

Construction Audit Report 2: Banana City Housing Project

Report Prepared for

**eThekweni Municipality – Department of
Human Settlements**

c/o Nelson Allopi and Associates

Report Number 574766/CA2

Report Prepared by

 **srk** consulting

July 2021

Construction Audit Report 2: Banana City Housing Project

eThekweni Municipality – Department of Human Settlements c/o Nelson Allopi and Associates

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List of Abbreviations

CLO	Community Liaison Officer
DEWATS	Decentralized Wastewater Treatment Systems
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EAPASA	Environmental Assessment Practitioners Association of South Africa
ECO	Environmental Control Officer
EDTEA	Department of Economic Development, Tourism and Environmental Affairs
EMPr	Environmental Management Programme
FBAR	Final Basic Assessment Report
NEMA	National Environmental Management Act No. 107 of 1998
NEM:WA	National Environmental Management Waste Act No. 59 of 2008
RAP	Relocation Action Plan
SACNASP	South African Council for Natural Scientific Professions
UKZN	University of KwaZulu Natal

1 Introduction and Scope of Report

The eThekweni Municipality Human Settlements Department are undertaking the *in situ* formalisation of 417 low-income residential housing sites, which involves the construction of new houses on a site approximately 8ha in extent at Banana City, Westville, KwaZulu-Natal. Infrastructure such as sewage reticulation, storm water control, roads, electricity supply and potable water connections form part of the *in situ* upgrade.

The sanitation system proposed for the development is based in a two-phased approach. The first phase is the construction and operation of two (2) temporary Decentralised Wastewater Treatment Solutions (DEWATS). The second phase is the decommissioning of the DEWATS and the linking into the existing bulk sewer network. When the Northern Treatment Works has been upgraded and these plants are no longer required, the wastewater can bypass the DEWATS and enter the existing sewer network. At that time, the DEWATS plants are to be removed and additional housing can be constructed in the areas where these plants were located. The relevant environmental approvals for this will need to be obtained in advance, prior to work commencing.

On 4 July 2019, the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (EDTEA) issued an Environmental Authorisation (EA) to the eThekweni Municipality Human Settlements and Infrastructure Unit (Housing) for the Banana City Housing Project (ref: DM/0030/2018). The EA (condition 3.3.1) included approval of the *Draft Environmental Management Programme: Proposed Banana City in situ upgrade Housing Project, eThekweni Municipality, KwaZulu-Natal* (SRK, August 2018) (herein after referred to as 'approved EMPr') that was submitted with the Final Basic Assessment Report (FBAR).

The project is currently in the construction phase. Condition 3.4. of the EA requires that an independent Environmental Control Officer (ECO) must be appointed, prior to the commencement of the construction phase, to monitor the implementation of the approved EMPr and EA. SRK Consulting (South Africa) (Pty) Ltd. (SRK) has been appointed by the resident engineer, Nelson Allopi and Associates, on 17 May 2021 to fulfil the role of the independent ECO. Condition 3.4.5 of the EA requires the ECO conduct one (01) site audit per month during the construction phase and one (01) post construction site audit.

This report constitutes the second construction compliance audit report.

2 Audit Team

The role of the external auditor / ECO is to provide independent, objective, and professional advice regarding compliance of the audited activities in terms of the conditions stipulated in the applicable environmental management document/s issued by, or approved by, the regulating authority.

SRK's independence is ensured by the fact that it is strictly a consultancy organisation, not holding equity in any project and with ownership primarily by staff. This permits its consultants to provide clients with conflict-free and objective support on crucial issues.

This report has been compiled by SRK as the appointed independent consultant and we hereby state that:

- SRK has no financial interest in the undertaking of the activities, other than remuneration for the work performed in terms of the National Environmental Management Act No. 107 of 1998 (NEMA).
- SRK undertakes to disclose to EDTEA, as the regulating authority, any material information that has or may have the potential to influence the decision of the regulating authority or the objectivity of any report, plan or document required in terms of NEMA.

- Based on information obtained during the site inspection and a review of the information provided to us by the client, this report correctly reflects the findings made at the time of the audit and the results and conclusion are presented to the best of our professional judgement.

The members of the SRK audit team are listed below, along with an outline of their expertise. Curriculum vitae for the team are available on request.

Environmental Scientists/Environmental Control Officers

The role of lead auditor / Environmental Control Officer was fulfilled by Mrs. Tamaryn Hale, who was responsible for undertaking the site inspection, data review and compilation of this report. Tamaryn has an Honours Degree in Environmental Science (2007). She also has an International Environmental Management accreditation for Environmental Auditing (2012). Her expertise includes: construction and operation environmental audits for Waste Water Treatment Works, industrial site development, in situ housing upgrades and waste storage facilities; Water Use Authorisation application processes; and Environmental Authorisation application processes. With over 13 years of experience in the field of environmental management, she has a thorough understanding of the evolution and trends of environmental legislation and policy in South Africa. Tamaryn is a Senior Environmental Scientist at SRK, is a certified Environmental Assessment Practitioner (EAP) with the Environmental Assessment Practitioners Association of South Africa (EAPASA) and is a registered natural scientist with the South African Council for Natural Scientific Professions (SACNASP).

The role of assistant auditor / ECO was fulfilled by Mr. Siphelele Mkhize. Siphelele has been involved in the field of Environmental Management and Land Rehabilitation for redevelopment for the past 5 years. He holds an Honours Degree in Environmental Geography (2018). Siphelele also has a certificate in Environmental Management Systems Auditing. His expertise includes: Environmental compliance auditing, groundwater and air quality monitoring; Contractor management; public participation and report writing. Siphelele is an Environmental Scientist at SRK and is a certified Candidate EAP with the EAPASA.

Partner and Quality Control

The role of Partner review and quality control for the project was fulfilled by Mr. Wouter Jordaan. Wouter is a registered natural scientist with the SACNASP. His expertise includes environmental compliance, sustainability auditing and environmental and social due diligence and review, with specialisation in industrial facilities; mines; electrification projects (power lines and substations); agricultural and agrochemical industries; renewable energy; and downstream retail petroleum facilities. Wouter has 20 years of experience in the fields of environmental science and GIS. Wouter holds the position of Partner and Principal Environmental Scientist at SRK.

3 Legal Requirements for Audit Reporting

This audit report meets the requirements for the content of an environmental audit report, as specified in Appendix 7 of the 2014 Environmental Impact Assessment (EIA) Regulations promulgated in Government Notice (GN) 326 on 07 April 2017 (as amended).

Table 3-1 provides a reference in this report for each requirement specified in GN 326.

Table 3-1: Legal Requirements for the Content of Environmental Audit Reports

Required content for an environmental audit report as per Section 3(1) of Appendix 7 of the 2014 EIA Regulations (GN 326, 7 April 2017) as amended	Reference in this Report
“(a) details of the - (i) independent person who prepared the environmental audit report; and (ii) expertise of the independent person that compiled the environmental audit report;	Chapter 2: Audit Team

Required content for an environmental audit report as per Section 3(1) of Appendix 7 of the 2014 EIA Regulations (GN 326, 7 April 2017) as amended	Reference in this Report
(b) a declaration that the independent auditor is independent in a form as may be specified by the competent authority;	Chapter 2: Audit Team
(c) an indication of the scope of, and the purpose for which, the environmental audit report was prepared;	Chapter 4: Audit Methodology
(d) a description of the methodology adopted in preparing the environmental audit report;	Chapter 4: Audit Methodology
(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 ongoing 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 environmental authorisation, EMPr, and where applicable, the closure plan;	Section 6.4: Effectiveness of the Environmental Management Documents
(f) a description of any assumptions made, and any uncertainties or gaps in knowledge;	Section 4.6: Assumptions and Limitations
(g) a description of any consultation process that was undertaken during the course of carrying out the environmental audit report;	Section 6.5: Consultation
(h) a summary and copies of any comments that were received during any consultation process; and	Section 6.5: Consultation
(i) any other information requested by the competent authority."	N/A

4 Audit Methodology

The key objectives for the audit were as follows:

- Assess regulatory compliance of the construction activities in terms of the conditions stipulated in the EA issued by EDTEA and the approved *Environmental Management Programme: Proposed Banana City in situ upgrade Housing Project, eThekweni Municipality, KwaZulu-Natal* (SRK, August 2018).
- The responsibilities of the external auditor / ECO are to carry out a physical inspection of the facilities and relevant site records and to prepare and submit a full report to eThekweni Municipality – Department of Human Settlements c/o Nelson Allopi and Associates.

To achieve the audit objectives, the audit activities detailed in the sub-sections below were undertaken.

4.1 Preparation

Prior to the audit, a checklist was prepared for the Banana City Housing Project. The checklist was based on the conditions of the EA and the approved EMPr.

4.2 Site Inspection

- The site inspection was undertaken on 21 June 2021.
- The EAP was hosted by Mr. Dumisani Mnyeni, Safety, Health and Environment (SHE) officer, of Gralio Precast and Mr. Ruveer Persad, Resident Engineer, of Nelson Allopi & Associates.
- The physical inspection of the construction activities was undertaken by Mrs. Tamaryn Hale and Mr. Sipehelele Mkhize of SRK.
- Selected photographs, taken during the inspection, are included in **Appendix A**.

4.3 Data Review

The relevant documentation required in terms of the audit was reviewed including:

- EA and associated reports.
- The approved EMPr; and
- The Environmental File and site records contained therein.

4.4 Compliance Assessment

The audit checklist was utilised to document the observations / findings made for each condition of the EA and EMPr during the data review and site inspection. Each condition was assessed in terms of the colour-coding and associated descriptors detailed in Table 4-1.

Table 4-1: Colour-coding and descriptors used for the respective audit observations

Non-compliant	Obligations and requirements that were not in place or implemented according to the requirements of the condition at the time of the audit. For non-compliances recommendation(s) and a timeframe of rectification are provided. These will be auditable at the next internal and external compliance audits.
Compliant	Compliant: The licence holder was able to provide evidence of compliance with the condition and / or relevant actions were implemented.
N/A	Conditions that are irrelevant to the phase or activities conducted at the time of the audit or have no auditable measures.

4.5 Reporting

This audit report has been prepared in accordance with the following report format requirements:

- (1) Specifically, state whether conditions of the relevant EA are adhered to (refer to **Appendix B**).
- (2) Contain recommendations regarding non-compliance or potential non-compliance (refer to **Chapter 6** for detailed information and **Appendix B**).
- (3) Specify target dates for the implementation of the recommendations by the Licence Holder to achieve compliance (refer to **Section 6**, Table 6-1 and Table 6-2).
- (4) Specify whether corrective action taken for the previous audit non-conformances was adequate (not applicable to this first construction audit).
- (5) Include photographic records from the site visit (refer to **Appendix A**).

4.6 Assumptions and limitations

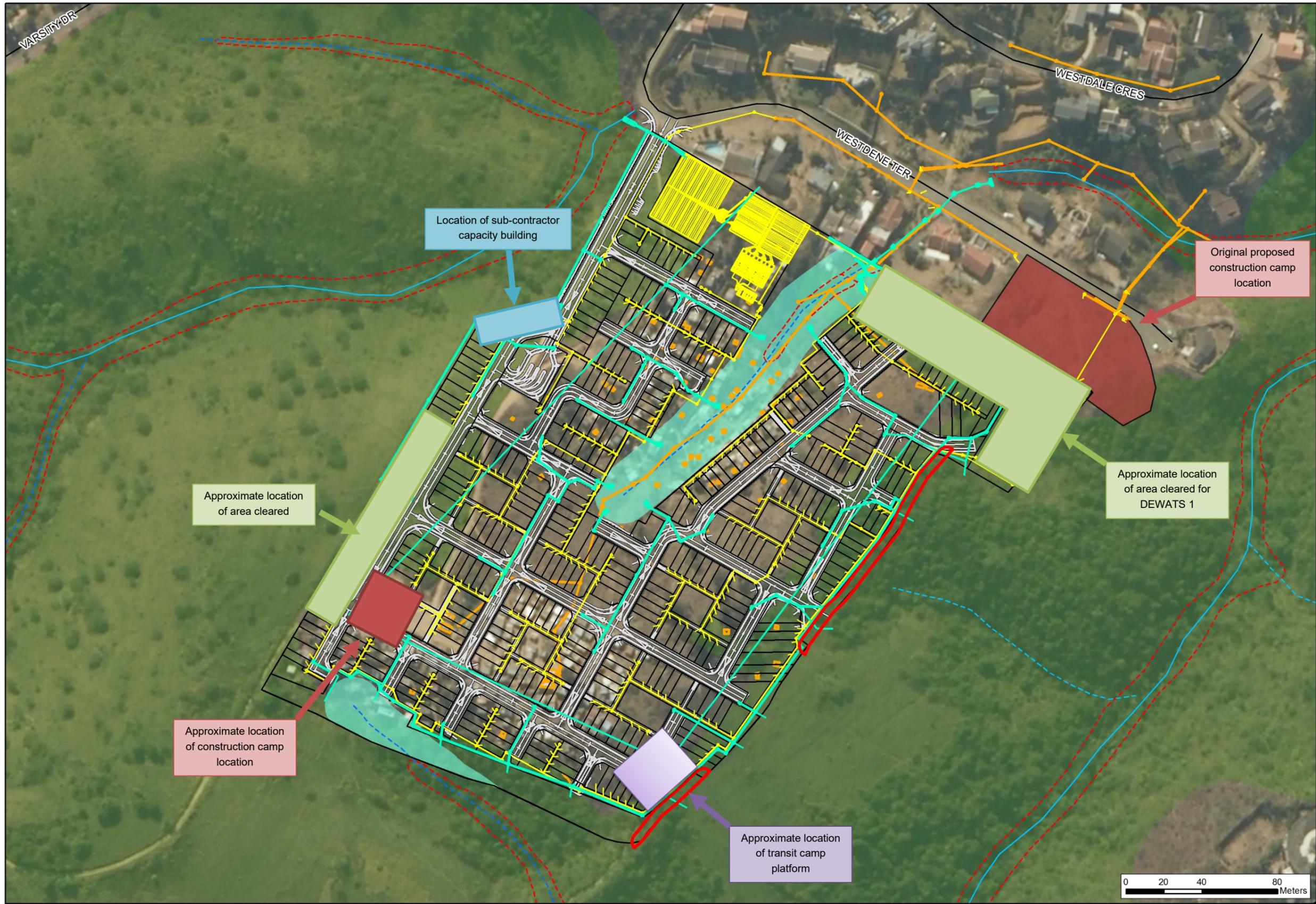
The opinions expressed in this report are based on the site conditions observed during the site inspection on 21 June 2021 and a review of the information supplied to SRK by Nelson Allopi and Associates and the Contractor, Gralio Precast. SRK has exercised all due care in reviewing the supplied information. Whilst SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them. Opinions presented in this report apply to the site conditions and features as they existed at the time of SRK's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this report, about which SRK had no prior knowledge nor had the opportunity to evaluate.

