cape Province

DEA Reference No.: 12/12/20/1569/2 & 12/12/20/2290

External Environmental Compliance Audit Report of
the Environmental Management Programme (EMPr),
in accordance with Regulation 54(A) of the EIA
Regulations (2017)

December 2019

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REPORT DETAILS

DEA Reference No's.	:	Bedford Stage WEF 12/12/20/1569/2 (Issued on 2 February 2012), as amended. GFR Wind Farm 12/12/20/2290 (Issued on 2 February 2012), as amended.
Environmental Assessment Practitioner (EAP)	:	Ms. K Jodas (Savannah Environmental)
Title	:	External Environmental Compliance Report for the Nxuba Wind Energy Facility between Cookhouse and Bedford, Eastern Cape Province
Authors	:	Savannah Environmental (Pty) Ltd Danie Brummer
Internal Review	:	Jo-Anne Thomas
Client	:	COASTAL AND ENVIRONMENTAL SERVICES (Pty) Ltd
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Date	:	December 2019

When used as a reference this report should be cited as: Savannah Environmental (2019) External S54 Environmental Compliance Report for the Nxuba Wind Energy Facility between Cookhouse and Bedford, Eastern Cape Province.

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DECLARATION OF INTEREST

I, PD Brummer, declare that:

- » I act as the independent environmental auditor for the environmental compliance audit (November 2019).
- » I have performed the work relating to the audit in an objective manner, even if this results in views and findings that are not favourable to the applicant.
- » I declare that there are no circumstances that may compromise my objectivity in performing such work.
- » I have expertise in conducting independent environmental audits, including knowledge of NEMA, the 2014 EIA Regulations (GNR 326) and any guidelines that have relevance to the activity.
- » I have complied with NEMA, the 2014 EIA Regulations (GNR 326) and all other applicable legislation.
- » I have no, and have not engaged in, conflicting interests in the undertaking of the audit.
- » I have undertaken to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing – any decision to be taken with respect to the project by the competent authority; and – the objectivity of any report, plan or document prepared by myself for submission to the competent authority.
- » All the particulars furnished by me in this report are true and correct.
- » I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of section 24F of the Act.
- » I do not have and will not have any vested interest (either business, financial, personal or other) in the project other than remuneration for work performed.

December 2019



Name

Date

ACRONYMS AND ABBREVIATIONS

CAA	Civil Aviation Authority
COC	Code of Conduct
DEA	Department of Environmental Affairs (National)
DWS	Department of Water and Sanitation
DoE	Department of Energy
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
GHG	Greenhouse Gas
GIIP	Good International Industry Practise
I&AP	Interested and Affected Party
IPP	Independent Power Producer
MW	Megawatts
NEMA	National Environmental Management Act (No. 107 of 1998)
NEM:BA	National Environmental Management: Biodiversity Act (No. 10 of 2004)
NHRA	National Heritage Resources Act (No. 25 of 1999)
NWA	National Water Act (No. 36 of 1998)
O&M	Operations and Maintenance
OEMPr	Operational Environmental Management Programme
OHS	Occupational Health and Safety
SAHRA	South African Heritage Resources Agency
WEF	Wind Energy Facility
WUL	Water Use License

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- Appendix A:** CVs of Independent Auditor/s and Report Reviewer
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1. INTRODUCTION AND BACKGROUND

Savannah Environmental (Pty) Ltd has been appointed by Coastal And Environmental Services (Pty) Ltd (on behalf of Wind Farm (RF)) to undertake an external environmental compliance audit and prepare an external environmental compliance audit report in accordance with the requirements of Regulation 54(a) of the EIA Regulations, 2014, as amended, for the Nxuba Wind Energy Facility (WEF) located between Cookhouse and Bedford, Eastern Cape Province. The external environmental compliance audit was conducted to demonstrate Nxuba Wind Farm (RF) (Pty) Ltd's compliance with the EMPr applicable to the project.

1.1. Project Background

Nxuba Wind Farm (RF) (Pty) Ltd (owned by Enel Green Power) is in the process of constructing the Nxuba Wind Farm, located approximately 11 km East of Cookhouse in the Eastern Cape Province. The wind farm falls within the Blue Crane Local Municipality of Sarah Baartman District Municipality. The project involves the construction and operation of a wind energy facility as well as its associated infrastructure. The Nxuba Wind Farm Project will generate 140MW from 47 Wind Turbines.

The Nxuba WEF includes the following permanent infrastructure:

- » 47 Wind turbine units on farm portions Robertskraal 281; Van Wyks Kraal 73/2; Van Wyks Kraal 73/3; Van Wyks Kraal 73/4; Van Wyks Kraal RE/73; Request RE/71; Request 11/71; Request 12/71 and Request 13/71;
- » Concrete foundations to support the turbine towers;
- » Hardstand/platform areas of approximately 25m by 50m;
- » Underground electrical distribution cabling between the turbines;
- » Overhead power line (132kV power line) including underpass connecting the Wind Farm to the Eskom Poseidon Substation;
- » Internal access roads to each wind turbine to link the turbines on site as well as the substation complex and permanent met masts; and
- » Guardhouses at the main access points

2. OBJECTIVE OF THE AUDIT

The objective of this environmental audit as contained in Appendix 7 of the 2014 Environmental Impact Assessment (EIA) Regulations (GNR 326) and Regulation 54(a) is to:

- » Report on:
 - * The level of compliance with the conditions of the EMPr.
 - * The extent to which the avoidance, management and mitigation measures provided for in the EMPr, achieve the objectives and outcomes of the EMPr.
- » Identify and assess any new impacts and risks as a result of undertaking the activity.
- » Evaluate the effectiveness of the EMPr.
- » Identify shortcomings in the EMPr.
- » Identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPr.

This Environmental Audit Report has been prepared in accordance with Appendix 7 of the 2014 EIA Regulations (GNR 326). An overview of the contents of the Environmental Compliance Audit Report, as prescribed by Appendix 7 of the 2014 EIA Regulations (GNR 326), and where the corresponding information can be found within the report is provided in **Table 1**.

Table 1: Summary of where the requirements of Appendix 7 of the 2014 EIA Regulations (GNR 326) are provided in this Environmental Compliance Audit Report.

Requirement	Location in Report
(a) Details of the – (i) Independent person who prepared the environmental audit report. (ii) Expertise of the independent person that compiled the environmental audit report.	Refer to Section 4 Refer to Appendix A
(b) A declaration that the independent auditor is independent in a form as may be specified by the competent authority.	Refer to Declaration of Interest Refer to Section 4
(c) An indication of the scope of, and the purpose for which, the environmental audit report was prepared.	Refer to Section 3
(d) A description of the methodology adopted in preparing the environmental audit report.	Refer to Section 0
(e) An indication of the ability of the EMPr, and where applicable, the closure plan to – (i) Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an on-going basis. (ii) Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the closure of the facility. (iii) Ensure compliance with the provisions of environmental authorisation, EMPr, and where applicable, the closure plan.	Refer to Section 11
(f) A description of any assumptions made, and any uncertainties or gaps in knowledge.	Refer to Section 5
(g) A description of any consultation process that was undertaken during the course of carrying out the environmental audit report.	Refer to Section 6 and Section 11
(h) A summary and copies of any comments that were received during any consultation process.	Refer to Section 11
(i) Any other information requested by the competent authority.	N/A

3. PURPOSE AND SCOPE

This Environmental Audit has been conducted to determine the Nxuba Wind Farm (RF) (Pty) Ltd's compliance with applicable environmental management requirements, as per the requirements of Section 54(A)(3) of the EIA Regulations, GNR 326 of 2017. The scope of the Environmental Audit is confined to an assessment of those environmental management requirements contained within the project EMPr.

4. OVERVIEW OF THE INDEPENDENT ENVIRONMENTAL AUDITORS

Nxuba WEF was initially authorised through Ms. Karen Jodas of Savannah Environmental as the Environmental Assessment Practitioner. Subsequently, the Environmental Control Officer roles has been fulfilled by Masonwabe Dyosi of CES. This independent environmental compliance audit was undertaken by Danie Brummer (refer to **Table 2**), and reviewed by Jo-Anne Thomas (refer to **Table 3**).

Table 2: Details of the Independent Environmental Auditors for this Section 54 audit report.

	Danie Brummer
Position:	Principal Consultant
Company:	Savannah Environmental (Pty) Ltd
Qualification:	M.Sc. Environmental Science and Management
Professional Registration:	Professional Natural Scientist (400166/11) (SACNASP)
Experience:	18 years
Contact:	011 656 3237
Email:	danie@savannahsa.com

Table 3: Details of the Report Reviewer.

Name:	Jo-Anne Thomas
Position:	Project Manager and Director
Company:	Savannah Environmental (Pty) Ltd
Qualification:	M.Sc. Botany
Professional Registration:	Professional Natural Scientist (400024/2000) (SACNASP) Registered EAP (EAPASA registration no.: 2019/726)
Experience:	22 years
Contact:	011 656 3237
Email:	joanne@savannahsa.com

A signed Declaration of Interest confirming the auditors' independence is included in this Environmental Audit Report. CVs of the Independent Environmental Auditor and Report Reviewer are attached as **Appendix A** to this report.

5. ASSUMPTIONS AND LIMITATIONS

The following assumptions and limitations are applicable to this Environmental Audit Report:

- » It is assumed that the information provided during the site visit was accurate and true at the time of conducting the site visit.
- » It is assumed that all information contained within the environmental files maintained onsite was accurate and true.

6. APPROACH TO CONDUCTING THE AUDIT

6.1. Pre-audit planning

Prior to undertaking the audit, the scope and objectives of the audit were determined through a review of relevant information applicable to the project.

Following the review of existing information, an audit checklist was prepared for use as a tool during the audit to identify any issues of non-compliance and / or areas where action plans may be required to be implemented to address any identified issues of concern.

The audit checklist was prepared based on the management specifications contained within the project EMP_r rev 3 (April 2016). As the Nxuba WEF is currently in the construction phase, all conditions barring those related to the operations and decommissioning of the facility are applicable to this audit. The checklist therefore contains all those specifications applicable given the current status of the project, i.e. pre-construction, construction phases.

6.2. Conducting the Audit

A site visit was conducted on Tuesday, 18 and 19 November 2019, and included:

- » A survey of the Nxuba WEF and associated infrastructure.
- » A review of on-site documentation and procedures.
- » An Interview with Nxuba Environmental Control Officer and the Enel Environmental Officer (on behalf of Nxuba Wind Farm (RF) (Pty) Ltd).

The following parties were present during the site visit:

- » Danie Brummer – Savannah Environmental's Independent Auditor.
- » Masonwabe Dyosi – Nxuba WEF Environmental Control Officer and the Enel Environmental Officer (on behalf of Nxuba Wind Farm (RF) (Pty) Ltd).

