

RE: DFFE Pre-application meeting - Casteel Dam Safety Rehabilitation Project

Samkelisiwe Dlamini <SDLAMINI@dffe.gov.za>

Mon 8/29/2022 11:06 AM

To: Marissa Botha <botham@naledzi.co.za>

Cc: Masina Morudu <memorudu@dffe.gov.za>

Dear Marissa

The proceedings have been recorded correctly

Regards

Samke

From: Marissa Botha <botham@naledzi.co.za>**Sent:** Thursday, 25 August 2022 22:47**To:** Samkelisiwe Dlamini <SDLAMINI@dffe.gov.za>; Masina Morudu <memorudu@dffe.gov.za>**Cc:** Desmond Musetsho <dmusetsho@naledzi.co.za>; Nhlabathi Steven <nhlabathis@dws.gov.za>; Siwelani Rodney <SiwelaniR@dwa.gov.za>; Tsitsa Ayanda <TsitsaA@dws.gov.za>; Thendo Matsenene <thendo@naledzi.co.za>; Khomo Khethiwe <Khomok@dwa.gov.za>; Sithabisiwe Ncube <sncube@naledzi.co.za>**Subject:** Re: DFFE Pre-application meeting - Casteel Dam Safety Rehabilitation Project

Dear Samkelisiwe and Masina,

Please find attached the pre-application meeting minutes for the Casteel Dam Safety Rehabilitation project including a copy of the Powerpoint presentation. Please review and confirm if the proceedings have been recorded correctly so that the minutes can be finalised and adopted. Please track any changes added to the word document.

Please note the minutes are a short summary of the discussions. Full details are available in the attached presentation.

Kind regards and TIA,

Marissa Botha*Environmental Scientist (SACNASP Reg no. 117526)***Naledzi Environmental Consultants Pty Ltd**Email: botham@naledzi.co.za

Cell: 084 226 5584

www.naledzi.co.za

From: Marissa Botha on behalf of Samkelisiwe Dlamini <SDLAMINI@dffe.gov.za>**Sent:** Thursday, August 25, 2022 9:21 AM**To:** Desmond Musetsho <dmusetsho@naledzi.co.za>; Siwelani Rodney <SiwelaniR@dwa.gov.za>; Nhlabathi Steven <nhlabathis@dws.gov.za>; Khomo Khethiwe <Khomok@dwa.gov.za>; Sithabisiwe Ncube <sncube@naledzi.co.za>; Thendo Matsenene <thendo@naledzi.co.za>; Tsitsa Ayanda <TsitsaA@dws.gov.za>

Cc: Samkelisiwe Dlamini <SDLAMINI@dfpe.gov.za>

Subject: Fw: DFFE Pre-application meeting - Casteel Dam Safety Rehabilitation Project

When: Thursday, August 25, 2022 9:30 AM-10:00 AM.

Where:

Please follow new link to MS Meeting

Regards,

Marissa Botha

Environmental Scientist (SACNASP Reg no. 117526)

Naledzi Environmental Consultants Pty Ltd

Email: botham@naledzi.co.za

Cell: 084 226 5584

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From: Samkelisiwe Dlamini <SDLAMINI@dfpe.gov.za>

Sent: Thursday, August 25, 2022 9:18 AM

To: Masina Morudu <memorudu@dfpe.gov.za>; Marissa Botha <botham@naledzi.co.za>

Subject: DFFE Pre-application meeting - Casteel Dam Safety Rehabilitation Project

When: Thursday, August 25, 2022 9:30 AM-10:00 AM.

Where:

Microsoft Teams meeting

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BASIC ASSESSMENT (BA) PROCESS – DFFE PRE-APPLICATION MEETING MINUTES			
Project name	Casteel Dam Safety Rehabilitation Project		
Date & Time Meeting	25 August 2022, 09:30 – 10:20 am		
Description	DFFE pre-application meeting		
Venue	Virtual - MS Teams		
Chairperson	Marissa Botha, Naledzi Environmental Consultants (Pty) Ltd		
A. Attendees	Name	Organisation	Designation
	Marissa Botha	Naledzi Environmental Consultants (Pty) Ltd	Senior Environmental Scientist
	Dr Desmond Musetsho	Naledzi Environmental Consultants (Pty) Ltd	Managing Director, Principal EAP
	Samkelisiwe Dlamini	Department of Forestry, Fisheries and Environment (DFFE)	Integrated Environmental Authorisations, Case Officer
	Masina Morudu	Department of Forestry, Fisheries and Environment (DFFE)	Integrated Environmental Authorisations,
	Rodney Siwelane	DWS, Directorate Dam Safety Surveillance	Programme Manager
	Khomo Khethiwe	DWS, Directorate Dam Safety Surveillance	Civil Engineer, Co-Programme Manager
	Steven Nhlabathi	DWS, Directorate: Environmental Impact Monitoring	Environmental Manager/Officer
	Ayanda Tsitsa	DWS, Directorate Dam Safety Surveillance	Civil Engineer
Circulation	The minutes of the meeting have been distributed to the meeting participants.		