5 Audit Observations / Findings

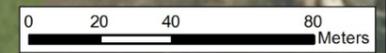
Observations / findings are recorded for each condition of the EA and approved EMPr and are included in **Appendix B**. A summary of the key observations / findings is provided below, with a detailed assessment of compliance provided in Chapter 6:

- The audit was conducted by Mrs. Tamaryn Hale and Mr. Siphelele Mkhize of SRK, hosted by Mr. Dumisani Mnyeni of Gralio Precast and Mr. Ruveer Persad of Nelson Allopi and Associates.
- A capacity building exercise to train local sub-contractors on how to build a retaining wall was the only activity taking place on site at the time of the audit (See Plate 8 of Appendix A and Figure 5-1).
- Drip trays have been provided under each of the plant in the construction camp (See Plate 1 of **Appendix A**)
- An Environmental awareness training session was conducted by the ECO on 8 June 2021, as per Condition 3.3.4 of the EA.
- The ECO attended the Construction Site Meeting held on 8 June 2021 and it was noted that environmental issues were raised and discussed at the meeting. The ECO will continue to attend these meetings going forward (see condition 5.1.5.2 of EMPr).
- The Contractor explained that vast amounts of rubbish and rubble was encountered during clearing of the DEWATS site and transit camp 1. A Durban Solid Waste (DSW) disposal certificate was made available to the ECO (See Plate 3 of **Appendix A**). It was reported by Mr. Myeni that only one load has been removed since the last audit.
- Evidence of cleaning of the chemical toilets is contained in the Environmental File. Gralio's HSE Officer noted that they have observed the Municipality cleaning the chemical toilets placed at various locations on site (See **Appendix C** for photographic evidence supplied by the HSE Officer). The chemical toilets provided by the municipality do, however, fall outside of the scope of this audit.
- The Contractor explained that there will be no storage of dangerous goods (e.g. diesel or petrol bowsers) on site, the vehicles delivering fuel have spill kits and all maintenance of vehicles occurs off site. There is a container within the construction camp that is locked and can be utilised for storage of dangerous goods (e.g. paint, oils or lubricants), should the need arise.
- EDTEA were informed of commencement of construction in the Compliance Audit 1 Report (SRK ref: 574766/CA2).
- An Environmental File has been compiled since the previous audit. However, it was noted by the ECO that certain items such as the EA and approved EMPr were outstanding. These were supplied to Mr. Mnyeni after the audit.
- A Construction Stormwater Management Plan has been compiled by Gralio and is awaiting approval from the Resident Engineer. Once approved, it will be submitted to eThekweni for approval.
- According to Mr. Mnyeni, the Community Liaison Officer (CLO) has undertaken a door-to-door campaign in the community to explain the following:
 - No dumping is permitted in and around the construction area.
 - There is a complaints procedure in place with an accompanying register.
 - There is no thoroughfare through the fenceline (signage indicating this was noted in Plate 2 of **Appendix A**).
 - The Resident Engineer explained that the community threatened unrest if the missing fence panels were to be replaced with shade cloth as this would impede their routes.
 - The dumping of general household waste is continuing around the construction area, despite signage prohibiting this (See Plate 6 of **Appendix A**). Mr. Mnyeni noted that contact had been made with eThekweni to request a skip for the general waste, however, no skip had been provided to date.
 - An incidents register is available in the Environmental File.
- No contact has been established with the University of KwaZulu Natal (UKZN) regarding the replacement/repair of damaged fence panels.

- Clearly labelled waste disposal bins with lids have been established on site (See Plate 2 of **Appendix A**).
- The Transit Camp platform, previously identified in Audit 1 to be within the no-go area 5m forest buffer, has been brought forth and out of the buffer (See Plate 11 and 12 of **Appendix A**). However, rehabilitation of the buffer area has not yet commenced. The Contractor noted that the eThekweni Business Forum has been causing delays with the appointment of sub-contractors to begin the rehabilitation work.
- The Contractor noted that he was not aware of the requirement for an approved Ecological Compensation Rehabilitation and Management Plan (ECRMP) to be in place prior to commencement of construction. This matter is the responsibility of the EA holder, eThekweni Municipality. The Resident Engineer noted that No progress has been made by eThekweni Municipality with regards to obtaining the ECRMP.
- The Department of Water and Sanitation (DWS) has not been informed of the disposal of waste to DSW (registered landfill site) (See Condition 5.1.9.6 of the EMPr). The details of the relevant DWS contact were emailed to the HSE Officer after the audit.



Legend	
	Preferred Layout
	Existing Sewer
	Proposed Sewer Layout
	Proposed Road layout
	Proposed Stormwater Layout
Drainage Lines	
	River (perennial)
	Stream (perennial)
	Stream (seasonal)
	Stream (ephemeral)
	Main Roads
	Forest Buffer (5m)
	Riparian Areas
	Construction Camp Site
	Aquatic Buffers (15m)
	DMOSS (2016)



Data Source:	
Scale: 1:2,000	
Projection: TM	Datum: HH94
Central Meridian/Zone: Lo31	
Date: 13/09/2018	Compiled by: GOVN
Project No: 574766	Fig No: 5-1

6 Assessment of Compliance

This Section provides an overview of the audit findings for Construction Audit 2.

6.1 Non-compliances and Action Items

A summary of the action items to rectify the non-compliances with the EA and EMPr are provided in Table 6-1 (refer to **Appendix B** for the detailed assessment). The timeframes in which to achieve such compliance are further noted in Table 6-1.

Table 6-1: Summary of action items and associated timeframes for non-compliances

EA Condition	EMPr Condition	Action Items	Timeframes
3.4.2	N/A	No recommendations are required as the ECO has now been appointed.	N/A
3.5.1	N/A	A letter had not been submitted to EDTEA prior to commencement of construction. EDTEA was, however, informed in Construction Audit 1 Report of the commencement of construction.	N/A
3.8 3.9	N/A	Proof of approval of the final layout plan by the municipality must be provided to the ECO and included in the environmental file.	Prior to the next audit. <i>[Secretarial note: a copy of the approval was made available to SRK subsequent to the audit]</i>
3.10 3.40 3.42	5.2.7.8 5.2.8.1	<ol style="list-style-type: none"> 1) An ecologist must provide guidance on the rehabilitation and vegetation used. 2) The 5m forest buffer area must be rehabilitated with indigenous vegetation. 3) The 5m forest buffer must be demarcated with orange bags or other such physical barrier and designated a No-go area. 	Prior to the next audit.
3.11	5.1.1.1	<ol style="list-style-type: none"> 1) The RAP must be updated with the current plan and submitted to eThekweni for formal approval. 2) Proof of approval must be kept on file. 	Prior to the next audit.
3.14	N/A	When relocation of the construction camp is required, the new location must be discussed and agreed to with the ECO prior to relocation.	Prior to commencement of relocation of the camp.
3.15 3.41	5.1.2.3	<ol style="list-style-type: none"> 1) Engineer needs an alternative solution to ensuring construction materials do not leave site. 2) The exposed foundations of the fence panels must be reinstated to avoid potential collapse of the fence line. 3) The University must be contacted to permanently fix the missing fence panels or install access gates. 	Prior to the next audit.
3.52	N/A	As soon as residents are removed from the sensitive buffer areas in preparation for construction activities, the sensitive areas must be cordoned off with a physical barrier.	Prior to construction activities in sensitive areas.
N/A	5.1.3.1	A draft Environmental Site Management Plan (ESMP) should be compiled based on the current proposed work plan. Any changes to the draft plan should be communicated with the ECO.	Prior to the next audit.
N/A	5.1.3.2	The new location of the construction camp must be discussed with the ECO prior to relocation.	Prior to relocation of the construction camp

EA Condition	EMPr Condition	Action Items	Timeframes
N/A	5.1.5.2	Environmental matters requiring attention must be minuted in the monthly progress meetings and minutes kept in the file.	Throughout the construction phase.
3.27 3.28	5.1.6.3 5.1.7.3 5.2.5.10 5.2.5.11 5.2.5.12 5.2.5.15 5.2.7.15	<ol style="list-style-type: none"> 1) A Stormwater Management Plan for the construction phase must be finalised and implemented. 2) A copy of the construction and operation SWMPs must be on file. 3) A copy of the approval from eThekweni must on file. 4) The conditions of the approval in principle received from the eThekweni Coastal, Stormwater and Catchment Management Unit for the operational phase SWMP must be implemented. 	The construction SWMP must be compiled and approved prior to the next audit.
N/A	5.1.8.2 5.2.7.6 5.2.7.7	The watercourse and associated 15m buffer areas must be demarcated once the residents had been removed from these sensitive areas.	Prior to commencement of construction activities within the sensitive areas.
N/A	5.1.9.1	Designated waste areas must be established.	Prior to the next audit.
N/A	5.1.9.6	Department of Water and Sanitation (DWS) must be informed of the use of DSW to dispose of waste and the facility to which the waste is being disposed. This must be undertaken prior to the next audit.	Prior to the next audit.
N/A	5.2.2.4 5.2.11.6	The incident / complaints register kept in the file on site must adhere to the format required by the EMPr.	Prior to the next audit.
N/A	5.1.14.1	<ol style="list-style-type: none"> 1) The municipality must, as a priority, appoint a terrestrial ecological specialist to compile a rehabilitation plan and obtain approval thereof. 2) A copy of the approved plan, and proof of approval must be kept on file. 	<p>Appointment of a specialist must be undertaken by the next audit.</p> <p>Timeframes for approval of the plan must be provided by the third construction audit.</p>

6.2 General Action Items

The action items detailed in are provided to ensure continued compliance with conditions of the EA and EMPr and prevent non-compliances occurring for the remainder of the project.

Table 6-2: Summary of general action items and associated timeframes

No.	Action Items	Timeframes
1	A copy of this report, and future audit reports, must be maintained in the environmental file on site.	For the duration of the construction phase
2	A Water Use Authorisation, and any other associated authorisations for the wetland rehabilitation must be obtained from the Department of Water and Sanitation, and other relevant authorities prior to commencement of rehabilitation.	Prior to commencement of rehabilitation activities within the wetland
3	The adjacent landowners must be informed of the disturbance and the anticipated duration thereof.	Prior to commencement of blasting, or other such disruptive activities
4	It is recommended that a copy of the contact details for the key role players be kept in the environmental file.	Prior to the next audit
5	A geotechnical investigation must be undertaken prior to commencement of construction of the DEWATS.	Prior to the construction of the DEWATS

No.	Action Items	Timeframes
		<u>[Secretarial note: it was confirmed subsequent to the audit that this is in progress]</u>
6	No progress has been made by eThekweni Municipality with regards to obtaining the Ecological Compensation Rehabilitation and Management Plan. The Contractor should retain proof of attempts made to contact the municipality in this regard.	Prior to the next audit
7	A letter informing EDTEA of commencement of construction must be submitted before next audit.	Prior to the next audit
8	A Stormwater Management Plan has been compiled. Awaiting approval from the engineer. Once approved, it will be submitted to EDTEA	Upon receipt of approval
9	The Department of Water and Sanitation (DWS) has not been informed of the disposal of waste to DSW (registered landfill site) (See Condition 5.1.9.6 of the EMPr). The details of the relevant DWS contact were emailed to the HSE Officer after the audit. DWS must be informed by the next audit.	Prior to the next audit.

6.3 Repeat Non-compliances

It is noted that the non-compliances noted in Table 6-1 are repeat non-compliances from the first compliance audit. The action items recommended in Table 6-1 must be implemented urgently to address these non-compliances.

6.4 Effectiveness of Environmental Management Documents

The effectiveness of the Environmental Management documents could partially be established as some documents were still outstanding in the Environmental File. The register for incidents and complaints is in place however it does not adhere to the requirements of Condition 5.1.10.4 of the EMPr. Furthermore, an Environmental Site Management Plan (ESMP), Stormwater Management Plan (SWMP) and Ecological Compensation Rehabilitation and Management Plan (ECRMP) have not yet been compiled.

6.5 Consultation

The results of this audit report are to be presented by the Contractor and discussed in the next project progress meeting scheduled for 6 July 2021, 10.00am on site.

7 Conclusion

Based on the findings of the Construction Audit 1 undertaken on 21 June 2021, and subsequent correspondence with the Contractor and Resident Engineer, several major and minor-non-compliances were recorded. The remedial action taken to rectify these non-compliances will be assessed at the next construction audit.

The next construction compliance audit will be undertaken on 16 July 2021.

Prepared by

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Senior Environmental Scientist

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

Appendices

Appendix A: Photographic Record of Site Inspection

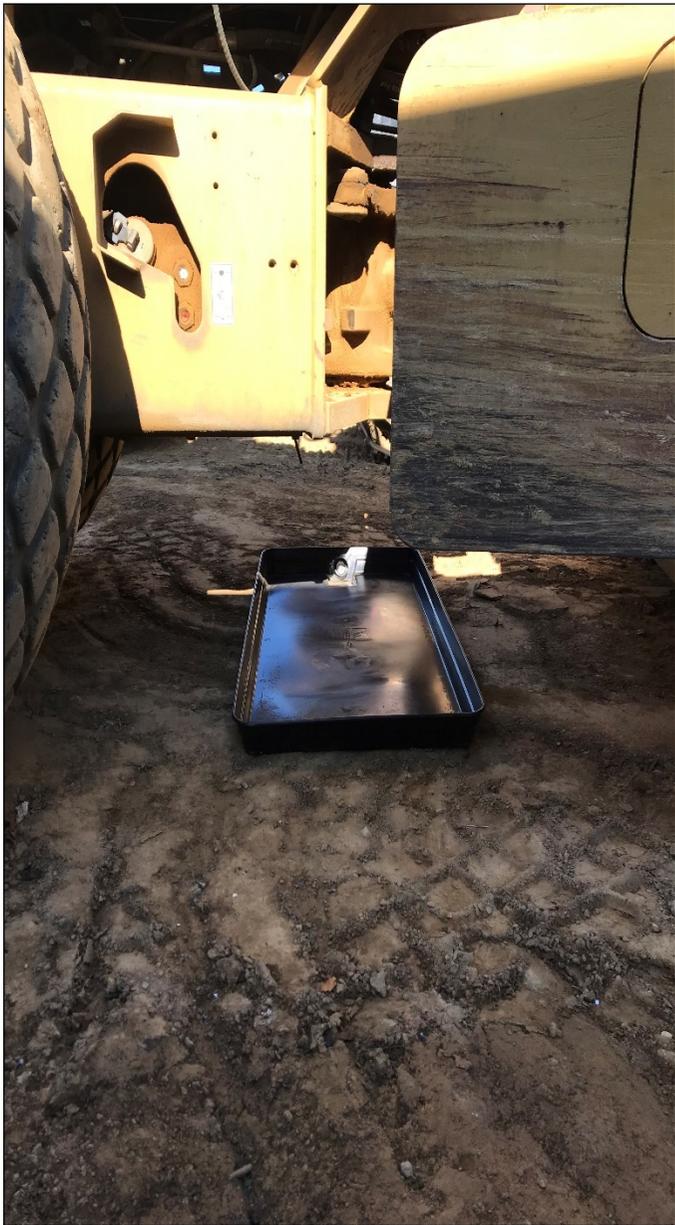


Plate 1: Drip trays placed under all plant in the construction camp



Plate 2: Labelled waste bins placed since previous audit finding

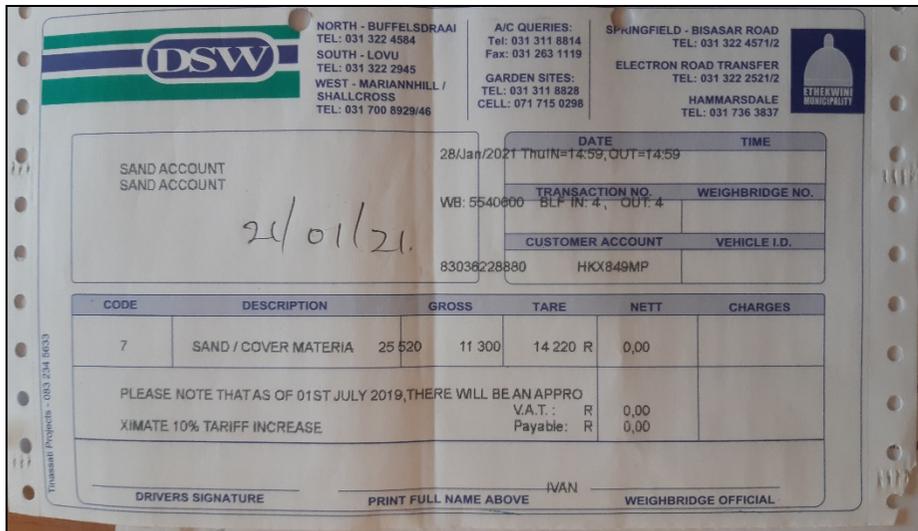


Plate 3: Waste disposal certificate for sand and cover material



Plate 4: Construction camp is access controlled with signage informing the community that this is the site office



Plate 5: Exposed fence panel foundations (potentially undermined) and missing fences panels



Plate 6: Continued illegal dumping despite signage prohibiting it



Plate 7: Deteriorating chemical toilets



Plate 8: Capacity building exercise to train local sub-contractors on how to build a retaining wall



Plate 9: Chemical toilets (not provided by contractor). Removed fence panels and domestic waste disposal by community.