6.3. Post Audit

Following the site visit, an Environmental Audit Report was compiled based on the findings of the audit. A copy of this Audit Report was submitted to the Department of Environmental Affairs (DEA) in accordance with the requirements of Section 54(A)(3) prior to the 7th of December 2019.

7. FINDINGS OF THE AUDIT

Compliance ratings were provided for each element of the audit checklist using the 4-point rating scale described below:

Compliance status	Rating	Description of compliance
Compliant	3	Compliant with no further action required to maintain compliance

Compliance status	Rating	Description of compliance
Compliant	2	Compliant apart from minor or immaterial recommendations to improve the strength internal controls to maintain compliance
Compliant	1	Compliant with major or material recommendations to improve the strength of internal controls to maintain compliance
Non-Compliant	0	Does not meet minimum requirements

Table 4 provides details of the findings of the audit.

Table 4: Audit Checklist for Compliance with the Conditions Contained in EMPr Revision 1 (April 2016) for EAs (DEA Reference No. 12/12/20/1569/2) and (DEA Reference No. 12/12/20/2290).

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
Objective 1: To ensure that the planning and design of the facility responds to the identified environmental constraints and opportunities	Plan and conduct pre-construction activities in an Environmentally acceptable manner by e.g. avoiding any identified sensitive areas as per the sensitivity map (refer to figure 2.3 and Appendix B)	Proponent Contractor(s)	Pre-construction	3	Compliant as far as could be established during the site visit.
	The watercourse crossings should be designed such that they do not trap any run-off, thereby creating inundated areas, but allow for free flowing systems.	Contractor(s)	Design phase	3	No issues in this regard observed during the site visit (See Photo Plate 1).
	Detailed geotechnical investigation required for the design phase must be undertaken by avoiding any sensitive environmental areas as per the sensitivity map (refer to figure 2.3 and Appendix B).	Proponent	Design phase	3	Report has been verified and has been completed before the construction started.
	Provide forums to communicate matters regarding environmental management.	Proponent/Contractor(s)	Design phase	3	Client has an EO. There are weekly meetings with the different contractors on site. SHE matters are also discussed during the monthly site meeting.
	A permit must be obtained for removal or cutting of any protected plants found on site prior to the commencement of construction.	Proponent/Contractor(s)	Design phase	3	Relocation has been undertaken - permit verified and they currently comply with the conditions of this permit.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	Consider design level mitigation measures recommended by the specialists, especially with respect to ecology, avifauna, palaeontology and heritage, as detailed within the walkthrough reports.	Engineering Design Consultant / turbine supplier Nxuba Wind Farm	Tender design & design review stage	3	Compliant, all these conditions have been included in the EMPr and are being audited for compliance.
	Access roads to be carefully planned to minimise the impacted area and prevent unnecessary over compaction of soil.	Contractor(s)	Design phase	3	Most access roads are existing. New access roads are as per the approved layout.
	Align underground cables and internal access roads as far as possible along existing Infrastructure and disturbances.	Contractor(s)	Design phase	N/A	Not applicable at this stage. No underground cables have been installed.
	Pre-construction activities should avoid the identified rocky outcrop located at S 32°41'20.3"E 25°57'44.1", approximately 60 meters north-west of turbine 7 (refer to figure 2.3 and Appendix B).	Contractor(s)	Pre-construction	3	This has been verified on site. No construction is being undertaken in this area.
	For the construction of the access road at the tributary crossing S 32°43'57.90", E 25°56'10.58", care should be taken to avoid damaging and/or removing of intact vegetation species where possible (refer to figure 2.3 and Appendix B). A permit for removal will be required	Contractor(s)	Final Design Phase	3	No issues observed during the site visit. All permits for the removal of plant species are in place.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	for <i>Cynanchum natalensis</i> SCC at the proposed causeway.				
	Permits will be required for the removal of SCC species before construction of the proposed development.	Proponent	Pre-construction	3	Compliant. All the permits are in place and they are being complied with.
	Should the layout (or type of wind turbines used) change significantly (not including micro-siting to avoid sensitive areas) during the final design, the new layout must be submitted to the Department.	Proponent / Contractor(s)	Design phase	3	Compliant. All the design changes have been approved by the department.
	Implement a Stormwater Management Plan for hard/ compacted surfaces as part of the final design of the project (see Appendix J for generic plan on which detailed plan must be based)	Proponent / Contractor(s)	Design phase	3	Compliant.
	Mining permit/license to be obtained for any borrow pits to be established for the project (if applicable).	Contractor(s)	Pre-construction	N/A	No borrow pits on site. The contractor procures the required material.
	Obtain required abnormal load permits for transportation of project components to site.	Turbine supplier/ Transport Contractor	Pre-construction	3	The permits are in place.
	Aviation warning lights must be planned on turbine hub or such measures required by the Civil Aviation Authority. Indications are	Turbine supplier/ Proponent	Design	N/A	Not applicable at this stage. Only 8 turbines erected for now. No electricity to the existing turbines.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	that the facility may not be required to fit a light to each turbine, but rather place synchronous flashing lights on the turbines representing the outer perimeter of the facility.				
	Environmental Control Officer (ECO) to be appointed prior to the commencement of any authorised activities. Once appointed the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring at the DEA.	Proponent	Pre-construction	3	Has been verified. The notification to the department has been verified.
	Identify potential opportunities for local businesses.	Proponent	Tender Design and Review stage	3	Several local contractors (fencing, stormwater pipes, pre-assembly slabs) are employed and make use of all local labourers.
	Balance technical and financial considerations against environmental constraints and opportunities in finalising the design of key elements.	Proponent	Tender Design and Review stage	3	Compliant.
	Develop a database of local BEE service providers and ensure that they are informed of relevant tenders and job opportunities.	Proponent/ Contractor(s)	Pre-construction	3	This database was developed and are still being used.
	This EMPr and all its attachments (which includes the Environmental Authorisation) must be included in all	Proponent/ Contractor(s)	Tender process	0	The EMPr and the EA is not included in the contractual documentation with contractors.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	tender documentation and Contractors contracts.				Recommendation: The EMPr and the EA should be included as an addendum to the contractual documentation as per the requirement.
	Plant search and rescue: Remove native plant species from disturbance areas for re-use in the rehabilitation phase if and where applicable. Where these plants cannot be rescued the relevant permit from the DEDEAT needs to be in place before it is disturbed.	Contractor(s)	Pre-construction	3	Plants have been relocated where it was possible, and the required permits are in place and complied with.
	Areas to be cleared will be clearly marked in the field to eliminate unnecessary clearing/disturbance	Contractor(s) in consultation with the relevant Specialist and or ECO	Pre-construction	3	Barricading is in place wherever construction takes place.
	Sections of overhead cable should be fitted with Eskom approved, or similar, anti-bird collision line marking devices on the earth wires (if present) or conductors. This should preferably be a dynamic device, i.e. one that moves, as it is believed that these are more effective in reducing collisions (see Shaw 2013). It is critically important that a durable device be used on the new power line if we are to effectively mitigate	Proponent/ Contractor(s)	Planning	N/A	Bird diverters have not been installed on the overhead power line at this stage; They have only been installed on the met mast.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<p>this aspect. Tower/pylon structures used should be bird friendly Eskom approved, or similar, structure with at least 1800mm of phase-phase and phase-earth clearance. If a monopole structure is to be used, a Bird Perch must be installed on the top of each and every pole, to provide safe perching space for birds well above the dangerous hardware.</p>				
	<p>Particular care should be taken in the design of road drainage line and watercourse crossings in order to ensure there is no step in the channel bed, substrate continuity is maintained and no undue constriction of flow takes place. Culverts (or other appropriate measures) must be designed to allow free flow of water for both watercourse crossings. Regular maintenance of the culverts must be carried out during operation.</p>	<p>Engineer / Contractor(s)</p>	<p>Erection: during site establishment Maintenance: for duration of contract</p>	<p>3</p>	<p>No problems in this regard observed during the site visit (refer to Photo Plate 1)</p>
<p>Objective 2: To ensure effective communication mechanisms</p>	<p>Compile and implement a grievance mechanism procedure for the public (using Appendix C as a baseline/framework) to be implemented during both the construction and operational</p>	<p>Proponent and/or Contractor(s)</p>	<p>Pre-construction (construction procedure) Pre-operation (operation procedure)</p>	<p>3</p>	<p>Complaints register is kept by the site co-ordinator and the procedure is in place.</p>

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<p>phases of the facility and if applicable during decommissioning. This procedure should include details of the contact person who will be receiving issues raised by interested and affected parties, and the process that will be followed to address issues. A Project Specific Grievance Mechanism will be developed and implemented prior to construction.</p>				
	<p>Develop and implement a grievance mechanism for the construction, operational and closure phases of the project for all employees, contractors, subcontractors and site personnel. This procedure should be in line with the South African Labour Law.</p>	<p>Proponent Contractor(s) and/or</p>	<p>Pre-construction (construction procedure) Pre-operation (operation procedure)</p>	<p>3</p>	<p>Complaints register is kept by the site co-ordinator and the procedure is in place.</p>
	<p>Liaison with landowners is to be undertaken prior to the commencement of construction in order to agree on landowner-specific conditions during construction and maintenance.</p>	<p>Proponent Contractor(s) and</p>	<p>Pre-construction</p>	<p>3</p>	<p>This has been done and verified through minutes.</p>
	<p>An incident reporting system must be developed and used to record non-conformances to the EMPr.</p>	<p>Contractor(s)/ ECO</p>	<p>Pre-construction Duration of construction</p>	<p>3</p>	<p>Registers for Incidents and NCRs have been verified.</p>

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	Public complaints register must be developed and maintained on site in line with the Grievance mechanism (Appendix C).	Contractor(s)	Pre-construction Duration of construction	3	The register is in place.
Objective 3: Protection of Heritage and Palaeontological Resources	Cordon off sensitive heritage sites/areas near the project footprint, i.e. a 50m buffer on the eastern side of the historical buildings located at 32°43'47.41'S; 25°56'15.01'E and at 32°43'49.74'S; 25°56'16.66'E (refer to figure 2.3 and Appendix B).	Contractor(s)	Pre-construction	3	These areas form part of the no-go areas outside of the construction footprint.
	If any human remains (or any other concentrations of archaeological heritage material) are exposed during pre-construction, all work in the immediate area affecting the find must cease and it must be reported immediately to the Albany Museum (Tel: 046 622 2312) or to the Eastern Cape Provincial Heritage Resources Authority (Tel: 043 642 2811), so that a systematic and professional investigation can be undertaken. Sufficient time should be allowed to investigate and to remove/collect such material. Recommendations will follow from the investigation.	Contractor(s)	Pre-construction	N/A	No such finds since the project started.
CONSTRUCTION					

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
Objective 1: Securing the site and site establishment	Secure site, working areas and excavations in an appropriate manner, as agreed with the Site Manager, ECO/ EO/ Environmental Representative.	Contractor(s)/ ECO/EO/ Environmental Representative	Site establishment, and duration of construction	3	All working areas and excavations have been secured with barricading.
	Where necessary to control access, fence and secure area using appropriate means, and implement access control procedures – fencing should take cognisance of farming activities, e.g. not limiting game and/or sheep and other animals from accessing water/ food (fencing should be discussed and planned in conjunction with the landowners prior to construction).	Contractor(s)	Site establishment, and duration of construction	3	There are two access control points that provide access to the site. Both are manned by 24-hour security personnel.
	Adequate protective measures must be implemented to prevent unauthorised access to the working area and the internal access/haul routes.	Contractor(s)	Site establishment, and duration of construction contract	3	There are two access control points that provide access to the site. Both are manned by 24-hour security personnel.
	The Contractor must take all reasonable measures to ensure the safety of the public in the surrounding area. Where the public could be exposed to danger by any of the works or site activities, the contractor must, as appropriate, provide suitable flagmen, barriers and/or warning signs in English,	Contractor(s)	Site establishment, and duration of construction contract	3	No concerns noted during the site visit.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	Afrikaans and any other relevant local languages, all to the approval of the Site Manager.				
	Fence and secure Contractor's equipment camp as agreed with the ECO/ EO/ Environmental Representative.	Contractor(s)	Site establishment	3	No concerns noted during the site visit. All the construction camps are fenced.
	Fencing should not have any strands within 30cm of the ground, which should be sufficient to allow smaller mammals, reptiles and tortoises to pass through, but still remain effective as a security barrier.	Contractor(s)	Site establishment	3	The fencing on site in the current condition does not provide a barrier to the movement of Fauna.
	Develop an efficient access control system which allows for the identification of all people on site.	Contractor(s)	Site establishment, and duration of construction	3	There are two access control points that provide access to the site. Both are manned by 24-hour security personnel.
	All unattended open excavations shall be adequately demarcated and/or fenced (fencing shall consist of a minimum of three strands of wire wrapped with danger tape).	Contractor(s)	Site establishment, and duration of construction	3	All open excavations are barricaded and inspected daily for animals that might have fallen in.
	All development footprints for roads, buildings, underground cables, laydown areas and turbine footings should be fenced off with two strand wire and clearly indicated with flags and/or danger tape strips. There is to	Contractor(s)	Site establishment, and duration of construction	3	The fencing and barricading in areas where construction takes place has been verified.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	be no disturbance outside these demarcated areas.				
	Establish appropriately bunded areas for storage of hazardous materials (i.e. fuel to be required during construction). Bunds must be constructed in order to accommodate 110% of the volume of the substance stored.	Contractor(s)	Site establishment	3	This has been verified within the construction camps (refer to Photo Plates 2 &4)
	Establish the necessary ablution facilities with chemical toilets and provide adequate sanitation facilities and ablutions for construction workers (1 toilet per every 15 workers) at appropriate locations on site.	Contractor(s)	Site establishment, and duration of construction	3	Toilets were observed across the site and were adequate for the number of workers within the construction teams.
	Ablution or sanitation facilities should not be located within 100 m from a 1:100 year flood line or within 32m of a watercourse if the aforementioned is unknown.	Contractor(s)	Site establishment, and duration of construction	3	All observed facilities were in accordance with this condition.
Objective 2: Maximise local employment and business opportunities associated with the construction phase	Employ as many workers (skilled, semi-skilled / low-skilled) from the local area/ nearby towns as possible.	Contractor(s)	Project duration	3	Local contractors have been employed wherever possible. The figures were confirmed with the CLO.
	Ensure that the majority of the low-skilled workers are sourced from the local area	Proponent/ Contractor(s)	Project duration	3	Local contractors have been employed wherever possible. The figures were confirmed with the CLO.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	Where required, implement appropriate training and skills development programmes prior to the initiation of the construction phase.	Proponent/ Contractor(s)	Project duration	3	Upskilling of local people was undertaken prior to construction and is ongoing.
	Skills audit to be undertaken as per REIPPP ED and SED Requirements to determine training and skills development requirements.	Proponent/	Project duration	1	Although evidence of training was provided during the audit there is no evidence of a skills audit that has been conducted. Recommendation: A skills audit need to be conducted on all workers as per the requirement.
	Develop a database of local BBEEE service providers and ensure that they are informed of tenders and job opportunities	Contractor(s)	Project duration	3	The database is in place and the required people are notified of tenders and job opportunities.
	Identify potential opportunities for local businesses.	Proponent/ Contractor(s)	Project duration	3	This has been done, and the local contractors employed wherever possible.
Objective 3: Avoid the negative social impacts on family structures and social networks due to the presence of construction workers from outside the area, including potential	The majority of the low-skilled workers should be sourced from the local area. This should be included in the tender documents. Construction workers should be recruited from the local area in and around the Cookhouse/ Bedford area and per the REIPPP requirements and obligations.	Proponent Contractor(s)	Pre-construction/ construction	3	This has been done as far as possible.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
loss of livestock, game, other fauna and damage to farm infrastructure	Identify local contractors who are qualified to undertake the required work. Consider establishment of a Monitoring Forum (MF) consisting of representatives from the local community, local police, local farming community, the DEDEAT (Environmental Provincial Authority) and the contractor prior to the commencement of the construction phase.	Proponent/ Contractor(s)	Pre-construction/ construction	3	Local contractors have been identified for the required work. There is no formal monitoring forum however as this is not considered to be practical.
	Develop a Code of Conduct to cover the activities of the construction workers housed on the site.	Contractor(s)	Pre-construction/ construction	3	The Enel COC is used on site.
	Ensure that construction workers attend a briefing session before they commence activities. The aim of the briefing session is to inform them of the rules and regulations governing activities on the site as set out in the Code of Conduct.	Proponent/ Contractor(s)	Pre-construction/ construction	3	There was a mass toolbox talk with all the construction workers before construction commenced where they discussed the Code of Conduct as well as all the EHS rules and requirements for the site.
	Ensure that all workers are informed at the outset of the construction phase of the conditions contained on the Code of Conduct.	Proponent/ Contractor(s)	Pre-construction/ construction	3	There was a mass toolbox talk with all the construction workers before construction commenced where they discussed the Code of Conduct as well as all the EHS rules and requirements for the site.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	Ensure that construction workers who are found guilty of breaching the Code of Conduct are disciplined accordingly. All disciplinary hearings and/or dismissals must be in accordance with South African labour legislation.	Proponent/ Contractor(s)	Pre-construction/ construction	3	The disciplinary procedure is in place and has been implemented as far as could be established.
	Provide workers with home breaks (weekends, holidays and month-end) opportunities as per Project Schedules and relevant Project contracts.	Proponent/ Contractor(s)	Construction	3	The contractors rotate with their pay weekends. All workers have a pay weekend at least once per month.
	During construction staff/ employees must be transported from town to site. The costs of transportation must be borne by the contractor.	Contractor(s)	Construction	3	The transport to Bedford is provided by the contractors. Local taxi drivers are used through the taxi association.
	The housing of construction workers on the site should be limited to security personnel, if required.	Contractor(s)	Construction	3	No construction workers staying on site.
	Ensure that all farm gates are locked (when not in use) and secure (when in use) at all times, Gate Management to be discussed with the landowners prior to construction activities. The Landowner Condition including gate management must be documented in the Access and/or Gate Management Method Statements.	Contractor(s)	Construction	3	The internal gates are manned, and then open and closed as required. External gates are access controlled through the appointed security company.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	Inform the landowner of activity on their land as per agreed landowner construction requirements or at least ten (10) days in advance of planned activities	Contractor(s)	Duration of contract	3	This have been done before construction started.
	Procedures and measures to prevent, and in worst cases, attend to fires should be developed in consultation with the surrounding property owners.	Contractor(s)	Pre-Construction and when required	3	There are no firebreaks and the local farmers indicated that they do not want fire breaks. There are procedures to deal with fires at the site.
	Contact details of emergency and police services should be prominently displayed on site. An after-hours number for complaints will be made available	Contractor(s)	Construction	3	Emergency numbers are displayed at the site offices.
	Appropriate fire-fighting equipment must be present on site and members of the workforce should be appropriately trained in using this equipment in the fighting of veld fires.	Contractor(s)	Construction	3	Firefighting equipment is in place and have been serviced.
	Employees, visitors and/or subcontractors should be made well aware of the consequences of any damage to private property and/or loss of livestock, game and/or other fauna.	Proponent/ Contractor(s)	Duration of contract	3	This has been done during the mass toolbox talk and during subsequent toolbox talks.
	Should there be any damage to private property and/or loss of	Proponent/ Contractor(s)	Duration of contract	N/A	No such incidents since the start of construction.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	livestock, game and/or other fauna that can be linked to the Contractor, or any subcontractor, the landowner shall be compensated accordingly upon sufficient proof thereof.				
	Reasonable site access control should be implemented.	Contractor(s)	Duration of contract	3	This is in place, with a security company appointed to control site access.
Objective 4: Noise control	On-site construction activities should be limited to daylight hours as far as possible. No construction activities after 13:00 on Saturdays or on Sundays and public holidays. Should construction activities need to be undertaken outside of these times, necessary communication including the surrounding communities will be conducted.	Contractor(s)	Construction	3	Compliant. When after hours activities are planned this is communicated to the affected parties.
	Construction noise must be managed according to the Noise Control Regulations and SANS 10103	Contractor(s)	Construction	3	Compliant, construction noise is within the legal limits at the site. A noise specialist conduct sampling.
	The construction crew must abide by the national standards and local by-laws, if any, regarding noise.	Contractor(s)	Construction	3	Compliant, construction noise is within the legal limits at the site.
	All construction equipment, including vehicles, must be properly and appropriately maintained in order to minimise noise generation.	Contractor(s)	Construction	3	Compliant, construction noise is within the legal limits at the site.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	Establish a line of communication and notify all stakeholders and sensitive receptors of the means of registering any issues, complaints or comments.	Contractor(s)	All phases of project	3	This is in place, part of the external grievance process.
	Notify potentially sensitive noise receptors about work to take place at least 2 days before the activity in the vicinity (within 500 m) of the Potentially Sensitive Receptors (PSR) is to start. The following information to be presented in writing: <ul style="list-style-type: none"> • Description of activity to take place; • Estimated duration of activity; • Working hours; and • Contact details of responsible party. 	Contractor(s)	At least 2 days, but not more than 5 days before activity is to commence	N/A	There are no sensitive receptors within 500m of current construction activities.
Objective 5: Management of dust and other emissions and damage to roads	Areas to be cleared in a progressive manner. Road surfaces and other infrastructure to be constructed as soon as possible after vegetation clearing in order to minimise exposed ground surfaces, specifically roads which carry traffic.	Contractor(s)	Duration of contract	3	This is the approach currently implemented on site.
	Roads must be maintained to a manner that will ensure that dust from road or vehicle sources is not visibly excessive. Ensure that	Contractor(s)	Pre-construction/construction	3	All roads were maintained in a good condition as observed during the site visit. Dust suppression takes place by using water trucks.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	damage to roads is repaired before completion of construction phase				
	Haul vehicles moving outside the construction site carrying material that can be wind-blown should be covered with tarpaulins or similar material.	Contractor(s)	Duration of contract	3	No issues with dust suppression observed during the site visit. Haul vehicles on the access roads were covered.
	Appropriate dust suppressant must be applied on all exposed areas and stockpiles as required to minimise/control airborne dust. Regular dust control of materials (sand, soil, concrete), e.g. enclosing stockpiles of soil, aggregate and sand with 2m shade cloth walls or similar, must be used at concrete batching plants on site.	Contractor(s)	Duration of contract	3	Dust suppression was conducted wherever applicable as observed during the site visit.
	Dust-generating activities or earthworks may need to be rescheduled or the frequency of application of dust control/suppressant increased during periods of high winds if visible dust is blowing toward nearby residences.	Contractor(s)	Duration of the contract	3	Dust suppression was conducted wherever applicable as observed during the site visit. There are no sensitive receptors close to the current construction activities.
	Haul vehicles moving outside the construction site carrying material that can be wind-blown should be covered with tarpaulins.	Contractor(s)	Duration of contract	3	Haul vehicles on the access roads were covered.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	Speed of construction vehicles must be restricted, as defined by the EO/ Environmental Representative.	Contractor(s)	Duration of contract	3	Speed limit at this site is 30km. This is enforced by the H&S department.
	Ensure vehicles adhere to speed limits on public roads and speed limits set within the site by the Site Manager/ ECO/ EO/ Environmental Representative.	Contractor(s)	Duration of contract	3	This is monitored by the various contractors and enforced by the H&S department.
	Disturbed areas must be re-vegetated as soon as practicable after construction is complete in an area.	Contractor(s)	At completion of the construction phase	3	Rehabilitation has started in small areas where construction has been completed.
	Vehicles and equipment must be maintained in a road-worthy condition at all times.	Contractor(s)	Duration of contract	3	Maintenance schedules are kept by the various contractors. They ensure that all vehicles are maintained and roadworthy. Spot checks are also performed by the security personnel on vehicles entering the site.
	Ensure that damage to gravel public roads and access roads attributable to construction vehicles used for construction of the Nxuba Wind Farm is repaired before completion of construction phase.	Contractor(s)	Before completion of construction phase	N/A	Construction still in progress.
	Regular dust control of materials (sand, soil, concrete) must be used at concrete batching plants on site.	Contractor(s)	Construction	N/A	No batching plant at the site.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	Strictly control vibration pollution from compaction plant or excavation plant as far as practically possible	Contractor(s)	Construction	3	Compliant as far as practically possible.
	Disturbed areas must be re-vegetated as soon as practicable.	Contractor(s)	At completion of the construction phase.	3	Rehabilitation has started in small areas where construction has been completed.
	If monitoring results or complaints indicate inadequate performance against the criteria indicated, then the source of the problem will be identified, and existing procedures or equipment modified to ensure the problem is rectified.	Contractor(s)	Duration of contract	3	Forms part of the corrective action process.
Objective 6: Soil, rock degradation, erosion control and water quality management	Disturbance of vegetation and topsoil must be kept to a practical minimum.	Contractor(s)	Duration of contract establishment and any activity related to earthworks as well as the duration of construction	3	Rehabilitation has started in small areas where construction has been completed.
	In rehabilitation phase. Maintain stockpile shape and protect from erosion. All stockpiles must be positioned 50m away from drainage lines, on either side of the drainage line. Limit the height of stockpiles to 1.5m in order to reduce compaction.	Contractor(s)	Duration of contract establishment and any activity related to earthworks as well as the duration of construction	N/A	Rehabilitation phase has not started yet.
	New access roads to be carefully planned and constructed to minimise the impacted area and	Contractor(s)	Before and during construction	3	Some new roads have been constructed. The roads have been constructed in such a way