Plate 10: Platform cleared for transit camp



Plate 11: Toe of the transit camp platform pulled forward and out of the 5m forest buffer



Plate 12: Toe of the transit camp platform pulled forward and out of the 5m forest buffer



Plate 13: Demarcated levelled platform for construction in the DEWATS area



Plate 14: Levelled platform in DEWATS area

Appendix B: Detailed Compliance Assessment

Table 1: Record of compliance with conditions of the Environmental Authorisation, proposed remedial action and associated timeframes

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
2. General				
2.1	Compliance with the conditions of this environmental authorisation (EA): In terms of section 24F of the National Environmental Management Act, 1998 (Act No. 107 of 1998), no person may commence with an activity listed in terms of section 24(2) (a) or (b) of the Act, unless the competent authority has granted an EA.	Partially Non-compliant	Not all conditions of the EA and EMPr have been complied with. Refer to the sections below for the non-compliances recorded.	Not applicable
2.2	Understanding the conditions of this authorisation: It is the responsibility of the holder of the EA to understand the conditions of this authorisation. Any queries regarding this EA must be submitted in writing to the Department as per contact details specified in condition 2.4 herewith.	Compliant	Since the previous audit induction training was undertaken.	Not applicable
2.3	Amendments to the project and update of the Environmental Management Programme (EMPr)			
2.3.1	Any changes to, or deviations from, the project description set out in this EA must be approved, in writing, by the Department before such changes or deviations may be effected.	N/A	None	Not applicable
2.3.2	Any subsequent amendments to the approved EMPr must also be submitted to the Department for review. The amendments must only be implemented after being approved by the Department.	N/A	None	Not applicable
2.3.3	This EA does not negate the EA holder's responsibility to comply with any other statutory requirement that may be applicable to the carrying on of the activities.	Compliant	As noted in compliance audit 1, a General Authorisation for the DEWATS plants was obtained.	Not applicable.
2.3.4	The Department retains the right to inspect the project area at any time during all phases of the development in accordance with relevant legislation.	N/A	None	Not applicable
2.3.5	It is the responsibility of the EA holder to ensure that the Department is made aware of any change of ownership or contact details within thirty (30) days of such changes. Where applicable, an amendment application must be submitted.	N/A	None	Not applicable
2.3.6	The holder of the EA must ensure that all workers be supplied with appropriate personal protective equipment/clothing (PPE/C) and management must ensure that all staff wear the necessary PPE/C during the construction phase.	Compliant	None	Not applicable
2.3.7	Please note that it is the responsibility of the EA holder to ensure the details are correct at the time of submitting any	Compliant	None	Not applicable

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	documentation and that the documentation reaches the relevant official.			
2.4	Contact details of the Department	Compliant	None	Not applicable
3. Conditions of the Environmental Authorisation				
3.1	Period of validity: The listed activities authorised must commence within ten (10) years from the date of issue. If commencement of the authorised activity/ any of the authorised activities does not occur within that period, this EA lapses.	Compliant	As noted in compliance audit 1, the EA was issued in July 2019 and the Contractor confirmed that the construction phase commenced in October 2020.	Not applicable
3.2	Notification to interested and affected parties			
3.2.1	The holder of the EA must notify all registered interested and affected parties, in writing and within fourteen 14 calendar days from date of the Department's decision to authorise the activity.	Compliant	Proof of notification was included in the compliance audit 1 report. .	Not applicable
3.2.1.1	The notification referred to must:	Compliant		
3.2.1.1.1	Specify the date on which the authorisation was issued;			
3.2.1.1.2	Inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014 as amended on 07 April 2017; and,			
3.2.1.1.3	Advise the interested and affected party that a copy of the authorisation will be furnished on request.			
3.3	Environmental Management Programme (EMPr)			
3.3.1	The Environmental Management Programme (EMPr) prepared by Messrs SRK Consulting (South Africa) (Pty) Ltd and submitted as part of the Final BAR received by the Department on 19 March 2019, for the construction and operational phases of this project as submitted for the EA of this project which complies with section 24N of NEMA and Appendix 4 of the EIA Regulations, 2014, as amended on 07 April 2017. This EMPr is hereby approved and must be implemented throughout the above-mentioned phases of the project.	Compliant	None	Not applicable
3.3.2	The EMPr must be kept on site throughout the construction and rehabilitation phases of the development.	Compliant	An Environmental File has been created and is available on site. At the time of the audit the report did not contain a copy of the approved EMPr or EA. [Secretarial note: a copy was observed in the file during the project team meeting held on 6 July 2021. This is therefore no longer a non-compliance.]	Not applicable.

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
3.3.3	Non-compliance with the approved EMPr will constitute non-compliance with the conditions of this EA.	Non-compliant	None	Not applicable
3.3.4	EMPr is considered as an extension of the EA. Each official and/or worker operating on site must be educated about the EMPr and made aware of his/her responsibilities. Proof of this must be attached to the first audit report submitted to the Department as per contact details specified in condition 2.4 herewith.	Compliant	An environmental induction training session was conducted by the ECO. A register is contained in the file.	For the remainder of the construction phase, new contractors or staff must undergo training prior to commencement with work on site.
3.3.5	The approved EMPr must be:			
3.3.5.1	Made binding on all parties operating on the site during all phases of the project and;	Compliant		
3.3.5.2	Included in all contractual documentation for the construction and operational phase of the development.	Compliant	An environmental induction training session was conducted by the ECO on 8 June 2021. Daily toolbox talks are held by the HSE officer.	
3.3.6	A copy of the approved EMPr together with any documents that need to be attached to the EMPr must be forwarded to the CME component - eThekweni District with contact details as specified in condition 2.4 herewith	Compliant	All required documents were appended to the compliance audit 1 report.	
3.4	Monitoring and Reporting to the Department			
3.4.1	All requirements for the management, monitoring and reporting of impacts for all phases of the project must be as specified in the EMPr or environmental audit report.	Compliant		
3.4.2	An independent Environmental Control Officer (ECO) must be appointed prior to the commencement of the construction phase to monitor the implementation of the approved EMPr and EA.	Non-compliant	As noted in compliance audit 1, the contractor confirmed that construction handover occurred in August 2020 and clearing on site commenced in October 2020. The ECO was only appointed in May 2021. The EDTEA was informed via email on 21 May 2021 of the appointment of SRK as the ECO.	No recommendations required.
3.4.3	Should the ECO for the approved development change at any time, this must be communicated, in writing, to the CME component - eThekweni District with contact details as specified in condition 2.4 herewith within fourteen (14) calendar days of appointing the new ECO.	N/A	None	Not applicable.
3.4.4	The notification in terms of condition 3.4.3 above must include contact details for the ECO, details pertaining to the ECO's relevant experience, and reasons for the change in ECO.	N/A	None	Not applicable.

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
3.4.5	The ECO must conduct one (01) site visit per month during the construction phase and one (01) post construction site visit.	Compliant		
3.4.6	The holder of the EA must conduct on-going monitoring as a commitment within the buffer areas	Compliant		
3.4.7	The responsibilities of the ECO must include inter alia:	Compliant		
3.4.7.1	Performing all tasks assigned to the ECO in the approved EMPr;			
3.4.7.2	Keeping record of all activities on site, problems identified and transgressions noted;			
3.4.7.3	Assisting the EA holder in ensuring/enforcing implementation of the EA and EMPr; and,			
3.4.7.4	Providing guidance/advice that ensures implementation of appropriate environmental management measures and adherence with environmental legislation/regulations.			
3.4.8	Records relating to monitoring and auditing must be kept on site by the ECO and made available for inspection to this Department and other relevant authorities.	Compliant	This report provides a record.	A copy of this report, and future audit reports, must be maintained in the environmental file on site.
3.4.9	The activity authorised must only be carried out at the location/s as described in Section 1 above.	Compliant		
3.5	Written notice of the commencement of the construction and operational phases			
3.5.1	Not less than seven (07) days written notice must be given to the Department that the construction phase will commence. Commencement for the purposes of this condition includes site preparation. The notice must include the EIA reference number DM/0030/2018, a date on which it is anticipated that construction will commence and a copy of the signed EA together with any other subsequent amendment if applicable	Partially Non-compliant	A letter had not been submitted to EDTEA prior to commencement of construction. EDTEA was, however, informed in Construction Audit 1 Report of the commencement of construction.	None required.
3.6	Availability of this EA			
3.6.1	A copy of this EA must be kept by the EA holder and made available to any authorised official of the Department on request.	Compliant		
3.6.2	The Department shall not be held responsible for any damages or losses suffered by the holder or successor in title in any instance where construction/commissioning may be temporarily or permanently stopped for reasons of non-compliance by the holder of the EA with the conditions of the EA as set out in this document or any other subsequent document emanating from these conditions of the EA	Compliant		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
Commissioning of the activity				
3.7	The development must comply substantially with the Development Layout Plan prepared by Nelson Allopi and Associates cc, with Project Number 369-001-001, dated 08/02/2018 submitted as part of the final BAR dated March 2019, depicted as Annexure 3: Development Layout Plan attached herewith. Should there be any changes to the approved layout plan; the Department must be informed in writing prior to the implementation of the change and the Department will provide a written response to confirm whether such changes are of a substantive nature or not	Compliant		
3.8	The final layout plans must be submitted for approval to the eThekweni Municipality prior to the commencement of construction.	Non-compliant	No proof of approval could be provided.	Proof of approval of the final layout plan by the municipality must be provided to the ECO and included in the environmental file.
3.9	The final approved layout plans must be submitted to this Department: CME section as per condition 2.4 herewith prior to the commencement of construction.	Non-compliant	No proof of submission could be provided.	Proof of approval of the final layout plan by the municipality must be provided to the ECO and included in the environmental file.
3.10	All sensitive areas must be demarcated with a physical barrier that cannot be destroyed or removed so as to clearly indicate "no-go" areas to the contractor, except for rehabilitation purposes.	Non-compliant	As noted in compliance audit 1, no demarcation of sensitive areas had been undertaken. The contractor did, however, note that there are residents living within the sensitive areas and therefore demarcation of such cannot be undertaken until work in a sensitive area is required.	An ecologist must provide guidance on the rehabilitation and vegetation used/to be used. The 5m forest buffer must be demarcated with orange bags or other such physical barrier and designated a No-go area.
3.11	The Relocation Action Plan (RAP) as contained in the final BAR, dated March 2019 must be approved by the eThekweni Municipality prior to the commencement of construction. Once approved; this plan must be complied with and implemented on site.	Non-compliant	As noted in compliance audit 1, the Relocation Action Plan (RAP) in the FBAR noted that a privately owned area of land adjacent to the site would be rented by the municipality for the duration of the construction phase. This piece of land would be the site for the construction camp and would be used as a transit camp to temporarily house residents of Banana City during construction. The contractor explained that the privately owned land could not be used and therefore an alternative arrangement was required for the construction camp and the transit camp. The construction camp was established within	The RAP must be updated with the current plan and submitted to eThekweni for formal approval. Proof of approval must be kept on file.

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
			development footprint. The contractor further explained that an existing transit camp was identified in New Germany. However, upon discussions with the existing residents at the camp and the Rate Payers Association, this site was not suitable for the temporary relocations required. The only viable alternative was to identify an area on site to relocate the Phase 1 residents. The area in the north-western corner of the site was identified as a suitable area. Whilst the amended RAP has not been formally approved by the Municipality, the Municipality was involved with the negotiations with the owner of the adjacent land and the stakeholders at the transit camp. The final decision to house residents on site was the decision of the Municipality.	
3.12	Chemical ablution facilities used during the construction phase must:	Compliant	As noted in compliance audit 1, the contractor explained that there are several formalised ablution facilities across the site for the Banana City residents. These facilities have and will be used by the construction staff for the duration of the construction phase. Two chemical toilets have been provided in the demarcated construction camp. Proof of regular cleaning was provided to SRK during the audit.	
3.12.1	Not cause any pollution to the receiving environment neither should it be a health hazard to the general public.			
3.12.2	Be cleaned regularly and disposed of at a registered wastewater treatment facility; and,			
3.12.3	Be removed from site when the construction and rehabilitation phases have been completed and a safe disposal certificate must be obtained as proof and attached to the audit report.			
3.13	The construction camp/s must be situated away from adjacent properties and outside of any sensitive areas and must be easily accessible to all workers.	Compliant		
3.14	The location of the construction camp/s must be negotiated and agreed upon by the holder of the EA, the contractor and ECO for the project.	Non-compliant	<p>As noted in compliance audit 1, the construction camp was established without input from the ECO. The location of the camp is, however, highly constrained due to several factors. The camp has been located away from adjacent properties and has been kept outside of sensitive areas. As such, the ECO satisfied with the location of the camp.</p> <p>It is noted that the construction camp is situated within the development footprint and as such will need to be relocated at some</p>	When relocation of the construction camp is required, the new location must be discussed with the ECO prior to relocation.