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	prevent unnecessary excavation, placement and compaction of soil.				as to prevent unnecessary excavation, placement and compaction of soil.
	Internal access roads should be kept to a minimum	Contractor(s)	During site establishment	3	Compliant as verified during the site visit.
	Access to the wind energy facility construction site should be restricted to designated access points	Contractor(s)	Duration of contract	3	There are only two access points to the two sections of the wind farm.
	Identify and demarcate construction areas for general construction work and restrict construction activity to these areas. Prevent unnecessary destructive activity within construction areas (prevent over-excavations and double handling of materials).	Contractor(s)	Construction	3	There are only two access points to the two sections of the wind farm.
	Rehabilitate disturbed areas as soon as construction in an area is completed, if practically and logistically possible.	Contractor(s)	During and after construction	3	Topsoil has been replaced in some areas.
	Keep the loss of vegetation cover adjacent to surface water resources, especially at the one watercourse crossing (S 32°43'57.90", E 25°56'10.58" – refer to figure 2.3 and Appendix B), to a minimum	Contractor(s)	Construction	2	Rehabilitation has started in small areas where construction has been completed including the area referenced in the EMPr. There are some steep slopes in this area that might need further attention following the first post construction rains.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
					Recommendation: The slopes next to the water course crossing should be monitored and mitigation measures implemented if any erosion is detected.
	Stockpiles not used in three (3) months after stripping must be seeded or appropriately covered to prevent dust and erosion - only if natural seeding does not occur. The seed used and seeding itself must be done under supervision and in consultation with the ECO/ EO/ Environmental Representative	Contractor(s)	During and after construction	3	Some uncovered and unseeded topsoil stockpiles were observed during the site visit, but some natural growth was observed on these.
	Any stockpiles must be protected against wind erosion (e.g. surrounded by shade cloth fences or damped down on a regular basis).	Contractor(s)	Duration of contract	3	Protective measures against wind erosion are implemented at the site.
	Silt traps / bunds must be used to trap sediment wherever possible and revegetate affected areas as soon as is practically and logistically possible.	Contractor(s)	Erection: Before construction Maintenance: Duration of contract	3	This is in place wherever relevant.
	Erosion control measures: Implement run-off attenuation on slopes (sand bags, logs), silt fences, storm water catch-pits, shade nets or temporary mulching over stripped areas.	Contractor(s)	Erection: Before construction Maintenance: duration of contract	N/A	Not applicable at this stage. There are only small areas that have been covered by topsoil following local construction activities.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	Concrete batching to take place in designated areas only. No concrete batching to take place on the bare soil surface. Cement/Concrete mixers to be placed on large trays to prevent accidental spills from coming into contact with the soil surface. A method statement must be developed for the concrete batching facilities.	Contractor(s)	Construction	N/A	No concrete batching takes place on site.
	Spill kits must be readily available on-site and easily accessible from anywhere on the site, especially where large works are being carried out, for the clean-up of spills and leaks of contaminants.	Contractor(s)	Duration of contract	3	This is in place and has been verified for completeness.
	Soil erosion control measures (such as hessian mats and gabions) must be used for erosion prone areas such as steep slopes.	Contractor(s)	Construction	2	There are some steep slopes in the area at the stream crossing that might need further attention following the first post construction rains. Recommendation: The slopes next to the water course crossing should be monitored and mitigation measures implemented if any erosion is detected.
	Any excavation, including those for cables, must be supervised by the EO/ Environmental Representative.	Contractor(s)	Duration of construction	3	Compliant.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	All cable trenches, etc. through sensitive areas should be excavated carefully in order to minimise damage to surrounding areas.	Contractor(s)	Duration of construction	3	Compliant.
	It may be necessary to use geotextiles and/or wind nets to limit wind erosion of exposed areas, where wind erosion could present difficulties and result in the loss of valuable topsoil.	Contractor(s)	Site establishment & duration of contract	3	No problems in this regard observed during the site visit. Dust suppression is taking place using bowsers.
	Vehicular traffic must be controlled during construction, confining access and roadways, where possible, to proposed or existing road alignments.	Contractor(s)	Duration of contract	3	Compliant.
	Movement of vehicles on-site is to be on approved and formalised access roads as far as possible, which shall be adequately maintained throughout construction. Where temporary tracks are required (e.g. for use by crawler crane) these are to be ripped and rehabilitated as soon as use of the track is no longer required.	Contractor(s)	Duration of contract	3	Compliant.
	If a bridge is not used, embed culverts in the substrate to ensure substrate continuity between up and downstream areas. Where this is not	Contractor(s)	Construction	3	Compliant at the low-level crossings on site.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	practical (e.g. culverts on bedrock) ensure the surface of the culvert mimics the natural habitat up and downstream.				
	Culverts of adequate size must be provided across drainage lines for any roads established within the wind energy facility site and/or within the power line servitude. Roadside drainage must ensure significant accelerated discharge of sediment to surface water bodies does not take place.	Contractor(s)	Erection: during site establishment Maintenance: for contract	3	No issues in this regard observed during the site visit.
	Use existing roads wherever possible.	Contractor(s)	During site establishment	3	Compliant as very little new access roads were constructed. New roads were only established in areas where there is no other alternative.
	Ensure there is no step in the bed profile as a result of the construction of a crossing.	Contractor(s)	Erection: during site establishment Maintenance: for duration of contract	3	Compliant as verified during the site visit.
	Construction equipment must be refuelled within designated refuelling locations, or where remote refuelling is required, appropriate drip trays will be utilised.	Contractor(s)	Duration of contract	3	Refuelling takes place within the construction camp on a spill pad.
	Construction machinery must be stored over drip trays in an	Contractor(s)	Duration of contract	0	Several plant and machinery were observed during the site audit that

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	appropriate area where the soil is protected/ sealed.				were not stored over drip trays. Several small spills were observed in the construction camp area (refer to Photo Plate 9). Recommendation: It is recommended that strict control is implemented on the allocation and the use of drip trays at the construction camps where heavy vehicles overnight.
	All stored fuel must be maintained within an appropriately bunded area and on a sealed surface.	Contractor(s)	Duration of contract	3	Fuel is stored in appropriately bunded areas with the correct capacity in terms of the SANS standards.
	Fuel storage areas must be inspected regularly to ensure bund stability, integrity and function.	Contractor(s)	Duration of contract	3	Inspections are carried out on a daily basis at the storage areas.
	Oily water from bunds must be removed from site by licensed contractors who will either reuse or dispose of it at a licensed waste water treatment works/ hazardous waste site. Waste manifests must be provided by the local municipality to prove legal disposal. Waste manifests must be provided by the local municipality to prove legal disposal.	Contractor(s)	Duration of contract	3	All waste documentation has been verified and is in place.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	Corrective action must be undertaken immediately if a complaint is made, or potential/actual leak or spill of polluting substance identified. This includes stopping the contaminant from further escaping, cleaning up the affected environment as much as practically possible and implementing preventive measures.	Contractor(s)	Duration of contract	2	Some spills were observed in the construction camp areas. When spills are cleaned the contaminated soils are taken to the hazardous waste skip. The skip is removed by Enviroserve /Oricol (Nordex). Recommendation: It is recommended that strict control is implemented on the allocation and the use of drip trays at the construction camps where heavy vehicles overnight.
	In the event of a major spill or leak of contaminants, the relevant administering authority must be immediately notified as per the notification of emergencies/incidents.	Contractor(s)	Duration of contract	3	No Section 30 spills recorded on site from the start of construction.
	Any contaminated/polluted soil removed from the site must be disposed of at a licensed hazardous waste disposal facility. Waste manifests must be provided by the local municipality to prove legal disposal.	Contractor(s)	Duration of contract	3	Some spills were observed in the construction camp areas. When spills are cleaned the contaminated soils are taken to the hazardous waste skip. The skip is removed by Enviroserve /Oricol (Nordex).
	The sediment control and water quality structures used on-site must	Contractor(s)	Duration of contract	3	No issues observed during the site audit.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	be monitored and maintained in a fully operational state at all times.				
	Upon the completion of construction, the area must be cleared of potentially polluting materials. Limit the spatial extent of the areas in which the predevelopment vegetation cover is reduced. After construction has been completed ensure exposed soil surfaces are rehabilitated with the replacement of topsoil (if relevant), scarification of the land surface (if relevant) and revegetation with an indigenous vegetation cover as soon as is practically possible. (Using plant species indigenous to the study area).	Contractor(s)	Duration of contract	N/A	Construction in progress. Rehabilitation has commenced in some areas where construction has been completed.
	Use mitre drains to disperse sediment laden flows in roadside drains onto adjacent slopes.	Contractor(s)	Pre-construction (avoidance planning), construction and operational phases of the project	3	This is in place along the access roads.
Objective 7: Limit disturbance and avoid damage to	Rehabilitate any disturbed areas as soon as possible once construction is completed in an area.	Contractor(s)	Construction	3	Construction in progress. Rehabilitation has commenced in some areas where construction has been completed.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
drainage lines/ watercourses.	Control storm water and runoff water through the implementation of a storm water management plan for the site. Post-development run-off must not exceed pre-development run-off. Contaminated runoff from the construction site(s) should be prevented from entering the rivers/streams, i.e. it must be trapped.	Contractor(s), ECO/EO /Environmental Representative	Construction & Operation	3	In compliance are far as could be verified through the Stormwater Management and Erosion Control Method Statement (15.MS-SMEC-REV-00).
	Construction must not result in the width of the watercourse being narrowed.	Contractor(s)	Construction	3	Compliant.
	Utilise erosion control measures on access roads and drainage lines where required.	Contractor(s)	Construction	3	This is in place.
	Ablution facilities at the construction sites, i.e. outside the construction camp, must be located at least 100m away from drainage lines and regularly serviced by a service provider.	Contractor(s)	Construction	3	These facilities are correctly placed, and the servicing records have been verified.
	Concrete batching plants and stockpiles to be located at least 50m away from drainage lines and a total buffer o width of 100 m. If not possible, the ECO/ EO/ Environmental Representative must be consulted to ensure the relevant	Contractor(s)/ECO/ EO/ Environmental Representative	Construction	3	No batching plant at the site. All the stockpiles are correctly located.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	mitigation measures are implemented.				
	Capture runoff from roofs in rainwater tanks or disperse runoff from impervious surfaces onto adjacent areas.	Contractor(s)	Pre-construction (avoidance planning), construction	3	There are a rainwater collection systems at the site camp to harvest rainwater.
	Use mitre drains to deflect water from roads onto adjacent slopes	Contractor(s)	Pre-construction (avoidance planning), construction	3	This is in place at the sides of the roads.
	Areas to be cleared must be clearly marked and confirmed as correct on-site to eliminate the potential for unnecessary disturbance. All woody material cleared must be shredded to coarse chips.	Contractor(s) in consultation with Technical Director/ Project Manager/ Contractor(s)	Pre- construction	3	Woody material is stored at the farmer's house as per agreement with the farmer.
Objective 8: Minimisation of development footprint and disturbance to topsoil quality	Construction activities must be restricted to demarcated areas so that impact on topsoil is minimised.	Contractor(s)	Before and during construction, monitored during operational phase	3	Compliant.
	Salvaging topsoil: » Topsoil must always be salvaged and stored separately from subsoil and lower-lying parent rock or other spoil material. » Topsoil stripping removes up to 30 cm or less of the upper soils. » In cultivated areas, depth of topsoil may increase and needs	Contractor(s)	Before and during construction	1	Very little topsoil has been stripped on site. The topsoil on the site is not enough for the rehabilitation works to be completed. Recommendation: Topsoil and subsoil should be separated and stored separately as per the requirement.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<p>to be confirmed with the land owner.</p> <ul style="list-style-type: none"> » Prior to salvaging topsoil the depth, quality and characteristics of topsoil should be known for every management area. » This will give an indication of total volumes of topsoil that need to be stored to enable the proper planning and placement of topsoil storage. » * Different types of topsoil – rocky soils and sands or loams must be stored separately Topsoil should be removed (and stored) under dry conditions to avoid excessive compaction whenever topsoil will have to be stored for longer than one year. 				
	<p>Storing topsoil:</p> <ul style="list-style-type: none"> » Viability of stored topsoil depends on moisture, temperature, oxygen, nutrients and time stored. » Rapid decomposition of organic material in warm, moist topsoil rapidly decreases microbial activity necessary for nutrient cycling, and reduces the 	Contractor(s)	Before and during construction	1	<p>Very little topsoil has been stripped on site. The topsoil on the site is not enough for the rehabilitation works to be completed.</p> <p>Recommendation: Topsoil and subsoil should be separated and stored separately as per the requirement.</p>

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<p>amount of beneficial micro-organisms in the soil.</p> <ul style="list-style-type: none"> » Stockpile location, if not adjacent to a linear development: » At least 50 m from any watering point » Ideally a disturbed but weed-free area » Topsoil is typically stored in berms with a width of 150 – 200 cm, and a maximum height of 1.5 – 2m: » Place berms along contours or perpendicular to the prevailing wind direction » Adhere to the following general rule: the larger the pile of topsoil storage needs to be, the shorter should be the time it is stored » Topsoil handling should be reduced to stripping, piling (once), and re-application. Between the stockpiling and reapplication, stored topsoil should not undergo any further handling except control of erosion and (alien) invasive vegetation 				

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<ul style="list-style-type: none"> » Where topsoil can be reapplied within six months to one year after excavation, it will be useful to store the topsoil as close as possible to the area of excavation and re-application, e.g. next to cabling trenches » In such case, use one side of the linear development for machinery and access only » Place topsoil on the other/far side of this development, followed by the subsoil (e.g. on geotextile if deemed necessary) » In cases where topsoil has to be stored longer than 6 months or during the rainy season, soils should be kept as dry as possible and protected from erosion and degradation by: <ul style="list-style-type: none"> » Preventing puddling on or between heaps of topsoil » Or covering topsoil berms » Preventing all forms of contamination or pollution » Preventing any form of compaction 				

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<ul style="list-style-type: none"> » Monitoring establishment of all invasive vegetation and removing such if it appears » Keeping slopes of topsoil at a maximal 2:1 ratio * Monitoring and mitigating erosion where it appears » Where topsoil needs to be stored in excess of more than 6 months, it is recommended to either cover the topsoil or allow an indigenous grass cover to grow on it – if this does not happen spontaneously, seeding should be considered. This must be implemented only after consultation with the ECO. 				
	<p>Reapplying topsoil:</p> <ul style="list-style-type: none"> » Spoil materials and subsoil must be back-filled first, then covered with topsoil » Generally, topsoil should be re-applied to a depth equal to slightly greater than the topsoil horizon of a pre-selected undisturbed reference site » The minimum depth of topsoil needed for revegetation to be 	Contractor(s)	During construction and after construction.	3	Mostly not applicable at this stage. Activities are compliant for the small areas where topsoil have been re-applied.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<p>successful is approximately 20 cm</p> <ul style="list-style-type: none"> » If the amount of topsoil available is limited, a strategy must be worked out to optimise revegetation efforts with the topsoil available » Reapplied topsoil should be landscaped in a way that creates a variable microtopography of small ridges and valleys that run parallel to existing contours of the landscape. The valleys become catch-basins for seeds and act as run-on zones for rainfall, increasing moisture levels where the seeds are likely to be more concentrated. This greatly improves the success rate of revegetation efforts. » To stabilise reapplied topsoils and minimise raindrop impact and erosion: <ul style="list-style-type: none"> • Areas to be cleared must be clearly demarcated and confirmed on-site to eliminate the potential for unnecessary disturbance. All woody material cleared 				

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<p>must be shredded to coarse chips, except for alien invasive species material which should not be used as much as seedlings may generate from it and reinvest the area.</p> <ul style="list-style-type: none"> Alternatively, suitable geotextiles or organic erosion mats can be used as necessary. Continued monitoring will be necessary to detect any sign of erosion early enough to allow timeous mitigation. 				
	<p>Re-applied topsoil needs to be re-vegetated as soon as possible, following the specifications of the revegetation and rehabilitation plan (refer to Appendix E)</p>	<p>Contractor(s)</p>	<p>Before and during construction, monitored during operational phase</p>	<p>3</p>	<p>The licensee is compliant for the small areas where topsoil has been re-applied.</p>
<p>OBJECTIVE 9: Protection of vegetation</p>	<p>Avoid creating conditions in which alien plants may become established:</p> <ul style="list-style-type: none"> * Keep disturbance of indigenous vegetation to a minimum * Rehabilitate disturbed areas as quickly as possible * Do not import soil from areas with alien plants 	<p>Contractor(s)</p>	<p>Construction & Operation</p>	<p>3</p>	<p>Alien invasive plant species seemed to be under control during the site visit.</p>