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
			point during the course of the construction phase.	
3.15	Prior to the commencement of the construction phase, a shade cloth screen must be erected around the working area to prevent the unnecessary spread of any material into neighbouring properties.	Non-compliant	<p>As noted in compliance audit 1, the entire site is fenced, however, there are missing panels from at least two sections of the fence in proximity to the working area. There is no evidence that the construction has caused the break in the fenceline.</p> <p>It was noted during the audit that the contractor had experienced resistance and threats of unrest should shade cloth be erected across the open sections along the fenceline.</p> <p>A shade cloth screen has been erected around the construction camp, which should contain the spread of material stored within the camp.</p>	<p>The contractor must notify the Municipality regarding challenges that have confronted them regarding the erection of shade cloth in certain parts. It must be noted that the issue of missing fence panels pre-exists the construction phase of the project. The Municipality and the University must engage each other to generate a long-term solution.</p> <p>The foundations of the fence panels must be reinstated to avoid potential collapse of the fenceline.</p> <p>The University must be contacted to permanently fix these missing fence panels.</p>
Construction Phase				
3.16	During the construction phase, the working area must be cordoned off from the public	Compliant	As noted in compliance audit 1, where possible the working area has been cordoned off. The construction area is, however, within an existing informal development and as such cannot be completely cordoned off from the public. The construction camp has been completely enclosed and signage has been erected around the site informing Banana City residents of the construction activities.	
3.17	Adequate and proper signage must be erected on the site to warn workers, the community and motorists that construction is in progress.	Compliant	As noted in compliance audit 1, signage has been placed at the only entrance to the site informing persons entering the site that construction is in progress.	
3.18	No fires are permitted on site. Fire extinguishers must be made available on site during the construction phase of the development	Compliant	As noted in compliance audit 1, fire extinguishers were observed in the construction camp.	
3.19	Cement mixing must be carried out on a hard surface or on cement mixing trays. Cement mixing must not be permitted to occur on bare ground or areas prone to erosion.	Compliant	As noted in compliance audit 1, mixing of cement had not commenced at the time of the audit. The Contractor was informed of the need to comply with the requirements of the EA and EMPr at the time of mixing of cement.	

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
3.20	The following conditions apply to the development areas which falls within sensitive areas i.e. watercourses:			
3.20.1	The extent of the environmental degradation damage must be minimal;	Compliant	At the time of the audit, construction activities within the riparian areas had not yet commenced.	
3.20.2	The riparian areas must be rehabilitated immediately after the disturbances caused due to construction related activities;	Compliant	At the time of the audit, construction activities within the riparian areas had not yet commenced. It is, however, noted that a Water Use Authorisation in terms of the National Water Act, 1998 (Act No. 36 of 1998) for the rehabilitation of the wetland areas is required prior to commencement of rehabilitation in the wetland areas.	A Water Use Authorisation for the wetland rehabilitation must be obtained from the Department of Water and Sanitation prior to commencement of rehabilitation.
3.20.3	If there are any banks adjacent to the construction site, the bank must be stabilised;	Compliant	As noted in compliance audit 1, there are currently no banks requiring stabilisation.	
3.20.4	All areas to be utilised by construction machinery must be clearly demarcated and rehabilitated accordingly; and	Compliant		
3.20.5	The invasive alien vegetation must be removed and re-planted with locally indigenous vegetation.	Compliant	As noted in compliance audit 1, all vegetation has been removed from the construction area. Rehabilitation will occur once construction in the area has been completed.	
3.21	The following conditions apply to the storage of dangerous substances on site during the construction phase:			
3.21.1	Dangerous substances must be stored in the construction camp under lock and key;	Compliant	As noted in compliance audit 1, there is a container within the construction camp that is locked and can be utilised for storage of dangerous goods (e.g. paint, oils or lubricants), should the need arise.	
3.21.2	The site Engineer or ECO must ensure that the storage and utilisation of any potentially dangerous materials such as, but not limited to, diesel, petrol, oils and/or lubricants do not result in any form of soil and water pollution; and,	Compliant	As noted in compliance audit 1, the contractor explained that there will be no storage of dangerous goods (e.g. diesel or petrol bowsers) on site, the vehicles delivering fuel have spill kits and all maintenance of vehicles occurs off site.	
3.21.3	Any soil/groundwater polluted during construction must be removed, stored in a sealed container and disposed thereof at a licensed disposal facility. Safe disposal certificates must be obtained and made available to the Department upon request.	Compliant	The contractor had no incidents to report at the time of the audit.	

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
Traffic Management				
3.22	Construction vehicles must be parked in a designated area which must not disrupt vehicle traffic from surrounding areas. All vehicles to remain in the parking area designated within the construction site when not in use	Compliant	Vehicles were parked in the construction camp area during the audit.	
3.23	Construction vehicles and machinery must make use of existing access routes. Should this not be possible, an alternative route must be agreed upon with the ECO and the CME component of the Department.	Compliant	As noted in compliance audit 1, there is only one existing access to the site and this is being utilised as the only access point.	
3.24	Traffic control measures must be implemented should the access roads be affected by the ingress and egress of construction vehicles and equipment.	Compliant		
Air Quality and Noise				
3.25	Machinery and equipment must always be used in accordance with the approved EMPr.	Compliant	Refer to the EMPr section for more details.	
3.26	Surrounding land owners must be notified in writing prior to commencement of disruptive activities during the construction phase. Proof of this must be submitted to the Department: CME section as per contact details specified in condition 2.4 herewith.	Compliant	The contractor noted that blasting has not occurred, however, it will be required in certain areas of the site. SRK noted that the surrounding landowners must be informed prior to commencement of the disruptive activity.	Prior to commencement of blasting, or other such disruptive activities, the adjacent landowners must be informed of the disturbance and the anticipated duration thereof.
Stormwater Management				
3.27	A Stormwater Management Plan (SWMP) must be compiled for the construction and operation of the development which must include but not limited to the following:	Non-compliant	A copy of the construction phase Stormwater Management Plan was not available. The HSE officer noted that a plan has been compiled but is awaiting signoff from the Resident Engineer and eThekwini Municipality.	A Stormwater Management Plan for the construction phase must be finalised and implemented before the next audit. A copy of the construction and operation SWMPs must be on file. A copy of the approval from eThekwini must on file. The conditions of the approval in principle received from the eThekwini Coastal, Stormwater and Catchment Management Unit for the operational phase SWMP must be implemented.
3.27.1	To reduce erosion on site, stormwater must be attenuated and the cause of erosion must be dealt with within twenty-four (24) hours of detection in accordance with the approved EMPr;			
3.27.2	Stormwater generated on site must be piped and fed through the municipal stormwater system and must be compliant with the municipal stormwater attenuation regulations;			
3.27.3	Any wastewater (i.e. dirty construction water) generated must not be discharged into the natural environment. Measures to contain wastewater and to safely dispose of it must be implemented;			
3.27.4	Stormwater must be suitably managed during and after construction;			
3.27.5	Drainage must be controlled to ensure that runoff from the site does not culminate in off-site pollution downstream of any stormwater discharge; and,			

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
3.27.6	On completion of construction the site must be contoured to ensure free flow of run-off and to prevent ponding of water.			
3.28	The SWMP must be submitted to the eThekweni Municipality for approval. The approved stormwater management plan must be appended to the approved EMPr and submitted to the Department: CME section as per condition 2.4 herewith.	Partially Non-compliant	A copy of the approved construction and operation SWMP was not available at the time of the audit. An approval in principle of the operational phase SWMP has been obtained and was made available to SRK. The HSE officer noted that a construction SWMP has been compiled but is awaiting signoff from the Resident Engineer and eThekweni Municipality.	The Stormwater Management Plan for the construction phase must be approved by the engineer and municipality, and implemented before the next audit. A copy of the construction and operation SWMPs must be on file. A copy of the approval from eThekweni must be on file. The conditions of the approval in principle received from the eThekweni Coastal, Stormwater and Catchment Management Unit for the operational phase SWMP must be implemented.
3.29	Any wastewater (i.e. dirty construction water) generated must not be discharged into the natural environment. Measures to contain wastewater and to safely dispose of it must be implemented.	Compliant	No wastewater had been generated on site at the time of the audit.	
3.30	Drainage must be contoured to ensure that runoff from the site is contained and does not culminate in off-site pollution downstream of any stormwater discharge.	Compliant	As noted in compliance audit 1, the resident engineer confirmed that the site has been contoured as such.	
3.31	Earthworks and drainage measures must be designed in such a way as to prevent ponding of, or high concentrations of, stormwater or groundwater anywhere on the site, both during and after the development has been completed.	Compliant	As noted in compliance audit 1, the resident engineer confirmed that the design of the site has included these factors.	
Dust and Erosion Control				
3.32	Dust must be suppressed during dry periods by the regular application of grey/waste water via a water cart in such quantities that will not result in runoff and erosion or muddied areas	Compliant	The contractor noted that dust has not been an issue since the last audit as minimal earth moving activities have occurred on site. No water tanker has been used.	
3.33	Soil erosion prevention measures and soil erosion control measures outlined in the approved EMPr must be implemented during the construction and rehabilitation phase	Compliant	Refer to the EMPr section for more details.	
3.34	Vehicles transporting sand or finer grained materials must be covered to prevent dangers/nuisance to other road users (dust, falling sand/rocks).	Compliant		
3.35	Soil must be exposed for a minimum time possible once cleared such that the timing of clearance is coordinated with	Compliant	As noted in compliance audit 1, clearance of the site is being undertaken in a phased	

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	the onset of construction. This will prevent wind and water erosion.		approach. This is particularly appropriate as it is an <i>in situ</i> upgrade and clearance of vast areas of land without infrastructure is not possible.	
3.36	All stockpiles must be covered by appropriate means if the stockpile is to be exposed for an extended period of time	Compliant	As noted in compliance audit 1, the contractor explained that the site contains vast swaths of rubble and rubbish. During the site clearance the rubble and rubbish was loaded directly onto Durban Solid Waste trucks for disposal at an appropriately licensed facility. DSW disposal slips were made available to SRK during the audit.	It is recommended that a log of vehicles disposing of waste via DSW be kept in the environmental file.
Spillage				
3.37	The holder of the EA must ensure that all personnel/workers on site are appropriately trained to deal with a spill/leak in accordance with relevant environmental legislative requirements.	Compliant	An Environmental awareness training session was conducted by the ECO on 8 June 2021.	A register must be maintained in the environmental file. For the remainder of the construction phase, new sub-contractors or staff must undergo training prior to commencing work on site.
3.38	Should spillage occur, the following steps must be taken and managed in accordance with the approved EMP:	N/A	It is noted that this procedure is included in the induction training.	
3.38.1	Stop the source of the spill;			
3.38.2	Contain the spill;			
3.38.3	All spills must be reported to this Department's Control Environmental Officer: Pollution and Waste (P&W) Component as per contact details specified in condition 2.4 herewith as well as any other mandated authorities such as the Department of Water and Sanitation (DWS); and,			
3.38.4	The incident must be documented.			
3.39	In the event of a spillage which poses a serious threat to the environment, the following Departments must be informed within 48 hours of an incident (i.e. an unexpected, sudden and uncontrolled release of a hazardous substance, including from a major emission, fire or explosion, that causes, has caused or may cause significant harm to the environment, human life or property) and/or emergency situation (i.e. a situation that has arisen suddenly that poses an imminent and serious threat to the environment, human life or property, including a disaster' as defined in section 1 of the Disaster	Compliant	The contractor confirmed that no incidents had occurred to date.	It is recommended that a copy of the contact details for the key roleplayers be kept in the environmental file.

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	Management Act, 2002 (Act No. 57 of 2002), but does not include an incident referred to in section 30 of this Act):			
3.39.1	The eThekweni Municipality;			
3.39.2	DWS;			
3.39.3	KZN EDTEA: P&W component as per contact details specified in condition 2.4 herewith;			
3.39.4	The Local Fire Department; and,			
3.39.5	Any other mandated department.			
Biodiversity				
3.40	The recommendations contained in the Terrestrial Ecological Assessment compiled by Eco-Pulse Environmental Consulting Services, dated 4 July 2018 must be complied with and adhered to. No development activities must take place within the forest buffer zone of 5m from the edge of the delineated seral forest habitat.	Non-compliant	It was noted in compliance audit 1 that construction of the platform for the transit camp occurred within the 5m forest buffer. This has since been rectified, however, rehabilitation has not yet been undertaken due to delays caused by the Business Forum with regard to appointing sub-contractors.	The 5m forest buffer must be demarcated with orange bags or other such physical barrier and designated a No-go area. Once appointment delays have been overcome, rehabilitation activities must commence.
3.41	Indigenous vegetation outside the development footprint must be demarcated and protected by preventing access of construction vehicles and personnel into these areas, unless for rehabilitation purposes and maintenance thereof.	Partially Non-compliant	As noted in compliance audit 1, the entire site is fenced, however, there are missing panels from at least two sections of the fence in proximity to the working area. There is no evidence that the construction has caused the break in the fenceline and there was no evidence of construction vehicles moving through the gaps. It was noted during the audit that the CLO has undertaken a door-to-door campaign in the community to explain that there is no thoroughfare through the fenceline. The Engineer, however, explained that the contractor had experienced resistance and threats of unrest from the community should shade cloth be erected across the open sections along the fenceline.	The University must be contacted to either permanently fix the missing fence panels or install access gates.
3.42	Vegetative areas that occur within the development footprint that have been set aside for conservation purposes must be demarcated and cordoned off during the construction phase.	Partially Non-compliant	The 5m forest buffer was encroached upon by the platform for the transit camp. This platform has been moved out of the 5m	An ecologist must provide guidance on the rehabilitation and vegetation used.

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	No access must be allowed into these areas unless for rehabilitation purposes.		buffer, however, rehabilitation of the buffer is yet to commence.	The 5m forest buffer area must be rehabilitated with indigenous vegetation. The 5m forest buffer must be demarcated with orange bags or other such physical barrier and designated a No-go area.
3.43	The following conditions apply to the management of alien invasive species:	Compliant		
3.43.1	All alien invasive species must be removed from within the development footprint in accordance with the approved EMPr, and			
3.43.2	Alien invasive species must be removed mechanically and not chemically so as to have minimal ecological and biological impacts.			
3.44	Any pollution to surface or groundwater must be immediately reported to the DWS and the Department as per the contact details in condition 2.4 herewith and appropriate mitigation measures must be employed.	Compliant	The contractor confirmed that no incidents had occurred to date.	It is recommended that a copy of the contact details for the key roleplayers be kept in the environmental file.
3.45	The holder of the EA must ensure that indigenous landscaping with suitable local vegetation is supported throughout the rehabilitation of the site.	Compliant	Rehabilitation is yet to commence.	
3.46	Rehabilitation of all sensitive areas must commence immediately after the completion of construction or at the earliest time prescribed by the ECO, in accordance with the approved EMPr.	Compliant	Rehabilitation is yet to commence.	
Watercourses				
3.47	The recommendations as contained in the Aquatic Assessment compiled by Eco-Pulse Environmental Consulting Services dated 26 June 2018 must be complied with and adhered to.	Compliant	These conditions are contained in the EMPr. Refer to Table 2 that details the compliance with the EMPr conditions.	
3.48	The conceptual Rehabilitation Plan as contained in the Aquatic Assessment compiled by Eco-Pulse Environmental Services dated June 2018 must be complied and adhered to.	Compliant	Rehabilitation is yet to commence.	
3.49	An aquatic buffer zone of 15m from the edge of the delineated riparian area must be implemented on site.	Compliant	It is noted that the construction of the retaining walls and / or stabilising embankment for platforms must not encroach into the 15m buffer.	
3.50	No physical development is permitted within the watercourse except for where there is construction activities permitted to take place.	Compliant	Removal of structures from the watercourses and associated buffers is yet to commence.	