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<p>It is recommended that all <i>Euphorbia globosa</i> individuals are carefully uprooted by a skilled botanist or horticulturist and transplanted to an area where they will not be disturbed and that the relevant permits are obtained from DEDEAT prior to these activities commencing. Three alien species from the <i>Cactaceae</i> family namely <i>Opuntia aurantica</i>, <i>Opuntia ficus-indica</i> and <i>Opuntia lindheimeri</i> were found within the area. Many areas surrounding the main tributary have well established stands of <i>Eucalyptus grandis</i> trees. Alien invasive species should be controlled in accordance with the Alien Species Management plan (Appendix F of the EMPr).</p>	Contractor(s)	Construction & Operation	3	<p>This has been verified through the Plant search and rescue plan removal performed by, EnviroSci (Pty) Ltd. These species as well as some additional protected species have been relocated and all the permits are in place. Alien species are being eradicated in accordance with the Alien Species Management plan.</p>
	<p>Immediately control any alien plants that become established using registered control methods.</p>	Contractor(s)	Construction & Operation	3	<p>Alien invasive plant species seemed to be under control during the site visit.</p>
	<p>The extent of clearing and disturbance to the native vegetation must be kept to a minimum so that the impact on flora is restricted.</p>	Contractor(s)	Site establishment & duration of contract	3	<p>The clearance footprint is restricted to the approved areas, and minimalised as far as possible.</p>
	<p>Revegetation of cleared areas or monitoring by the ECO/ EO/ Environmental Representative</p>	Contractor(s)	Construction	3	<p>The licensee is compliant for the small areas where topsoil has been re-applied.</p>

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	should be implemented to ensure that recovery is taking place				
	The site revegetation and rehabilitation plan (attached as Appendix D) should be implemented. Establish an on-going monitoring programme as per Alien Management Plan (Appendix F) to detect, quantify and remove any alien species that may become established and identify the problem species (as per Conservation of Agricultural Resources Act, Act 43 of 1983 and NEM: Biodiversity Act)	Contractor(s) in consultation with Specialist	Duration of contract	3	Alien invasive plant species seemed to be under control during the site visit.
	The removal of the alien invasive species must be undertaken by a specialist or accredited Pest Control Operator (PCO) where chemical control is required.	Contractor(s)/Specialist/PCO	During construction	3	Sundula Conservation (PE) conduct alien invasive clearing at the site. This is done quarterly in accordance with the alien invasive management plan.
OBJECTIVE 10: Protection of fauna and avifauna	Removal and alteration of natural vegetation should be kept to an absolute minimum	Contractor(s)	Construction & operation	3	The clearance footprint is restricted to the approved areas, and minimalised as far as possible.
	Disturbed areas which will possibly house rodents (which in turn attract raptors) should be effectively rehabilitated with indigenous grass species as soon as possible.	Contractor(s)	Construction & operation	3	The licensee is compliant for the small areas where topsoil has been re-applied.
	Underground cabling should follow roads as far as practically possible,	Contractor(s)	Construction & operation	3	Compliant as far as could be established during site verification.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	and not unnecessarily deviate from the road verge (as this would result in additional linear impacts on the grassland).				
	The extent of clearing and disturbance to the native vegetation must be kept to a minimum so that impact on fauna and their habitats is restricted.	Contractor(s)	Site establishment & duration of contract	3	The clearance footprint is restricted to the approved areas, and minimalised as far as possible.
	The site Rehabilitation Plan should be implemented (refer to Appendix E). No animals are to be harmed or killed. Employees should be trained (e.g. during toolbox talks) that poisonous animals should not be killed and if encountered the ECO/ EO/ Environmental Representative should be informed. The ECO/ EO/ Environmental Representative must have the required Competency Certificates, received from the attendance of a Reptile Husbandry and Handling Course as there may be many poisonous snakes to be moved.	Contractor(s) in consultation with Specialist	Duration contract	3	No issues were observed during the site visit. There are snake handlers at the site to relocate snakes and reptiles. Training records have been verified and the required topics are included.
	Alternatively, if any poisonous animals are encountered on site, they should either be allowed sufficient space and time to relocate, or a relevantly qualified	Contractor(s)/ ECO/ EO/ Environmental Representative	Duration of contract	3	There are people on site who are qualified to relocate animals.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	person must be contacted to remove/relocate the animal.				
	Employees must be prohibited from harvesting wild plants for any purpose.	Contractor(s)	Duration of contract	3	Compliant. No issues were observed during the site visit.
OBJECTIVE 11: Protection of fossils and sites of heritage value	The ECO/ EO/ Environmental Representative for the project should be well versed before construction starts on the possible types of heritage sites/materials they may encounter and the procedures to follow when they find sites. They should be trained by the Heritage Specialist to identify, follow the relevant procedure and report to the site manager if sites are found.	Contractor(s) and ECO/ EO/ Environmental Representative	Pre-construction/ Construction	3	The ECO is well versed with the heritage structures and the possible artefacts at the site. The ECO is familiar with the procedure when there are chance finds.
	The ECO/ EO /Environmental Representative for the project should be alerted to the potential for, and scientific significance of, new fossil finds during the construction phase of the development. They should familiarise themselves with the sort of fossils concerned through museum displays and accessible, well-illustrated literature.	Contractor(s) and ECO/ EO/ Environmental Representative	Pre-construction/ Construction	3	The ECO is well versed with the possible fossil finds in the area as well as the procedure to follow if any fossils are discovered during construction.
	All construction activities on the site must be monitored by an archaeologist/heritage practitioner,	ECO/ EO/ Environmental Representative/ Specialist	Construction	3	The ECO is well versed with the heritage structures, fossils and the possible artefacts at the site. The

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<p>or alternatively a person should be trained to conduct the monitoring, such as the ECO/ EO/ Environmental Representative. This must include the clearing of the vegetation (which constrained the visibility of heritage resources during the walkthrough investigation).</p> <p>If any human remains or any other concentrations of archaeological heritage material are exposed during construction, all work in the immediate area affecting the find, must cease and it must be reported immediately to the archaeologist at the Albany Museum in Grahamstown (Tel: 046 622 2312) or to the Eastern Cape Provincial Heritage Resources Authority (Tel: 043 642 2811), so that a systematic and professional investigation can be undertaken. Sufficient time should be allowed to investigate and to remove/collect such material. Recommendations will follow from the investigation</p>				ECO is familiar with the procedure when there are chance finds.
	Areas required to be cleared during construction must be clearly marked in the field to avoid unnecessary disturbance of adjacent areas.	Owner/Contractor(s) in consultation with Specialist	Pre-Construction/ Duration of contract	3	All areas earmarked for construction are demarcated. Specialists will be brought in if heritage objects are found.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<p>If a heritage object is found, work in the immediate area affecting the find must be stopped immediately, and appropriate specialists brought in to assess the site, notify the administering authority of the item/site, and undertake due/required processes.</p>				
	<p>Apply for permits from the Eastern Cape Province Heritage Resources Authority to collect and/or excavate sites/materials from archaeological sites if exposed during construction work.</p>	<p>Consultant/ EO, Contractor(s) and the archaeologist / heritage practitioner.</p>	<p>Before construction continues and for the duration of the project</p>	<p>N/A</p>	<p>No such sites/areas exposed.</p>
	<p>The palaeontologist concerned with mitigation work will need a valid fossil collection permit from SAHRA (Contact details: Mrs Colette Scheermeyer, P.O. Box 4637, Cape Town 8000. Tel: 021 462 4502. Email: cscheermeyer@sahra.org.za) and any material collected would have to be curated in an approved depository (e.g. museum or university collection).</p>	<p>Specialist</p>	<p>Construction</p>	<p>N/A</p>	<p>No such finds to date.</p>
	<p>Should important new fossil remains such as vertebrate bones and teeth, plant-rich fossil lenses or dense fossil burrow assemblages be exposed during construction, the responsible</p>	<p>Contractor(s) and ECO/ EO/ Environmental Representative</p>	<p>Construction</p>	<p>3</p>	<p>No such finds to date. The ECO is well versed with the heritage structures, fossils and the possible artefacts at the site. The ECO is</p>

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<p>ECO/ EO/ Environmental Representative should alert ECPHRA (i.e. The Eastern Cape Provincial Heritage Resources Authority. Contact details: Mr Sello Mokhanya, 74 Alexander Road, King Williams Town 5600; smokhanya@ecphra.org.za tel: 043 745 0888) as soon as possible so that appropriate action can be taken in good time by a professional palaeontologist.</p> <p>Although the development is well-removed from the historical Van Wyks Kraal homestead and graveyard (which date from 1805), care must be taken that no damage occur to these buildings and features. These must be listed as a 'no-go zone'. The heritage sites/areas must be avoided, i.e. a 50m buffer on the eastern side of the historical buildings located at 32°43'47.41'S; 25°56'15.01'E and at 32°43'49.74'S; 25°56'16.66'E (refer to figure 2.3 and Appendix B).</p>				familiar with the procedure when there are chance finds.
<p>OBJECTIVE 12: Traffic Management and</p>	<p>The Traffic and Transportation Management Plan (refer to Appendix I and J-1) must be implemented. The plan specifies that</p>	<p>Contractor(s)/ Transport Contractor</p>	<p>Pre-construction/ Construction</p>	<p>3</p>	<p>Permits are in place. Sample verification was conducted during the site visit.</p>