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
3.51	No construction vehicles are permitted within the watercourse.	Compliant		
3.52	The watercourse and riparian areas must be demarcated as "No Go" areas	Non-compliant	As noted in compliance audit 1, no demarcation of the watercourse and riparian areas had been undertaken. The contractor did, however, note that there are residents living within these areas and therefore demarcation of such cannot be undertaken until work in these areas is required. At which time, the residents would have been relocated.	As soon as residents are removed from the sensitive buffer areas in preparation for construction activities, the sensitive areas must be cordoned off with a physical barrier.
3.53	Any pollution to surface or groundwater must be immediately reported to the DWS and the Department and appropriate mitigation measures must be employed.	Compliant	The contractor confirmed that no incidents had occurred to date.	It is recommended that a copy of the contact details for the key roleplayers be kept in the environmental file.
3.54	No excavated material must be stored within 32 metres of the watercourse.	Compliant		
3.55	Uncontrolled access of vehicles through the watercourse is prohibited so as to prevent significant adverse impact on the hydrology and soil structure of these areas through rutting and soil compaction.	Compliant	As noted in compliance audit 1, construction activities near the watercourses had not commenced at the time of the audit.	
Sewage Waste Management				
3.56	Prior to the commencement of construction of the waste water disposal system (DEWATS); a suitably qualified geotechnical specialist must be appointed to undertake a detailed soil depth assessment.	Compliant	As noted in compliance audit 1, whilst the platform for the DEWATS has been cleared, construction of the facilities is yet to commence.	A geotechnical investigation must be undertaken prior to commencement of construction of the DEWATS.
3.57	The recommendations as contained in the Final BAR, dated March 2019 in respect of the DEWATS system must be complied with and adhered to.	Compliant		
3.58	A maintenance and management plan for the existing DEWATS system must be compiled and handed over to the eThekweni Municipality: Water and Sanitation prior to the commissioning of the DEWATS plants.	N/A	This is still to be undertaken.	
3.59	Prior to the undertaking of any further activities related to the (i) the decommissioning of the DEWATS plant and (ii) the switching over to waterborne sewage disposal option; the Department: EIA section must be contacted in writing as per condition 2.4 herewith. The Department will provide a written response to your enquiry. Proof of the response must be kept as record.	N/A		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
Solid Waste Management				
3.60	All waste material generated during all phases of the development must be identified and classified. Waste generated must be handled/stored/disposed according to its classification in terms of the National Environmental Management Waste Act (NEMWA).	Compliant	As noted in compliance audit 1, The contractor explained that the site contains vast swaths of rubble and rubbish. During the site clearance the rubble and rubbish was loaded directly onto Durban Solid Waste trucks for disposal at an appropriately licensed. No waste storage areas for construction waste have been designated to date.	It is recommended that a log of vehicles disposing of waste via DSW be kept in the environmental file. It is recommended that designated areas for storage of construction waste (e.g. cement bags, paint tins etc.) be established.
3.61	All waste material collected must be stored under cover and within a designated waste collection/storage area which must be on an impermeable surface. Access control to this area must be properly managed.	Compliant		
3.62	The holder of the EA is responsible for the removal and disposal of solid waste including surplus of spoil material and rubble. All waste that cannot be reused or recycled must be disposed off accordingly at a landfill site registered in terms of section 20(b) of the National Environmental Management: Waste Act, Act No. 59 of 2008. The contractor responsible for the removal of the waste must supply the applicant with a certificate indicating safe disposal. Within fourteen (14) days of its issue, a copy of the safe disposal certificates must be forwarded to the Control Environmental Officer: CME Component as per contact details specified in condition 2.4 herewith.	Compliant		
3.63	It is the responsibility of the holder of the EA to identify any sources of pollution from the undertaking of the activity and to take appropriate measures to prevent any pollution of the environment.	Compliant		
3.64	The site engineer or ECO must ensure that the storage and utilisation of potentially dangerous materials such as diesel, petrol, oils and/or lubricants during the construction phase does not result in any form of soil and underground water pollution.	Compliant	As noted in compliance audit 1, the contractor explained that there will be no storage of dangerous goods (e.g. diesel or petrol bowsers) on site, the vehicles delivering fuel have spill kits and all maintenance of vehicles occurs off site.	
3.65	Chemicals or dangerous substances must not be allowed to pollute the soil or groundwater. In the event of this occurring, the necessary clean up measures must be undertaken immediately. Any soil/groundwater polluted during construction must be removed, stored in a sealed container and disposed off at a licensed disposal facility.	Compliant	The contractor had no incidents to report at the time of the audit.	
Operational phase				
3.66	The holder of the EA must conduct annual inspections to ensure there is no erosion or silting occurring within the wetland/riparian areas. A report outlining the above findings	N/A	N/A	

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	must be forwarded to the Department: CME section as per contact details provided in condition 2.4 herewith.			
3.67	Energy and water saving technology must be implemented where possible.	N/A	N/A	
3.68	The holder of the EA is responsible for compliance with the provisions for Duty of Care and remediation of damage in accordance with section 28 of NEMA, Act no. 107 of 1998 (as amended). Determination of damage vests in this Department.	N/A	N/A	
3.69	Should the activity ever cease or become redundant, the EA holder must contact the Department to determine the required actions for the rehabilitation and closure of the site.	N/A	N/A	
3.70	The holder of the EA is responsible for the prevention of invasion of informal housing in the forest area.	N/A	N/A	
3.71	Prior to the undertaking of any further activities related to the (i) the decommissioning of the DEWATS plant and (ii) the switching over to waterborne sewage disposal option; the Department: EIA section must be contacted in writing as per condition 2.4 herewith.	N/A	N/A	

Table 2: Record of compliance with conditions of the EMPr, proposed remedial action and associated timeframes

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.1 Site Establishment and Preliminary Activities				
5.1.1 Resettlement Action Plan				
5.1.1.1	The Resettlement Action Plan (RAP) should be approved by the EDTEA and eThekweni Environmental Planning and Climate Protection Department (EPCP prior to commencement of construction. Should amendments to the RAP be required during the construction phase, the changes should be submitted to and approved by the EDTEA.	Non-compliant	As noted in compliance audit 1, the RAP in the FBAR noted that a privately owned area of land adjacent to the site would be rented by the municipality for the duration of the construction phase. This piece of land would be the site for the construction camp and would be used as a transit camp to temporarily house residents of Banana City during construction. The contractor explained that the privately owned land could not be used and therefore an alternative arrangement was required for the construction camp and the transit camp. The construction camp was established within the development footprint. The contractor further explained that an existing transit camp was identified in New Germany. However, upon discussions with the existing residents at the camp and the Rate Payers Association, this site was not suitable for the temporary relocations required. The only viable alternative was to identify an area on site to relocate the Phase 1 residents. The area in the north-western corner of the site was identified as a suitable area. Whilst the amended RAP has not been formally approved by the Municipality, the Municipality was involved with the negotiations with the owner of the adjacent land and the stakeholders at the transit camp. The final decision to house residents on site was the decision of the Municipality.	The RAP must be updated with the current plan and submitted to eThekweni for formal approval. Proof of approval must be kept on file.
5.1.1.2	The Contractor appointed to construct the top structures should be appointed timeously to avoid exacerbating social concerns.	Compliant		
5.1.1.3	Adequate temporary ablution facilities (for e.g. Containerised Ablution Blocks) should be provided for relocated residents.	N/A	This condition must be audited once the transit camps have been established.	
5.1.1.4	A plan for the incorporation of the Umgudulu community must be compiled prior to commencement of construction.	N/A	This condition is no longer applicable as the Umgudulu community will not be relocated.	
5.1.2 Access to Site				
5.1.2.1	The location of all underground services and servitudes will be identified and confirmed to avoid impacting on these services.	Compliant	As noted in compliance audit 1, the Resident Engineer confirmed that all existing underground services have been identified.	

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.1.2.2	Choice of access routes for construction vehicles will take into account minimum disturbance to riparian and wetland areas and residents neighbouring the site.	Compliant		
5.1.2.3	Access to sensitive areas on the outskirts of the site the will be restricted	Non-compliant	The entire site is site is fenced, however, there are missing panels from at least two sections of the fence in proximity to the working area. There is no evidence that the construction has caused the break in the fenceline. It is, however, noted that next to the one section of missing panels along the western boundary of the site excavations have exposed the foundations of several fence panels and it is only a matter of time before these collapse. The CLO has informed the community in a door-to-door campaign that they do not dump waste within the construction area and the fenceline is not a thoroughfare.	Engineer needs an alternative solution to ensuring construction materials do not leave site. The exposed foundations of the fence panels undermine the whole fenceline. These must be reinstated to avoid potential collapse of the fence line. The University must be contacted to permanently fix the missing fence panels.
5.1.2.4	Impacts will be minimised by using existing roads where possible and avoiding the creation of new routes.	Compliant	As noted in compliance audit 1, there is only one existing access to the site and this is being utilised as the only access point.	
5.1.2.5	Disturbance to surrounding areas will be minimised by allowing sufficient space for turning areas.	Compliant		
5.1.2.6	Where construction will obstruct existing access, alternative temporary access routes will be allowed for.	Compliant		
5.1.2.7	Safe pedestrian crossings will be provided where necessary.	Compliant		
5.1.3 Setting up Construction Camp and Storage Areas				
5.1.3.1	An environmental site management plan (ESMP) will be compiled in consultation with the ECO after the contract is awarded. This plan will show the final positions and extent of all permanent and temporary site structures and infrastructure, including (where appropriate): <ul style="list-style-type: none"> · Contractors' camp and lay down areas. · Excavations and trenches. · Topsoil and spoil stockpiles. · Waste material storage sites. · Spoil areas. · Solid waste storage and disposal sites. · Construction materials stores and batching sites. · Site toilets and ablutions. 	Non-compliant	As noted in compliance audit 1, the contractor explained that the conditions on site are quite volatile and change daily. As such, areas in which the contractors will work and the space available is not clearly understood.	A draft ESMP should be compiled based on the current proposed work plan. Any changes to the draft plan should be communicated with the ECO.

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	<ul style="list-style-type: none"> · Equipment stores. · Hazardous waste storage sites. · Fuel stores. 			
5.1.3.2	Choice of the site for the Contractor's camp requires the Engineer's, ECO and EPCPD permission and will take into account location of local residents and sensitive environmental areas. Areas of natural vegetation must be avoided where possible.	Non-compliant	<p>As noted in compliance audit 1, the construction camp was established without input from the ECO. The location of the camp is, however, highly constrained due to several factors. The camp has been located away from adjacent properties and has been kept outside of sensitive areas. As such, SRK is satisfied with the location of the camp.</p> <p>It is noted that the construction camp is situated within the development footprint and as such will need to be relocated at some point during the course of the construction phase.</p>	When relocation of the construction camp is required, the new location must be discussed with the ECO prior to relocation.
5.1.3.3	The size of the construction camp will be minimised (especially where it is not possible to avoid natural vegetation or grassland).	Compliant		
5.1.3.4	While not preferred, should the Contractor choose to locate the camp site on private land, prior written permission from the Engineer, EPCPD and the landowner will be required.	N/A	The construction camp has been located within the development footprint.	
5.1.3.5	Open areas and the surrounding bush will not be used as ablutions. Where waterborne sewerage is not available, temporary chemical toilets must be provided by a company that has been approved by the Engineer. Such toilets must be available for all site staff, both at the camp site, and on site in locations that reduce the risk of contamination to the natural environment e.g. not within the 1:100 year floodline of a river. Ablution facilities must be located away from steep slopes and protected from disturbance by natural elements.	Compliant	As noted in compliance audit 1, the contractor explained that Containerised Ablution Blocks are available across the site and therefore, chemical toilets for construction staff are not required.	
5.1.3.6	Choice of location for storage areas must take into account prevailing winds, distance to water bodies and general on-site topography.	Compliant		
5.1.3.7	All construction camps, lay down areas, batching plants and any stores in general will be located outside of delineated riparian areas and the recommended 15m buffer zone from the riparian areas.	Compliant		
5.1.3.8	Storage of potentially hazardous materials (e.g. diesel, oil, cement, bitumen, paint, etc.) will not be located within	Compliant		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	a horizontal distance of 50m from a watercourse, drainage line or wetland, or as specified by the ECO.			
5.1.3.9	Residents living adjacent to the construction site will be notified of the existence of the hazardous storage area.	Compliant		
5.1.3.10	Appropriate fire prevention facilities will be present at all storage facilities.	Compliant		
5.1.4 Hazardous Materials Management				
5.1.4.1	The definition of hazardous substances / materials are those that are potentially: poisonous, flammable, carcinogenic or toxic e.g. diesel, petroleum, oil, bituminous products cement solvent based paints lubricants explosives drilling fluids pesticides, herbicides LPG.	Compliant	As noted in compliance audit 1, the contractor explained that there will be no storage of dangerous goods (e.g. diesel or petrol bowsers) on site, the vehicles delivering fuel have spill kits and all maintenance of vehicles occurs off site.	
5.1.4.2	Hazardous storage and refuelling areas will be bunded with an impermeable liner to protect groundwater quality. Areas will be located away from sensitive areas such as within 1:100 year floodline of any river or riparian buffer areas.	Compliant		
5.1.4.3	Material Safety Data Sheets (MSDSs) will be readily available on site for all chemicals and hazardous substances, to be used on site. Where possible and available, MSDSs will also include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases or escapes.	Compliant	As noted in compliance audit 1, there are currently no hazardous substances stored on site.	
5.1.4.4	When deciding on storage areas for hazardous substances the proximity of houses, schools etc. will be taken into account.	Compliant	As noted in compliance audit 1, there are currently no hazardous substances stored on site.	
5.1.4.5	Contractors will submit a method statement and plans for the storage of hazardous materials and emergency procedures.	Compliant	As noted in compliance audit 1, there are currently no hazardous substances stored on site.	
5.1.4.6	Staff dealing with hazardous materials / substances will be made aware of their potential impacts and will follow the appropriate safety measures and be provided with suitable Personal Protective Equipment or clothing.	Compliant	As noted in compliance audit 1, there are currently no hazardous substances stored on site.	
5.1.4.7	Fuel tanks will meet relevant specifications and be elevated so that leaks may be easily detected.	Compliant	As noted in compliance audit 1, the contractor explained that there will be no storage of dangerous goods (e.g. diesel or petrol bowsers) on site.	
5.1.4.8	Storage areas containing hazardous substances / materials will be clearly signed.	Compliant	As noted in compliance audit 1, there are currently no hazardous substances stored on site.	
5.1.4.9	Surface water draining off contaminated areas containing oil and petrol will be channelled towards a sump to separate these chemicals and oils.	Compliant		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.1.4.10	Spillages will be cleaned up immediately and contaminants properly drained and disposed of using appropriate solid/hazardous waste facilities (not to be disposed of within the natural environment). Any contaminated soil from the construction site will be removed and rehabilitated timeously and appropriately.	Compliant	The contractor had no incidents to report at the time of the audit.	
5.1.5 Education of Site Staff on General and Environmental Conduct				
5.1.5.1	All construction personnel will be trained on the provisions contained in this EMPr (i.e. construction induction and basic environmental awareness information. Proof the training will be retained in the site environmental file for auditing purposes.	Compliant	An environmental induction training session was conducted by the ECO. A register is contained in the file.	For the remainder of the construction phase, new sub-contractors or staff must undergo training prior to commencing work on site.
5.1.5.2	Provision will be made on the Construction Site Meeting Agenda for environmental issues.	Compliant	The ECO attended the June 2021 site meeting and environmental matters were raised.	Environmental matters requiring attention must continue to be minuted and minutes kept in the file.
5.1.5.3	The site foreman will receive no less than 1 hour's environmental training and will have sufficient understanding to pass this information onto the construction staff.	Compliant	An environmental induction training session was conducted by the ECO. A register is contained in the file.	For the remainder of the construction phase, new contractors or staff must undergo training prior to commencement of work on site.
5.1.5.4	A general regard for the social and ecological well-being of the site and adjacent areas is expected of the site staff. Workers will be made aware of the following general rules: a) No alcohol / drugs to be present on site. b) No firearms allowed on site or in vehicles transporting staff to / from site, (unless used by security personnel. c) Prevent excessive noise. d) Prevent unsocial behaviour. e) Bringing pets onto the site is forbidden. f) No harvesting of firewood muthi plants, crops or any other natural material from the site or from the areas adjacent to it. g) The hunting of birds and animals (including the use of snares) on site and in surrounding areas is forbidden. h) Construction staff are to make use of the facilities provided for them, as opposed to ad-hoc alternatives. (e.g.: fires for cooking; the use of surrounding bush as a toilet facility is forbidden.	Compliant		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	i) Trespassing on private / commercial properties adjoining the site is forbidden. j) Driving under the influence of alcohol is prohibited. k) Access to wetland and riparian areas is restricted. l) Other than pre-approved security staff, no workers will be permitted to live on site.			
5.1.6 Soil Erosion				
5.1.6.1	Immediately ahead of construction, development areas will be stripped of topsoil (top 300mm of soil). Topsoil will be stockpiled separately from overburden (subsoil and rocky material) for later reuse in the rehabilitation process.	Compliant	As noted in compliance audit 1, the contractor explained that the site contains vast swaths of rubble and rubbish. During the site clearance the rubble and rubbish was loaded directly onto Durban Solid Waste trucks for disposal at an appropriately licensed facility. DSW disposal slips were made available to SRK during the audit.	It is recommended that a log of vehicles disposing of waste via DSW be kept in the environmental file.
5.1.6.2	Works will be coordinated to limit unnecessarily prolonged exposure of stripped areas and stockpiles. Vegetation and soil will be retained in position for as long as possible and removed only immediately ahead of construction / earthworks in that area.	Compliant		
5.1.6.3	Wind screening and stormwater control will be undertaken to prevent soil loss from the site.	Non-compliant	The contractor noted that dust has not been an issue since the last audit as minimal earth moving activities have occurred on site. No water tanker has been used. No stormwater control mechanisms are in place.	The Stormwater Management Plan for the construction phase must be approved by the engineer and municipality, and implemented before the next audit. A copy of the construction and operation SWMPs must be on file. A copy of the approval from eThekweni must on file. The conditions of the approval in principle received from the eThekweni Coastal, Stormwater and Catchment Management Unit for the operational phase SWMP must be implemented.
5.1.7 Storm Water				

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.1.7.1	A formal storm water system will be designed and implemented together with storm water and erosion control requirements.	Compliant	The HSE Officer explained that a construction Stormwater Management Plan has been compiled. Awaiting approval from the engineer. Once approved, it will be submitted to eThekweni Municipality for approval.	The Stormwater Management Plan for the construction phase must be approved by the engineer and municipality, and implemented before the next audit. A copy of the construction and operation SWMPs must be on file. A copy of the approval from eThekweni must on file. The conditions of the approval in principle received from the eThekweni Coastal, Stormwater and Catchment Management Unit for the operational phase SWMP must be implemented.
5.1.7.2	Storm water run-off will not be concentrated to an extent that would result in any damage to down-stream riverine ecology and/or built environment during storms with a recurrence interval exceeding 1: 10 years and would result in only minor, repairable damage during storms with a recurrence interval exceeding 1: 50 years.	Compliant	No evidence of stormwater damage was observed on site.	
5.1.7.3	Storm water will be directed towards the natural drainage lines and valleys of the site. Storm water will be directed along road surfaces to either discharge through energy dissipaters directly into watercourses or collected by side inlets at strategic and critical points and directed into sub-surface spigot and socket pipe systems. These pipe systems will then discharge via headwall outlets with erosion protection in the form of reno-mattresses and gabion baskets into natural watercourses.	Non-compliant	The HSE Officer explained that a construction Stormwater Management Plan has been compiled. Awaiting approval from the engineer. Once approved, it will be submitted to eThekweni Municipality for approval.	The Stormwater Management Plan for the construction phase must be approved by the engineer and municipality, and implemented before the next audit. A copy of the construction and operation SWMPs must be on file. A copy of the approval from eThekweni must on file. The conditions of the approval in principle received from the eThekweni Coastal, Stormwater and Catchment Management Unit for the operational

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
				phase SWMP must be implemented.
5.1.7.4	All reasonable efforts will be made to prevent storm water from entering the sewer network at the DEWATS plants, including construction of a separate storm water conveyance network. The bypass line will only be activated during severe storm events.	Compliant	As noted in compliance audit 1, the construction of the DEWATS system infrastructure had not commenced at the time of the audit.	
5.1.8 Conservation of the Natural Environment				
5.1.8.1	Care will be taken to position infrastructure so that indigenous trees are not damaged or affected wherever possible. Sensitive trees will be marked with danger tape. The removal of any indigenous trees may need to be authorised by the Department of Agriculture, Forestry and Fisheries.	Compliant		
5.1.8.2	Natural streams, rivers and 15m aquatic buffers are to be demarcated on the ground using an orange bonox/hazard fence or other suitable demarcation and the area beyond the fence must be considered a 'no-go' area. This demarcation must be maintained for the duration of the construction period.	Non-compliant	As noted in compliance audit 1, no demarcation of the watercourse and riparian areas had been undertaken. The contractor did, however, note that there are residents living within these areas and therefore demarcation of such cannot be undertaken until work in these areas is required. At which time, the residents would have likely been relocated.	The water resource and associated 15m buffer areas must be demarcated once the residents have been removed from these sensitive areas.
5.1.9 Set up of Waste Management Procedures				
5.1.9.1	A fenced waste management area will be set up in accordance with the ESMP in the construction camp to store waste collected from the bins on site.	Non-compliant	As noted in compliance audit 1, no designated waste storage area has been set up on site. The contractor explained that construction has been stop-start due to the issues with the relocation of the Banana City residents and waste cleared from site has been placed directly into DSW trucks for offsite disposal. A certificate was available for the waste removal	A record of disposal to DSW must be kept in the environmental file on site.
5.1.9.2	Bins and / or skips will be provided at convenient intervals, identified in the ESMP, for disposal of waste within the construction camp.	Compliant		
5.1.9.3	Bins will be equipped with a closing mechanism to prevent their contents from blowing out and have liner bags for efficient control and safe disposal of waste.	Compliant	Bins equipped with closing mechanisms have been established in the construction camp.	
5.1.9.4	Recycling and the provision of separate waste receptacles for different types of waste will be encouraged.	Compliant	The waste bins established are clearly labelled to indicate the type of material to be disposed in each bin.	
5.1.9.5	No hazardous waste may be stored in the open or around the work areas, close to streams or wetlands.	Compliant		
5.1.9.6	The contact details of the contractor and registered landfill site (s) to be used during construction for safe disposal of wastes will be submitted to the DWS prior to commencement of construction.	Non-compliant	The required details have not been submitted to the DWS. The contact details of a DWS contact were supplied to the HSE Officer following the audit.	DWS must be informed of the use of the DSW to dispose of waste and the facility to which the waste is being disposed. This must

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
				be undertaken prior to the next audit.
5.1.9.7	The tanks for the urine diversion system will be located as far away from the riparian areas as is technically feasible.	N/A		
5.1.10 Social Impacts – Visual & Noise				
5.1.10.1	Contractors will be expected to maximise the employment of individuals with the required skills residing in the Banana City area or adjacent residential areas.	Compliant	As noted in compliance audit 1, the contractor noted that local sub-contractors have been employed to undertake work on site where possible.	
5.1.10.2	eThekwini Municipality will make use of local construction companies as far as possible. Contractors outside of the area will only be used to provide skills not readily available in the area.	Compliant		
5.1.10.3	A CLO will be appointed and will be responsible for ongoing communication with those people that are interested in / affected by the project. This includes explaining the construction process and answering any questions as may be required.	Compliant	As noted in compliance audit 1, the contractor explained that two CLOs have been appointed for the construction phase (one representing Banana City residents and one Umgudulu residents). The CLOs are permanently based on site.	
5.1.10.4	An incident/ complaints register will be housed at the site office and managed by the CLO. This will be in carbon copy format, with numbered pages. Any missing pages will be accounted for by the Contractor/ CLO. This register will be tabled during monthly site meetings.	Compliant	While an incident/complaints register has been made available, it does not follow the required format of this condition. The CLO has made residents aware of the complaints procedure.	The incident / complaints register kept in the file on site must adhere to the format required by the EMPr.
5.1.10.5	The CLO will make I&APs aware of the existence of the complaints book and the methods of communication available to them.	Compliant		
5.1.10.6	Queries and complaints will be handled as follows: <ul style="list-style-type: none"> Document details of such communications. Submit these for inclusion in incident/ complaints register. Bring issues to Contractor/Engineer's attention immediately. Take remedial action as per Engineer's instruction. 	N/A		
5.1.10.7	The Contractor/CLO will inform neighbours in writing of disruptive activities at least 24 hours beforehand. This will take place by way of leaflets distributed or notice boards at affected sites giving the Engineer's, Contractor's and CLO's details or other method approved by the ECO.	Compliant	As noted in compliance audit 1, the contractor noted that blasting has not occurred, however, it will be required in certain areas of the site. SRK noted that the surrounding landowners must be informed prior to commencement of the disruptive activity.	Prior to commencement of blasting, or other such disruptive activities, the adjacent landowners must be informed of the disturbance and the anticipated duration thereof.

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.1.10.8	Construction vehicles will be fitted with standard silencers prior to the beginning of construction.	Compliant		
5.1.10.9	Equipment that is fitted with noise reduction facilities (e.g. Side flaps, silencers etc.) will be used as per operating instructions and maintained properly during site operations.	Compliant		
5.1.10.10	Existing private property, fences and gates will be protected and maintained. Trespassing on private properties and into designated no-go areas is forbidden.	Compliant		
5.1.10.11	The site will be kept clean to minimise the visual impact of the site.	Compliant	<p>The contractor has requested DSW for a skip to minimized waste on site.</p> <p>The CLO has undertaken a door-to-door campaign to inform residents to not litter within the construction area.</p> <p>Waste bins with lids have been placed in the construction camp.</p>	These measures should be maintained, and waste disposal certificates should be retained in the Environmental File.
5.1.10.12	Storage facilities, elevated tanks and other temporary structures on site will be located such that they have as little visual impact on local residents as possible.	Compliant	At the time of the audit all temporary structures were located within the construction camp. The camp is fenced with shade cloth thereby minimising the visual intrusion.	
5.1.10.13	Lighting will be positioned so that it does not pose a nuisance to residents or a danger to road users while still allowing for maximum security.	Compliant		
5.1.11 Heritage Environment				
5.1.11.1	Prior to the commencement of construction, all staff will be trained on what possible archaeological or historical objects of value may look like, and to notify the Engineer should such an item be uncovered.	Compliant	Environmental awareness training was provided by the ECO on 8 June 2021.	Environmental induction training of all contractors and staff working on site must be undertaken. The current staff must undergo training before the next audit. For the remainder of the construction phase, new contractors or staff must undergo training prior to commencement of work on site.
5.1.11.2	No traditional burial places may be altered in any way without the permission of the next-of-kin and a permit from the relevant heritage authority. Consultation with the local community during the detailed planning and design phase, will assist to identify grave sites and will ensure	Compliant	The contractor confirmed that no burial places had been discovered to date.	

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	that the grave sites or sites of cultural significance are not affected by the proposed development.			
5.1.11.3	No structures older than sixty years or parts thereof will be demolished, altered or extended without a permit from Amafa.	Compliant		
5.1.11.4	No activities within 50m of a site which contains rock art will be undertaken.	Compliant		
5.1.12 Security and Safety				
5.1.12.1	Any storage areas will be appropriately secured to reduce the opportunity for criminal activity in the locality of the construction site.	Compliant	Lockable storage containers are provided in the fenced and access controlled construction camp.	
5.1.12.2	Residents living adjacent to the construction site will be notified of the existence of the hazardous storage area.	Compliant	As noted in compliance audit 1, the contractor explained that there will be no storage of dangerous goods (e.g. diesel or petrol bowsers) on site, the vehicles delivering fuel have spill kits and all maintenance of vehicles occurs off site.	
5.1.12.3	Potentially hazardous areas such as trenches will be demarcated and clearly marked.	Compliant		
5.1.12.4	All relevant Health and Safety legislation as required in South Africa will be strictly adhered to including the OHS Act.	Compliant	As noted in compliance audit 1, the contractor explained that an external safety officer has been appointed for the duration of the construction phase. The safety officer is permanently based on site.	
5.1.13 Landscaping guidelines				
5.1.13.1	A landscaping plan must be developed for large open spaces within the boundary of the development area. Common indigenous lawn species and trees native to the Durban area must be utilised and tall tufted grasses along with forbs and trees must be planted in large open spaces. It is recommended that landscaping promote the use of indigenous species common to the region and that as much natural ground cover is established on the site to help with binding soils and encouraging water infiltration, thus reducing overland flows and the pressure on storm water management infrastructure.	N/A	Rehabilitation or revegetation of areas is yet to be undertaken.	
5.1.14 Ecological Compensation Rehabilitation and Management Plan				
5.1.14.1	A terrestrial ecological specialist will be appointed prior to commencement of construction to compile a rehabilitation plan to compensate the extent of grassland lost to the development. The plan will identify an area within close proximity to the site of a similar extent to the grassland area lost that will be rehabilitated. This plan will be compiled in consultation with the EPCPD,	Non-compliant	As noted in compliance audit 1, the Contractor has no knowledge of the Municipality, as the EA holder, having appointed a terrestrial ecological specialist having being appointed to develop a rehabilitation plan.	The municipality must, as a priority, appoint a terrestrial ecological specialist to compile a rehabilitation plan and obtain approval thereof.