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
transportation of equipment and materials to site	the relevant permits must be obtained for abnormal loads.				
	A designated access to the proposed site must be created to ensure safe entry and exit.	Contractor(s)	Pre-construction	3	Designated access to the site is in place with the required access control.
	No deviation from approved transportation routes must be allowed, unless roads are closed for whatever reason outside the control of the contractor.	Contractor(s)/ Transport Contractor	Duration of contract	3	Only approved access roads to the site are used.
	Appropriate road management strategies must be implemented on external and internal roads with all employees and contractors must be required to abide by standard road and safety procedures.	Contractor(s)/ Transport Contractor	Duration of contract	3	This is in place and monitored.
	Appropriate dust suppression techniques must be used to minimise dust emissions on unsurfaced roads. Vehicle movements on local roads must be limited to standard construction operating hours wherever possible to limit noise impacts and dust nuisance.	Contractor(s)/ Transport Contractor	Duration of contract	3	Water trucks are used to perform dust suppression on the access roads to the site. There are currently two operational water trucks. Movements of vehicles are limited as far as possible. Special focus is on dust suppression close to the sensitive receptors on the road leading to the site (main gravel road).
	Times for arrival and departure of heavy vehicles must be co-ordinated as far as possible in order	Contractor(s)/ Transport Contractor	Duration of contract	3	No issues have been observed in this regard during the site visit.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	to minimise congestion. Any traffic delays as a result of construction traffic must be co-ordinated with the appropriate authorities.				
	The movement of all vehicles within the site must be on designated roadways.	Contractor(s)	Duration of contract	3	No issues have been observed in this regard during the site visit.
	Signage must be established at appropriate points warning of turning traffic and the construction site (all signage to be in accordance with prescribed standards and must be managed on an ongoing basis).	Contractor(s)	Duration of contract	3	All signage is in place at the site.
	All hazardous substances must be transported in accordance with the relevant legislation and regulations.	Contractor(s)/ Transport Contractor	Duration of contract	3	Compliant as far as could be established during the site visit.
	Appropriate maintenance of all vehicles must be ensured.	Contractor(s)/ Transport Contractor	Duration of contract	3	Permits are in place. Sample verification were conducted during the site visit.
	All vehicles travelling on public roads must adhere to the specified speed limits and all drivers must be in possession of an appropriate valid driver's license.	Contractor(s)/ Transport Contractor	Duration of contract	3	This is monitored by the Safety and the Security departments. Sample verification was conducted during the site visit.
OBJECTIVE 13: Minimisation of visual impacts	The activities and movement of construction workers and construction site vehicles must be restricted to the immediate construction.	Contractor(s)	Duration of contract	3	No issues observed in this regard during the site visit.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
associated with construction	The general appearance of construction activities, construction equipment camps and lay-down areas must be maintained by means of the timely removal of rubble and disused construction materials.	Contractor(s)	Duration of contract	3	Compliant.
	Construction activities must be restricted to daylight hours (as far as possible) in order to negate or reduce the visual impacts associated with lighting. In the event that night-time construction activities are required to be undertaken, lighting must be placed in such a manner as to limit impacts on the surrounding areas (also refer to section 5.2, Objective 2).	Contractor(s)	Duration of contract	3	Some construction activities are taking place at night. Lighting is limited and there are no sensitive receptors in the areas of construction. Stakeholders are notified before these activities take place.
	Aviation warning lights must be mounted on turbine housing or such measures required by the Civil Aviation Authority.	Contractor(s) and/or turbine contractor	Erection of turbines	N/A	Not applicable at this stage. Still in construction; no power to the turbines.
	Clearance of vegetation within the development footprint must be minimised in order to minimise long-term visual disturbance, and rehabilitation efforts undertaken.	Contractor(s)	Duration of contract	3	Compliant as verified during the site visit.
	Limit access to the construction sites (during both construction and	Contractor(s)	Duration of contract	3	Access to the construction site is limited as far as practically possible.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	operational phases) along existing access roads as far as possible.				
	Ensure all disturbed areas are appropriately rehabilitated once construction in an area is complete.	Contractor(s)	Duration of contract	3	Limited rehabilitation is currently taking place in areas where construction has been completed. Rehabilitation seems to be appropriate as far as could be determined.
	The storage of flammable and combustible liquids such as oils must be in designated areas which are appropriately bunded and stored in compliance with Material Safety Data Sheets (MSDS) files.	Contractor(s)	Duration of contract	3	This is in place and has been verified during the site visit (refer Photo Plate 8).
OBJECTIVE 14: Appropriate handling and storage of chemicals, hazardous substances and waste	Any spills must receive the necessary clean-up action. Bioremediation kits are to be kept on-site and used to remediate any spills that may occur. Spill kits must be readily available on-site and easily accessible from anywhere on the site, especially where large works are being carried out, for the clean-up of spills and leaks of contaminants. Appropriate arrangements must be made for appropriate collection and disposal of all cleaning materials, absorbents and contaminated soils (in accordance with a Waste Management Plan, Appendix H).	Contractor(s)	Duration of contract	1	Some spills were observed in the contractor's camps, especially in the heavy vehicles parking areas. Several heavy vehicles were observed without drip trays. There were spill kits available in areas where these would be required. Recommendation: It is recommended that strict control is implemented on the allocation and the use of drip trays at the construction camps where heavy vehicles overnight.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<p>All stored fuels to be maintained within a bund and on a sealed surface as per the requirements of SABS 089:1999 Part 1. The bunded area must be provided with a tap-off system through which spillages and leakages that might occur will be removed without any spillage outside the bunded area.</p>	Contractor(s)	Duration of contract	1	<p>Fuels are maintained within a bund and on a sealed surface. The tap off system was non functional at the construction camp during the site visit, however, and it is not clear how clean rainwater is drained for this bund (refer to Photo Plates 2&3).</p> <p>Recommendation: The tap off system must be serviced to get it in working order. Daily inspections should be conducted to drain clean rainwater before it gets contaminated.</p>
	<p>Generators and fuel supply needed during construction at or near watercourses must be placed on trays, which rest on clean sand. Once construction has been completed, this sand (if contaminated) must be removed from site and disposed of at a registered waste disposal site. Waste manifests must be provided by the local municipality to prove legal disposal.</p>	Contractor(s)	Construction	3	<p>No issues were observed at sampled sites during the site visit. Waste documentation is kept with the various contractors.</p>
	<p>Any storage and disposal permits/approvals which may be required must be obtained, and the</p>	Contractor(s)	Duration of contract	3	<p>In place. Waste documentation is kept with the various contractors.</p>

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	conditions attached to such permits and approvals will be complied with.				
	SABS approved spill kits must be available and easily accessible	Contractor(s)	Duration of contract	3	Spill kits were available at the sampled sites during the site visit.
	Routine servicing and maintenance of vehicles is not to take place on-site (except for emergency situations or large cranes which cannot be moved off-site). If repairs of vehicles must take place on site, an appropriate drip tray must be used to contain any fuel or oils.	Contractor(s)	Duration of contract	3	No issues were observed at sampled sites during the site visit.
	Transport of all hazardous substances must be in accordance with the relevant legislation and regulations.	Contractor(s)	Duration of contract	3	Enviroserve and Orikol are used for the collection and disposal of hazardous waste. The required documentation was in place at sampled sites.
	Waste disposal records must be available for review at any time.	Contractor(s)	Duration of contract	1	There is no waste register. Only safe disposal certificates are submitted to the ECO. Recommendation: A waste register indicating the quantities of all waste removed from the site must be submitted to the ECO on a monthly basis.
	Construction contractors must provide specific detailed waste management plans/method	Contractor(s)	Duration of contract	3	Samples have been verified during the site visit.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	statements to deal with all waste streams. These must be based on the underlying principles of the Waste Management Plan attached as Appendix H.				
	Specific areas must be designated on-site for the temporary management of various waste streams, i.e. general refuse, construction waste (wood and metal scrap) and contaminated waste. Location of such areas must seek to minimise the potential for impact on the surrounding environment, including prevention of contaminated runoff, seepage and vermin control.	Contractor(s)	Duration of contract	3	This was in place at the sampled sub-contractors' sites.
	Where possible, construction and general wastes on-site must be reused or recycled. Bins and skips must be available on-site for collection, separation and storage of waste streams (such as wood, metals, general refuse etc.). Disposal of waste must be in accordance with relevant legislative requirements, including the use of licensed contractors and licensed waste disposal sites.	Contractor(s)	Duration of contract	3	Waste separation is conducted on site and the waste is then removed by a contractor.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	Hydrocarbon waste must be contained and stored in sealed containers within an appropriately bunded area.	Contractor(s)	Duration of contract	3	Compliance verified at the sampled sites.
	Waste and surplus dangerous goods must be kept to a minimum and must be transported by approved waste transporters to sites designated for their disposal.	Contractor(s)	Duration of contract	3	Compliance verified at the sampled sites.
	Documentation (waste manifest) must be maintained detailing the quantity, nature and fate of any hazardous waste.	Contractor(s)	Duration of contract	3	This is kept with the various sub-contractors.
	No chemicals must be stored within 100m of drainage lines	Contractor(s)	Duration of contract	3	Compliance verified at the sampled sites.
	Supply adequate weather and vermin proof waste collection bins and skips (covered at minimum with secured netting or shade cloth) at site where construction is being undertaken. Separate labelled bins should be provided for general and hazardous waste. As far as possible, provision should be made for separation of waste for recycling.	Contractor(s)	Site establishment, and duration of construction	2	Compliance verified at the sampled sites (refer to Photo Plate 10). Waste skips were not completely covered in accordance with this requirement. The one skip had a lid, but it was open during the site visit. Recommendation: All general waste stored on site should be covered to prevent windblown litter.
	All work sites must be kept free of waste. No solid waste may be	Contractor(s)	Site establishment, and duration of construction	3	Compliance verified at the sampled sites.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	<p>burned or buried on site or disposed of by any other method on site or within quarries or borrows pits. Solid waste (general waste) to be disposed of at the relevant municipal landfill site. Slips of disposal to be retained as proof of responsible disposal</p>				
	<p>Liquid waste: No liquid waste, including grey water, may be discharged into any waterbody or drainage line. All sewage disposal to take place at a registered and operational wastewater treatment works. Slips of disposal to be retained as proof of responsible disposal Hazardous substances and hazardous waste: Ensure compliance with all national, regional and local legislation with regard to the storage, handling and disposal of hydrocarbons, chemicals, solvents and any other harmful and hazardous substances and materials. The onus is on the Contractor to identify and interpret the applicable legislation. Hazardous waste to be disposed of at a registered h:H or H:H landfill site. Depending on the classification of</p>	<p>Contractor(s) O&M Contractor Proponent</p>	<p>During and post construction.</p>	<p>3</p>	<p>This is kept with the various contractors. Compliance verified at the sampled sites.</p>

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	the waste, a registered service provider with the necessary permits is to collect, transport and dispose of hazardous waste. Proof of appropriate disposal to be provided to the ECO.				
	Keep a record of all hazardous substances stored on site for submission to the ECO. Clearly label all the containers storing hazardous waste.	Contractor(s)	Pre-Construction	0	No records of hazardous <u>substances</u> stored are submitted to the ECO at the moment and the existence of these records could therefore not be verified during the site visit. Only the ECO was available for the audit. Recommendation: records of hazardous <u>substances</u> stored at the site should be submitted to the ECO on a monthly basis.
	An effective monitoring system must be put in place to detect any leakage or spillage of all hazardous substances during their transportation, handling, installation and storage.	Contractor(s)	Duration of contract	3	Visual observations from drivers and security as well as the onsite ECO and the EOs.
	Precautions must be in place to limit the possibility of oil and other toxic liquids from entering the soil or clean storm water system.	Contractor(s)	Duration of contract	1	Some spills were observed at the site camps in areas where trucks are stored. Recommendation: It is recommended that strict control is