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	eThekwini Parks and Recreation Department, eThekwini Human Settlements and UKZN (if the area to be rehabilitated is on UKZN land). The final plan will be submitted to EPCPD prior to commencement of construction.			
5.1.14.2	The natural forest (i.e. the Seral and Riparian forest) found in the close proximity to the site must not be disturbed by the development activities as well as the consequences of the activities. In addition, the approved plan must be put in place to ensure that there is no further destruction of these conservation areas/open spaces by the Banana City residents. The residents must be educated about the prohibition of natural forest destruction.	Compliant		
5.1.14.3	The condition of the site/non-developed areas must be improved by rehabilitating using 100% indigenous tree species and the removal of alien invasive vegetation.	N/A		
5.1.14.4	All transplantable trees should be transplanted to a suitable location.	N/A	To date no trees have been transplanted.	
5.2 Management of Construction Activities and Workforce				
5.2.1 Access to Site				
5.2.1.1	Existing roads will be used where possible, avoiding the creation of new routes. Any additional routes and turning areas required by the contractor will be approved by the ECO, in writing based on the route map that will be retained as part of the environmental file. Disturbance to surrounding areas will be minimised by allowing sufficient space for turning areas.	Compliant	As noted in compliance audit 1, there is only one existing access to the site and this is being utilised as the only access point.	
5.2.1.2	Speed limits (30 km/hr on dirt roads) will be enforced at all times, and traffic control provided both on public roads and onsite roads.	Compliant		
5.2.1.3	Only authorised roads and access routes will be used. Where construction will obstruct existing access, alternative temporary access routes will be allowed for. Access routes to be designed in order to minimize impact on riparian areas and the general environment.	Compliant		
5.2.1.4	All access routes and roads will be adequately maintained in order to minimise erosion and undue surface damage. Rutting and potholing will be repaired and stormwater control mechanisms will be maintained.	Compliant		
5.2.1.5	Runoff from roads will be managed to avoid erosion and pollution problems.	Compliant		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.2.1.6	Any gravel or cement spillage on roads will be cleaned up in the same day in which the spill occurred.	Compliant		
5.2.1.7	Any damage to public or private roads caused by the Contractor during the construction phase will be repaired.	N/A		
5.2.2 Maintenance of Construction Camp				
5.2.2.1	Run-off from the camp site will not discharge into neighbours' properties.	Compliant	As noted in compliance audit 1, the camp is currently located in the middle of the developable area and runoff does not discharge into neighbour's properties.	
5.2.2.2	The drainage of the camp site will be monitored and managed to avoid standing water and soil erosion.	Compliant		
5.2.2.3	Ablutions will be maintained in a clean state and moved where appropriate to ensure that they adequately service the work areas. Open areas and the surrounding bush will not be used as ablutions.	Compliant	As noted in compliance audit 1, the contractor explained that there are several formalised ablution facilities across the site for the Banana City residents. These facilities have and will be used by the construction staff for the duration of the construction phase. Two chemical toilets have been provided in the demarcated construction camp. Proof of regular cleaning was provided to SRK.	
5.2.2.4	The construction camp and working areas will be kept clean and tidy at all times.	Compliant	The CLO has informed the Banana City community that should illegal disposal of waste continue within the construction area, construction activities may be delayed. A request for skips has been made to DSW, however this has not yet been delivered.	
5.2.2.5	Eating areas should be regularly serviced and cleaned to ensure the highest possible standards of hygiene and cleanliness.	Compliant		
5.2.3 Staff Conduct				
5.2.3.1	Conduct of staff will be monitored to ensure that the induction training they received regarding the EMPr and environmental practices are adhered to, including the conduct rules in terms of Section 5.1.4 above	N/A		
5.2.4 Dust Control				
5.2.4.1	No fires will be permitted for any purposes whatsoever.	Compliant		
5.2.4.2	The production of dust and damage caused by dust will be limited through regular watering of the work areas. Where dust is unavoidable in residential or commercial areas, screening will be required utilising wooden supports and shade cloth.	Compliant	The contractor noted that dust has not been an issue since the last audit as minimal earth moving activities have occurred on site. No water tanker has been used.	
5.2.4.3	Stripping of vegetation and existing material will be limited to necessary working areas.	Compliant		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.2.4.4	Vehicles and machinery will be kept in good working order and to meet manufacturer's specifications for safety, fuel consumption etc. Should excessive emissions be observed, the Contractor will have the equipment repaired as soon as possible. This will include reducing emissions from the equipment and adjusting any load it may be carrying.	Compliant	As noted in compliance audit 1, the contractor noted that maintenance of vehicles occurs off site.	
5.2.4.5	Lime, concrete and other powders must not be mixed during excessively windy conditions.	N/A		
5.2.5 Storm water, soil erosion and stockpile areas				
5.2.5.1	Construction activities must minimise the duration of exposure to bare soils on site, especially on steep slopes. The unnecessary removal of groundcover from slopes must be prevented, especially on steep slopes.	Compliant		
5.2.5.2	Clearing activities must only be undertaken during agreed working times and permitted weather conditions. If heavy rains are expected, clearing activities should be put on hold. In this regard, the contractor must be aware of the weather forecast.	Compliant		
5.2.5.3	Where applicable, subsoil and topsoil must be stockpiled separately. Erosion/sediment control measures such as sand/silt fences, low soil berms or bricks must be placed around soil stockpiles to limit sediment runoff from stockpiles.	Compliant		
5.2.5.4	The stockpiles must only be placed within demarcated stockpile areas, which must fall within the demarcated construction area. The contractor will avoid stockpiling materials in vegetated areas that will not be cleared.	N/A	There were no stockpiles on site at the time of the audit.	
5.2.5.5	Wind screening and stormwater control will be undertaken around stockpiles to prevent soil loss from the site.	N/A		
5.2.5.6	Stockpiled soil must be kept free of weeds and will not be compacted.	N/A		
5.2.5.7	The height of soil stockpiles must be limited to 2m to avoid soil compaction, particularly for topsoil.	N/A		
5.2.5.8	Stockpiles of construction materials must be clearly separated from soil stockpiles in order to limit any contamination of the soil.	N/A		
5.2.5.9	Trench dewatering will be done in such a manner that water does not result in concentrated flow that could cause soil erosion.	N/A	No trenching has occurred to date.	
5.2.5.10	All bare slopes and surfaces to be exposed to the weather elements during clearing and earthworks must	Non-compliant		The Stormwater Management Plan for the

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	be protected against erosion using rows of silt fences and/or sandbags to break the energy of surface flows.		The HSE officer noted that a construction SWMP has been compiled but is awaiting signoff from the Resident Engineer and eThekweni Municipality.	construction phase must be approved by the engineer and municipality, and implemented before the next audit. A copy of the construction and operation SWMPs must be on file. A copy of the approval from eThekweni must on file. The conditions of the approval in principle received from the eThekweni Coastal, Stormwater and Catchment Management Unit for the operational phase SWMP must be implemented.
5.2.5.11	Sediment barriers (e.g. silt fences, sandbags, etc.) must be established along the entire downslope section of the development footprint to capture sediment before entering natural watercourses (streams/rivers). Sediment barriers should be regularly maintained and cleaned so as to ensure effective drainage. Breaching of such barriers must be avoided.	Non-compliant		
5.2.5.12	The berms, sandbags and/or silt fences must be monitored for the duration of the construction phase and repaired immediately when damaged. Berms, sandbags and silt fences must only be removed once vegetation cover has successfully re-colonised the embankments.	Non-compliant		
5.2.5.13	No stockpiling will take place within wetland/riparian areas or the recommended buffer zones.	N/A	There were no stockpiles on site at the time of the audit.	
5.2.5.14	After every rainfall event, the contractor must check the site for erosion damage and rehabilitate this damage immediately.	N/A		
5.2.5.15	Surface water or storm water will not be allowed to concentrate, or to flow down cut or fill slopes or platforms without erosion protection measures being in place (e.g. sand bags or Hessian sheets).	Non-compliant	The HSE officer noted that a construction SWMP has been compiled but is awaiting signoff from the Resident Engineer and eThekweni Municipality.	The Stormwater Management Plan for the construction phase must be approved by the engineer and municipality, and implemented before the next audit.
5.2.5.16	Topsoiling and revegetation will commence immediately after the completion of an activity and at an agreed distance behind any particular work front.	N/A		
5.2.5.17	All banks will be returned to their natural slope or at an angle which ensures slope stability and safety. Where this is not possible the banks will be stabilised immediately after the completion of activities in that area. If re-vegetation of exposed surfaces cannot be established immediately due to phasing issues, rows of silt fences and sandbags of vegetation must be established along contours at regular intervals to capture eroded sand.	N/A		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.2.5.18	Overflow and scour channels will be lined with stone pitching along their length and at their points of discharge to prevent soil erosion. The point of discharge will be at a point where there is dense natural grass cover.	N/A		
5.2.5.19	Channels will not be allowed to discharge straight down the contours. These will be aligned at such an angle to the contours that they have the least possible gradient.	N/A		
5.2.5.20	Overland discharge will only be allowed to occur over areas that have a minimum cover of 90% grass cover at a minimum height of 150mm. This applies to areas down slope of the discharge point as well.	N/A		
5.2.6 Water Quality				
5.2.6.1	Discharge of water containing polluting matter or visible suspended materials directly into drainage lines or riparian areas and associated buffers will be prohibited.	Compliant		
5.2.6.2	Any unpolluted water / runoff will be deflected away from any dirty area (including plants, maintenance areas, workshops and contractors yards).	Compliant		
5.2.6.3	No vehicles will be washed on site.	Compliant		
5.2.6.4	No hydrocarbons (oil or fuel etc.) will be allowed to enter sewers, storm water drains or the natural environment. Any accidental oil or fuel spills or leakages will be immediately cleaned with an approved absorbent material, such as 'Drizit' or 'Spill-sorb'. Sand can also be used. Any contaminated soil will be removed to the depth of the contamination. The contaminated material must be disposed of via the hazardous waste disposal stream. Any hydrocarbon spill constitutes an incident that will be captured on the incident/ complaints register.	Compliant	The contractor had no incidents to report at the time of the audit.	
5.2.6.5	Site staff will not be permitted to use any stream, river, other open water body or natural water source adjacent to or within the designated site for the purposes of bathing, washing of clothing or for any construction or related activities.	Compliant	As noted in compliance audit 1, the contractor explained that Containerised Ablution Blocks are available across the site and therefore, construction staff have access to formalised bathing facilities .	
5.2.6.6	Municipal water (or another source approved by the Engineer) should instead be used for all activities such as dust suppression, concrete mixing, compacting etc.	Compliant		
5.2.6.7	Ongoing during construction	Compliant		
5.2.6.8	Earthworks will be restricted to outside of riparian areas and applicable 15m aquatic buffer zones.	Compliant		
5.2.7 Conservation of the Natural Environment				