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
					implemented on the allocation and the use of drip trays at the construction camps where heavy vehicles overnight.
	Implement an integrated waste management approach that is based on waste minimisation and incorporates reduction, recycling, re-use and disposal where appropriate.	Contractor(s)	Duration of contract	3	Sorting of waste is taking place at the site. The waste is then removed by a contractor where it is recycled.
	Upon the completion of construction, the area must be cleared of potentially polluting materials. Spoil stockpiles must also be removed and appropriately disposed of or the material re-used for an appropriate purpose.	Contractor(s)	Completion of construction	3	This has been done in the isolated areas where construction has been completed.
OBJECTIVE 15: Ensure disciplined conduct of on-site contractors and workers	Contractors must use chemical toilets/ablation facilities situated at designated areas of the site; no abluting must be permitted outside the designated area. These facilities must be regularly serviced by appropriate contractors. Ablution facilities must not be placed within 100m from any river or drainage line.	Contractor(s) (and sub-contractor/s)	Duration of contract	3	Compliant at the sampled sites.
	Cooking must take place in a designated area. No firewood or	Contractor(s) (and sub-contractor/s)	Duration of contract	3	Compliant at the sampled sites.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
	kindling may be gathered from the site or surrounds.				
	All litter must be deposited in a clearly marked, closed, animal-proof disposal bin in the construction area; particular attention needs to be paid to food waste.	Contractor(s) (and sub-contractor/s)	Duration of contract	3	Compliant at the sampled sites.
	No one must disturb flora or fauna outside of the demarcated construction area/s.	Contractor(s) (and sub-contractor/s)	Duration of contract	3	Compliant at the sampled sites.
	Contractors appointed by Nxuba Wind Farm must ensure that all workers are informed at the outset of the construction phase of the conditions contained on the Code of Conduct, specifically consequences of stock theft and trespassing on adjacent farms.	Contractor(s) (and sub-contractor/s)	Duration of contract	3	This has been done and verified. Forms part of the induction material.
	On completion of the construction phase all construction workers must be transported back to their place of appointment within two days of their contract ending. The costs of transportation must be borne by the contractor	Contractor(s) (and sub-contractor/s)	Construction	N/A	Not applicable at this stage.
OBJECTIVE 16: To avoid and or minimise the	No open fires for cooking or heating must be allowed on site.	Contractor(s)	Construction	3	Compliant at the sampled sites.
	Provide adequate firefighting equipment on-site.	Contractor(s)	Construction	3	Compliant at the sampled sites.

Objective	Mitigation: Action/control	Responsibility	Timeframe	Compliance Rating (1 – 3)	Audit Finding
potential risk of increased veld fires during the construction phase.	Provide fire-fighting training to selected construction staff.	Contractor(s)	Construction	3	Compliant at the sampled sites.
	Compensate farmers / community members at full market related replacement cost for any losses due to the wind farm project, such as livestock, damage to infrastructure etc as a result of fires that can be directly attributed to construction activities.	Contractor(s)	Construction	N/A	Not applicable at this stage.

8. PHOTO RECORD



Photo Plate 1. Steep slopes next to the river crossing that would be prone to future erosion.



Photo Plate 2. Diesel tanks and pumps within the bunded area at the contractor's site camp.



Photo Plate 3. Tap off system non functional at the bunded area. The pipe is full of ground.



Photo Plate 4. Indication of the tank and the bund capacity at the Diesel storage area.



Photo Plate 7. Generator stored within bunded area.



Photo Plate 8. Hazardous substances stored in a designated ventilated storage area with spill containment.



Photo Plate 9. Small oil and hydraulic fluid spill observed under heavy machinery where the trucks overnight.



Photo Plate 10. General waste stored in a skip with a lid although the lid stood open during the site visit.

9. AUDIT RESULTS AND RECOMMENDATIONS

9.1. Overview of Audit Findings

The following recommendations are made for the Nxuba WEF:

- » There are some steep slopes in recently rehabilitated areas such as the area next to the stream crossing that might need further attention following the first post construction rains. Rip rap or vegetation could be used to prevent erosion on these slopes.

Responsible Party – Enel EO/Site ECO/EO's/Construction manager

Target Date: March 2020

- » Although evidence of training was provided during the audit there are no evidence of a skills audit that has been conducted. A skills audit needs to be done on all the workers on site.

Responsible Party – All Contracting Managers/Training Managers

Target Date: March 2020

- » It is recommended that strict control is implemented on the allocation and the use of drip trays at the construction camps where heavy vehicles overnight. Several small spills were observed in these areas during the audit (**Photo Plate 9**)

Responsible Party – Enel EO/Site ECO/EO's for the subcontractors

Target Date: Immediate

- » Records of all hazardous substances stored on site by each contractor should be submitted to the ECO for his records on a monthly basis.

Responsible Party – Enel EO/Site ECO/EO's for the subcontractors

Target Date: Immediate

- » All general waste stored on site should be covered to prevent windblown litter.

Responsible Party – Enel EO/Site ECO/EO's for the subcontractors

Target Date: Immediate

9.2. Conclusion

Although some instances were identified as being less than 100% compliant with the conditions of EMPr Revision 1 (April 2016), these were considered to be minor. Overall the site was found to be well-managed and operated and maintained in an environmentally sound manner.

An overall compliance percentage of the Nxuba Wind Farm's compliance with the conditions of the EMPr was calculated (refer to **Table 5**). The following compliance ratings are applicable in this regard:

- » A rating of 100%: best practice / full compliance.
- » A rating of >50%: compliance is satisfactory.
- » A rating of <50%: compliance is unsatisfactory.
- » A rating of 0%: nothing in place.
- » A rating of N/A: not applicable at this time (and therefore excluded from the overall compliance rating).

Overall the Nxuba WEF was found to be mostly compliant with the conditions of the EMPr Revision 3 to varying degrees (refer to **Table 5**), although some instances of partial non-compliance were recorded. The facility is 95% fully compliant with the conditions of EMPr Revision 3 with 5% of the conditions being partially non-compliant and 2% being non-compliant.

Table 5: Overview of the Nxuba WEF overall compliance.

Compliance status	Rating	Description of compliance	EMPr	
			Results	%
Compliant	3	Compliant with no further action required to maintain compliance.	176	93%
Compliant	2	Compliant apart from minor or immaterial recommendations to improve the strength internal controls to maintain compliance.	4	2%
Compliant	1	Compliant with major or material recommendations to improve the strength of internal controls to maintain compliance.	7	3%
Non-Compliant	0	Does not meet minimum requirements.	3	2%
TOTAL:			190	100%

10. EVALUATION OF THE EMPr

As per Appendix 7 of the EIA Regulations, GNR 326 of 2017, an external audit report must include “an indication of the ability of the EMPr to:

- (i) sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an on going basis;
- (ii) Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the closure of the facility; and
- (iii) Ensure compliance with the provisions of the EMPr;”

10.1. Ongoing impact avoidance, management and mitigation

Based on the audit outcomes and results reported above, the auditor is satisfied that the EMPr is sufficient and able to provide for the avoidance, management and mitigation of the environmental impacts associated with the undertaking of the activity at the moment, and that no further amendment or alteration to the EMPr is required in order to maintain this reliability of the EMPr for now.

10.2. Closure impact avoidance, management and mitigation

The facility is currently in operation and will not be decommissioned or closed in the foreseeable future, and therefore no decommissioning activities are applicable to this audit. However, based on the audit outcomes and content of the EMPr, the auditor is satisfied that sufficient provision has been made for the decommissioning of the facility (for instance, through the requirement contained in the EMPr for a decommissioning method statement or management plan within 2 years of decommissioning commencing). No further amendment or alteration to the EMPr is required currently.

11. CONCLUSIONS AND RECOMMENDATIONS

This Chapter provides an overview of the results and recommendations of the environmental audit of the Nxuba WEF with the specifications of the project EMPr.

The facility was found to be 93% compliant with the requirements of the EMPr. No significant non-compliances were recorded as part of the independent external environmental compliance audit. Recommendations have been provided for all license conditions which received a Compliance Rating of less than 3 (i.e. any license conditions or environmental management requirements which were less than 100% compliant with no further action required to maintain compliance).

12. STAKEHOLDER CONSULTATION

12.1. Notification of all potential and registered interested and affected parties

In accordance with the requirements of Section 34(6) of the EIA Regulations (GNR 326 of 2017), the following consultation must form part of the audit report submission:

- » Within 7 days of the date of submission of an environmental audit report to the competent authority, the holder of an environmental authorisation must notify all potential and registered interested and affected parties of the submission of that report, and make such report immediately available
 - * (a) to anyone on request; and
 - * (b) on a publicly accessible website, where the holder has such a website.

In order to remain compliant with these requirements, all potential and registered interested and affected parties have been notified of the submission of the external compliance audit report by the auditor:

- » The placement of a site notice along the project boundary (Please refer to Appendix B for proof of site notice and precise location); and
- » Uploading the audit report onto the Savannah Environmental website for download upon request.

APPENDIX A:
CVS OF INDEPENDENT AUDITORS AND REPORT REVIEWER

**APPENDIX B:
LOCATION AND PROOF OF SITE NOTICE**



**NOTICE OF AN EXTERNAL COMPLIANCE AUDIT (SECTION 54) AND
PUBLIC PARTICIPATION PROCESS:**

**DEVELOPMENT AND OPERATION OF THE NXUBA WIND FARM,
BEDFORD, EASTERN CAPE PROVINCE**

Project Name: Nxuba Wind Farm, Bedford, Eastern Cape Province.

Client: Enel Green Power.

DEA Reference(s): 12/12/20/1569/2;
12/12/20/2290

Proposed Activity: Nxuba Wind Farm (RF) Pty Ltd. currently holds valid Environmental Authorisations for the construction of the Nxuba Wind Energy Facility (WEF), located near Bedford, Eastern Cape Province. This WEF comprises 47 wind turbines with a total capacity of 140MW, a substation with a 33kV/132kV yard footprint and associated infrastructure. The project is currently in the construction phase.

Project Location: The Nxuba WEF is located within the jurisdiction of the Nxuba Local Municipality, occupying the following properties:

- » Portion 0,1,2,3 and 4 of Farm van Wyks Kraal 73;
- » Portion 0 of the farm Roberts Kraal 72;
- » Portion 3 of the Farm Gallants Kloof 70;
- » Portion 0, 11 and 12 of the Farm Request 71;
- » Portion 2 of the Farm 75;

External Compliance Audit: In terms of Section 54(A)(3) of the EIA Regulations 2014 of GNR 326 (as amended), an Independent External Compliance Audit ("S54 Audit") is required to verify compliance towards the Environmental Management Programme (EMPr) for the project. This notice hereby notifies all potential and registered interested and affected parties, including organs of state with applicable jurisdiction as well as the competent authority, of the submission of the external compliance audit report to the competent authority. This report is available at the Savannah Environmental website: <https://www.savannahsa.com/>

Please direct any queries, information requests or comments to the DEA compliance directorate, at the following:

Department of Environmental Affairs (DEA) Legal
Authorisations and Compliance Inspectorate
E-mail: compliance@environment.gov.za

savannah
environmental

**APPENDIX B:
PROOF OF NOTIFICATION TO REGISTERED I&AP's**