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.2.7.1	No vegetation may be cleared without prior permission from the Engineer.	Compliant		
5.2.7.2	Qualified personnel must monitor the vegetation clearing and re-vegetation process.			
5.2.7.3	Should there be a need to disturb indigenous trees in a natural forest and/ or protected tree species, a licence application form must be submitted to the Department of Agriculture, Forestry and Fisheries (DAFF) office in Pietermaritzburg prior any activity commencement.	N/A	No protected tree species have been identified on site.	
5.2.7.4	Care must be taken to avoid the introduction of alien plant species to the site and surrounding areas. Particular attention must be paid to imported material.	Compliant		
5.2.7.5	Disturbance to birds, animals and reptiles and their habitats should be minimised wherever possible.	Compliant		
5.2.7.6	A minimum buffer zone (or development setback) width of 15m will be applied from the edge of the delineated riparian. Special care is to be taken to demarcate the buffer zone and to actively prevent encroachment into this zone during construction.	Non-compliant	As noted in compliance audit 1, to demarcation of the watercourse and riparian areas had been undertaken. The contractor did, however, note that there are residents living within these areas and therefore demarcation of such cannot be undertaken until work in these areas is required. At which time, the residents would have been relocated.	It is recommended that the EMPr be amended to stipulate that these sensitive areas should be demarcated once the residents had been removed from these sensitive areas.
5.2.7.7	The outer edge of the construction servitude must be demarcated with an orange hazard fence and the area beyond the fence must be considered a no-go area. Where construction is to be contained within the existing perimeter fence at the site, further demarcation work is unnecessary.	Non-compliant		
5.2.7.8	Any contractors found working inside sensitive 'no-go' areas (i.e. all natural grassland/forest/riverine areas outside the development footprint) will be fined as per a fining schedule/system setup for the project.	Compliant		
5.2.7.9	All demarcation work, including soil stockpiles, equipment laydown and storage areas must be signed off by the Environmental Control Officer (ECO).	Compliant		
5.2.7.10	Construction materials must only be brought to the equipment laydown area 3 days prior to use and must not be kept for more than 2 weeks. Timing of delivery is critical.	Compliant		
5.2.7.11	No equipment laydown or storage areas must be located within 15m of any delineated watercourse/buffer and/or within the 1:100 year floodline.	Compliant		
5.2.7.12	Areas to be utilised by heavy machinery, etc. will be clearly demarcated and a responsible person appointed to ensure that there is full compliance with the EMPr.	Compliant		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.2.7.13	The buffer zone rehabilitation recommendations and maintenance/ management guidelines developed by the aquatic specialist and included in the 'Conceptual Rehabilitation Plan' in Section 7.5 of the aquatic specialist report (pg 72-100) must be implemented (refer to Appendix C).	N/A	Rehabilitation or revegetation of areas is yet to be undertaken.	
5.2.7.14	Buffer zones will be established and maintained with indigenous vegetation cover as open space areas with appropriate alien plant control and slashing to maintain grass.	N/A		
5.2.7.15	Recommended sediment retention measures will be implemented to limit exposed surfaces and to control sediment-laden runoff prior to entering water courses during construction.	Non-compliant	The HSE officer noted that a construction SWMP has been compiled but is awaiting signoff from the Resident Engineer and eThekweni Municipality.	The Stormwater Management Plan for the construction phase must be approved by the engineer and municipality, and implemented before the next audit.
5.2.7.16	Areas which are identified by the Engineer or the ECO as being ecologically sensitive and which are adjacent to any construction work are to be suitably demarcated to prevent damage by plant and labour. Temporary bonnox type fencing should be used and should be moved in phases as the construction progresses from one area to the next.	Compliant		
5.2.7.17	Restrict/limit access to delineated /riparian areas and associated buffers, particularly along channel banks and in-stream environments.	Compliant		
5.2.7.18	Where possible trenching should be undertaken by hand.	Compliant		
5.2.7.19	The Contractor will minimise the need for plant /materials to cross the rivers or streams by storing plant/ materials on the side of the river that is under construction.	Compliant		
5.2.7.20	Operation and storage of machinery and construction-related equipment will be done outside of wetland/riparian areas and relevant buffer zones,	Compliant		
5.2.7.21	Mechanical plant and bowsers will not be refuelled or serviced within or directly adjacent to any wetland/riparian areas.	Compliant		
5.2.7.22	Suitable overnight facilities will be provided for vehicles, away from any areas of channelled flow.	Compliant		
5.2.7.23	No natural watercourse (i.e. wetland/rivers/streams) will be used for the cleaning of tools or any other apparatus. This includes for purposes of bathing, washing of clothing, etc.	Compliant		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.2.7.24	Alien vegetation encroachment onto the site as a result of construction activities will be controlled during construction. Invasive alien plant control will be implemented to ensure that alien plants are actively managed and eradicated from the site, with adequate monitoring and follow-up measures. This will include any disturbed areas created during construction. The dominant invasive species common to the site have been documented in Annexure C of the Aquatic Assessment Report (Appendix C of this EMPr).	Compliant		
5.2.7.25	The ECO will assess the need / desirability for further monitoring and control after the first 12 months and include any recommendations for further action to the relevant environmental authority (EDTEA).	N/A		
5.2.7.26	The use of herbicides in invasive alien control will require an investigation into the necessity, type to be used, effectiveness and impacts of the agent on biota. No banned chemicals or preparations will be used/applied.	N/A		
5.2.7.27	Re-vegetation of disturbed areas will use indigenous plants including locally common indigenous grasses and trees/shrubs (no alien species will be used in re-vegetation).	N/A		
5.2.7.28	An opportunity exists to rehabilitate/facilitate the recovery of wetland/riparian areas as well as the recommended aquatic buffer zone areas. These areas will be adequately rehabilitated to ensure that sufficient indigenous ground cover is established to aid in preventing soil erosion and ensuring the stability of river banks. Guidelines for the rehabilitation of wetland/riparian areas are included in Section 5.2.4 of the Aquatic Assessment Report, included in Appendix C.	N/A		
5.2.8 Terrestrial Buffer Zones / Development Set-backs				
5.2.8.1	Development or construction activities within the 5m forest buffer zone is strictly forbidden. These areas will be cordoned off with a physical barrier and designated as no-go areas.	Non-compliant	The transit camp platform which previously went beyond the 5m forest buffer has been resolved. However, the area has not been demarcated or cordoned off.	The forest buffer areas must be cordoned off with a physical barrier and designated as no-go areas.
5.2.9 Materials Management				
5.2.9.1	All on-site operations that involve the use of cement and concrete will be carefully controlled. All concrete mixing will take place on a designated, impermeable surface and the number of designated sites minimised as far as	N/A		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	practically possible. These sites will not be permitted within riparian an areas or wetland/ wetland buffer areas.			
5.2.9.2	Cement batching activities will occur outside of the delineated wetland/riparian areas on an impervious surface.	N/A		
5.2.9.3	Cement products/wash will not to be disposed of, or allowed to discharge into the natural environment.	N/A		
5.2.9.4	Inert building rubble and waste rock will be stored in areas designated for such	Compliant		
5.2.9.5	Mixing / decanting of all chemicals and hazardous substances must take place either on a tray or on an impermeable surface that is contained by temporary or permanent bunds. Mixing / decanting will not be permitted within riparian an areas or wetland/ wetland buffer areas. Waste from these should then be disposed of to a suitable waste site.	N/A		
5.2.9.6	Any storage areas will be appropriately secured to reduce the opportunity for criminal activity in the locality of the construction site. Unauthorised access to hazardous materials storage areas will not be permitted.	Compliant		
5.2.9.7	Smoking within 3m of hazardous materials storage areas will not be permitted.	Compliant		
5.2.9.8	Spraying of herbicides / pesticides should not take place under windy conditions and must comply with OHSA specs and other chemical handling laws.	N/A		
5.2.10 Waste Management Procedures				
5.2.10.1	Non-hazardous Solid Waste			
5.2.10.1.1	Dumping of waste of any nature, or any foreign material will not be permitted	Compliant		
5.2.10.1.2	Store rubble and waste rock as indicated on the approved ESMP. Rubble and waste rock will be disposed of at the discretion of, and with the permission of the ECO at the nearest registered solid waste disposal facility. Proof of safe disposal will be retained for inspection during audits.	Compliant		
5.2.10.1.3	All remains of excess cement and concrete will be disposed of in the approved manner after the completion of tasks. Solid waste concrete must be treated as inert construction rubble, but wet cement and liquid slurry, as well as cement powder will be treated as hazardous waste.	N/A		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.2.10.1.4	All domestic waste will be collected in adequate numbers of litter bins located as required on the Works Site and within the Contractors camp.	Compliant		The municipality should provide a skip in a central location for disposal of general waste that should be removed from site weekly.
5.2.10.1.5	Where feasible, collected waste paper, glass and metal will be collected separately and either collected by or delivered to registered recyclers. Proof of safe disposal will be retained for inspection during audits.	Compliant		
5.2.10.1.6	Litter in and around the work area will not be permitted. Litter bins will be equipped with a closing mechanism to prevent their contents from blowing out, will be emptied weekly and staff will be required to use these bins at all times.	Compliant	The CLO has informed the Banana City community that should illegal disposal of waste continue within the construction area, construction activities may be delayed. A request for skips has been made to DSW, however this has not yet been delivered.	The municipality should provide a skip in a central location for disposal of general waste that should be removed from site weekly.
5.2.10.1.7	No solid waste will be burned or buried on site but will be removed from site weekly or fortnightly and disposed of at an appropriately licenced disposal facility. Skips will be emptied prior to over-flowing. The excavation and use of rubbish pits on site is forbidden. Proof of safe disposal at a registered landfill site will be retained for inspection during audits.	Compliant		
5.2.10.1.8	Solid waste will be transported properly whereby waste spills en-route will be avoided. Tarpaulins or similar mechanisms can be used to prevent spillages.	Compliant		
5.2.10.2	Liquid Waste			
5.2.10.2.1	Combine drinking water facilities with hand washing facilities near site toilets.	Compliant		
5.2.10.2.2	Side tipping of spoil and excavated materials will not be permitted – all spoil material will be disposed of as directed by the Engineer.	Compliant		
5.2.10.3	Hazardous waste (includes oils, chemicals, fuels, paints, batteries, lubricants, wet cement and liquid slurry etc.)			
5.2.10.3.1	Hazardous waste will be stored appropriately to ensure that it does not pollute the environment. Designated skips will be provided across the site to store hazardous waste.	Compliant		
5.2.10.3.2	Wherever possible waste oils and batteries will be kept separate and either collected by or delivered to an appropriate recycling facility. Proof of safe disposal will be retained for inspection during audits.	Compliant		
5.2.10.3.3	Hazardous waste not earmarked for reuse, recycling or resale will be disposed of at a registered hazardous	Compliant		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	waste disposal site. Skips will be emptied prior to overflowing. Proof of safe disposal will be retained for inspection during audits.			
5.2.10.3.4	Contain chemical spills, and arrange for clean-up / control by the supplier, or by professional pollution control personnel.	Compliant		
5.2.11 Social Impacts – Visual & Noise				
5.2.11.1	Lighting on the construction site will be designed to avoid impacting on traffic and nearby houses.	Compliant		
5.2.11.2	Visual impact of the site will be reduced by ensuring the site is neat at all times	Compliant		
5.2.11.3	Noise pollution emanating from the site will comply with SANS STANDARD 10103: 2008 relating to the measurement and rating of environmental noise with respect to annoyance and speech communication.	Compliant		
5.2.11.4	All staff and contractors in site will conduct themselves in an acceptable manner to ensure that the disturbance to surrounding residents is minimised.	Compliant		
5.2.11.5	Noise impacts will be reduced by maintaining normal working hours (07h00 to 17h00, Mondays to Fridays) and should after hours construction work be required adjacent landowners will be notified 24 hours prior to the activity.	Compliant	The contractor confirmed that construction hours are kept to normal working hours.	
5.2.11.6	A complaints register will be housed at the site office and managed by the CLO. This will be in carbon copy format, with numbered pages. Any missing pages will be accounted for by the Contractor/ CLO. This register will be tabled during monthly site meetings.	Non-compliant	While an incident/complaints register has been made available, it does not follow the required format of this condition. The CLO has made residents aware of the complaints procedure.	The incident / complaints register kept in the file on site must adhere to the format required by Condition 5.1.10.4 of the EMPr.
5.2.12 Cultural Environment				
5.2.12.1	Amafa will be contacted if any heritage objects are identified during earthmoving activities and all development should cease until further notice.	Compliant		
5.2.12.2	No rock art and its surrounds (50m) will be impacted on by construction activities.	Compliant		
5.2.12.3	Amafa will be contacted if any graves, not previously identified by the community during the planning phase are identified during construction. The following procedure will be followed: 1. Stop construction. 2. Report findings to the local police station.	Compliant		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	3. Report to Amafa to investigate (Ms Bernadet Pawandiwa – telephone: 033 3946 543).			
5.2.12.4	No exhumations will be conducted without the prior notification of the eThekweni Municipality, Health Department.	Compliant		
5.2.13 Water Abstraction and use				
5.2.13.1	No water is to be abstracted from any river/stream for use in construction activities without prior approval by the Department of Water and Sanitation (DWS), subject to acquiring a relevant Water Use License in terms of Section 21 (a) of the National Water Act for taking water from a water resource. Alternative water supply to be provided for construction activities and for human consumption.	Compliant		
5.2.13.2	The Contractor will only be allowed to draw water from the source/s licenced points	Compliant		
5.2.13.3	Excavating trenches or pits within streams or rivers for the purpose of intercepting groundwater or diffuse surface flows to facilitate water abstraction is not to be permitted	Compliant		
5.2.13.4	Drinking water is to be provided to all employees and labourers are to be discouraged from drinking directly from streams/rivers on site. Suitable domestic water supply to be sourced for human consumption by workers onsite (to comply with DWS specifications for drinking water). Water for human consumption should be available at the site offices and at other convenient locations on site where work occurs	Compliant		
5.2.13.5	Rivers/natural water bodies are not to be used for swimming/fishing/washing of clothes and equipment or other related recreational activities	Compliant		
5.2.13.6	Any dewatering is to be done so in such a manner that water does not result in concentrated flow down slope that could cause soil erosion.	Compliant		
5.2.13.7	Water for irrigation (i.e. for use in revegetation/plant establishment) must not be abstracted from any local watercourse without prior consent/approval from the Department of Water and Sanitation.	Compliant		
5.2.14 Wildlife Management				
5.2.14.1	Education of workers/employees onsite on not to harm wildlife unnecessarily will assist in mitigating this impact. Contractor induction and staff/labour environmental	Compliant	An environmental induction training session was conducted by the ECO on 8 June 2021. Daily toolbox talks are held by the HSE officer.	

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	awareness training needs are to be identified and implemented through staff/contractor environmental induction training. This should include basic environmental training based on the requirements of the EMPr, including training on avoiding and conserving local wildlife.			
5.2.14.2	No wild animal may under any circumstance be hunted, snared, captured, injured, killed, harmed in any way or removed from the site and surrounding natural habitats. This includes animals perceived to be vermin or poisonous (such as snakes, mice, rats, frogs, etc.).	Compliant		
5.2.14.3	The handling and relocation of any animal perceived to be dangerous/venomous/poisonous must be undertaken only by a suitably trained individual.	Compliant		
5.2.14.4	Any fauna (frogs, snakes, etc.) that are found within the construction area must be moved to the closest point of similar habitat type (i.e. grassland/bush) outside of the areas to be impacted.	Compliant		
5.2.14.5	The extent of the disturbed area must be limited to avoid excessive generation of dust.	Compliant		
5.2.15 Conceptual Rehabilitation Plan				
5.2.15.1	The Conceptual Rehabilitation Plan, as detailed in Section 7.5 of the Aquatic Habitat Impact Assessment Report (refer to Appendix C), is designed to address residual construction-related impacts and disturbances to streams and riparian areas as a result of the development project. The Plan must be implemented within the degraded stream and riparian areas on and adjacent to the existing informal settlement to be upgraded as well as the 15m aquatic buffer zone.	Compliant		
5.2.16 Controlling alien/exotic vegetation and weeds				
5.2.16.1	It is the responsibility of the developer/landowner to eradicate and control invasive alien plants that invade the property. These species will need to be removed/controlled as per the requirements of the NEM:BA guidelines for alien species management and control:	Compliant		
	· All alien invasive vegetation that has colonised the construction site must be removed, preferably by uprooting. The contractor should consult the ECO regarding the method of removal.			

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	· All bare surfaces across the construction site must be checked for alien invasive plants at the end of every month and alien plants removed by hand pulling/uprooting and adequately disposed.			
	Herbicides should be utilised where hand pulling/uprooting is not possible. No locally banned chemicals may be used.			
	Further information on the eradication and control of invasive alien plants is provided in Section 7.5 of the Terrestrial Ecological Report (refer to Appendix .			
5.2.17 Fire management				
5.2.17.1	No open fires to be permitted on construction sites. Fires may only be made within the construction camp and only in areas and for purposes approved by the ECO.	Compliant		
5.2.17.2	Fire prevention facilities must be present at all hazardous storage facilities.	Compliant		
5.2.17.3	Ensure adequate fire-fighting equipment is available and train workers on how to use it.	Compliant		
5.2.17.4	Ensure that all workers on site know the proper procedure in case of a fire occurring on site.	Compliant		
5.2.17.5	Provide local emergency numbers (including fire department) at key locations.	Compliant		
5.2.17.6	Smoking must not be permitted in areas considered to be a fire hazard.	Compliant		
5.2.17.7	Ensure that no refuse wastes are burnt or buried on the construction site or on surrounding areas.	Compliant		
5.2.18 General				
5.2.18.1	In accordance with the geotechnical report, precast concrete retaining blocks must be used to shield exposed rock that will decompose and ravel overtime.	Compliant		
5.2.18.2	Rock faces in excess of 1.5m must be checked for slope stability and fill embankments retained using precast concrete retaining blocks.	Compliant		
5.2.18.3	As part of the construction phase of this project the existing resurfaced roads on site will need to be stripped and re-aligned.	Compliant		
5.3 Management of Post Construction Activities				
5.3.1 Construction Camp				
5.3.1.1	All leftover building materials must be returned to the depot or removed from the site.	N/A	All post-construction activities are currently not applicable.	

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
5.3.1.2	All construction plant, equipment, storage containers, temporary fencing, temporary services, temporary storage (including fuel stores and other banded hazardous material storage area) fixtures and any other temporary works will be cleared and completed removed from the site unless otherwise agreed with community members who will take ownership of these materials/ equipment.	N/A		
5.3.1.3	Any access roads created will be rehabilitated to their condition prior to the start of construction	N/A		
5.3.1.4	Any infrastructure (gates, fences, etc) impacted on by construction activities will be returned to the same or better condition than prior to the start of construction.	N/A		
5.3.1.5	Once construction infrastructure has been removed spills not previously evident may become visible. These spills will be appropriately addressed and any contaminated material removed from the site and disposed of offsite at an appropriately licensed disposal facility.	N/A		
5.3.2 Vegetation				
5.3.2.1	Any invasive alien vegetation within areas disturbed by construction activities must be removed using techniques that will limit the possibility of recolonization by alien species	N/A	All post-construction activities are currently not applicable.	
5.3.2.2	Open areas are to be re-planted as per the revegetation specification.	N/A		
5.3.2.3	All vegetation that has been cleared during construction is to be removed from site and delivered to a garden refuse disposal site or used as much as per the revegetation specification, (except for seeding alien vegetation).	N/A		
5.3.2.4	Replanted areas will be maintained and any new invasive alien vegetation cleared as above	N/A		
5.3.3 Rehabilitation				
5.3.3.1	Any excavations will be backfilled and shaped to blend with the surrounding areas and then covered with topsoil and revegetated as above.	N/A	All post-construction activities are currently not applicable.	
5.3.3.2	Where necessary storm water management measures will be implemented to ensure that surface water is not concentrated resulting in scouring and erosion.	N/A		
5.3.3.3	Backfilled areas will be monitored for subsidence.	N/A		
	Guidelines for the rehabilitation of wetland and riparian areas and their terrestrial buffer zones as included in the	N/A		

No.	Description	Status	Observation / Finding	Recommendations/ Remedial Action
	specialist aquatic assessment included at Appendix C will be implemented			
5.3.4 Waste				
5.3.4.1	All waste including building rubble, litter, domestic waste, spilled concrete, unusable building materials, skips and bins will be removed (unless by prior arrangement with the owner of the property on which the waste is located) from the site and appropriately disposed of. Certificates of safe disposal will be maintained for inclusion in the closure audit report.	N/A	All post-construction activities are currently not applicable.	
5.3.5 General				
5.3.5.1	A closure site audit will be conducted by the ECO after the completion of works and rehabilitation. The contractor will not be permitted to leave the site until the site visit has been conducted and any issues identified remediated.	N/A	All post-construction activities are currently not applicable.	
5.3.5.2	An Operational Phase EMPr will be compiled and approved by the EDTEA prior to commencement of operation. The Operational Phase EMPr will include, but not be limited to, detail regarding the backup concept for the DEWATS plants.	N/A		
5.3.5.3	A detailed operation and maintenance manual for the DEWATS plants must be provided to the eThekweni Water and Sanitation Department prior to the commissioning of the DEWATS plants.	N/A		

**Appendix C: Photographs of Municipal Chemical Toilets
Being Cleaned
(supplied by the HSE Officer)**



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Report No.

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