KEY RECOMMENDATIONS FROM DFFE RECORDED DURING THE MEETING

- The EAP must commission a Traffic Impact Statement/Assessment to assess the anticipated construction traffic impacts for the project;
- If no heritage resources are present onsite a Heritage Statement/Exemption letter must be compiled by a specialist and submitted to SAHRA.

The full meeting minutes are provided over-leaf.

1. MINUTES

Item	Minutes	Action
1	Welcome and Introduction	
1.1	<p>Dr D Musetsho welcomed the attendees, opened the meeting and thanked the DFFE for the opportunity to conduct the pre-application consultation. Introductions followed (see cover page item A). The purpose of the meeting was highlighted i.e.</p> <ul style="list-style-type: none"> • Obtain DFFE’s input on listed activities triggered and specialist studies to be commissioned for the project • Record any comments that need to be addressed by specialists and the EAP during the BA process. 	Dr D Musetsho Naledzi EAP
1.2	<p>It was explained that the Department of Water and Sanitation, Directorate Strategic Infrastructure Asset Management (SIAM) (the applicant) has appointed Naledzi Environmental Consultants as the independent environmental assessment practitioner (EAP) to conduct the Basic Assessment (BA) process and associated public participation for the proposed Casteel Dam Safety Rehabilitation project.</p>	
2	Project Background	Action
2.1	<p>M Botha outlined the background of the project through a presentation (refer to Appendix A for the detailed presentation). The main points outlined included:</p> <ul style="list-style-type: none"> • Casteel Dam has been placed on the DWS Dam Safety Rehabilitation Programme (DSRP) for repair based on several safety risks identified during the recent Dam Safety Evaluation (DSE) i.e. <ul style="list-style-type: none"> ○ The steep slope of the dam downstream slope may fail ○ There is seepage from the dam wall; and ○ A large eroded gully downstream of the spillway channel; and ○ The outlets are non-functional <p>The safety risks were illustrated using photographic evidence obtained from Casteel Dam on 22 August 2022 during the site verification visit (see slide 7 of the presentation).</p>	M Botha Naledzi
2.2	<p>Casteel Dam is a medium-sized earth fill-embankment dam located on the Tlulanziteka River in the jurisdiction of Bushbuckridge Local Municipality 15 km north of Bushbuckridge on the farm Kasteel 231-JU between the settlements of Casteel and Arthur’s Seat next to the R 40 Bushbuckridge-Acornhoek road.</p> <p>The dam is located within the Sand River Catchment. It has a capacity of 1.18 million m³ and a surface area of 16 ha. It was built in 1965 to supply irrigation water to the rural community.</p>	
3	Scope of Works	Action
3.1	<p>M Botha outlined the project scope of work and the locality of the components using presentation (see slides 8 and 9 for more details). It was explained that the DWS Chief Directorate: Construction Management proposes to undertake rehabilitation works at the original dam embankment over a twenty-four (24) month construction period. No expansion or construction of a new facility is proposed. The main rehabilitation works were outlined i.e.</p> <ol style="list-style-type: none"> 1) 28 500m² rehabilitation works at the main dam embankment and spillway (detailed components provided on slide 8); 2) 0.9 ha site establishment area northeast of the dam for site offices; 3) Upgrading of the existing gravel road from the R40 to the dam 	M Botha Naledzi

	<p>embankment (less than 1km, no more than 4m wide).</p> <p>4) Use of an alternative access road during construction through Casteel settlement to access the spillway section on the right flank of the dam. A short 350m section of access road would need to be created through old fields to reach the spillway area.</p>	
3.2	The construction period will be 24 months and all materials for the rehabilitation works will be sourced from a licensed commercial quarry. Skilled labour would be sourced from DWS and unskilled labour from the local community.	
4	Basic Assessment (BA) process	Action
4.1	The environmental authorisation would be sought from DFFE subject to a BA process executed in line with Regulations 19 and 40-44 of the NEMA EIA Regulations of 2014 (GNR 326). DWS is exempted from the requirement to apply for a WULA. No water use license is therefore required.	M Botha Naledzi
4.2	<p>The project triggers listed activities 19 and 27 under GNR 327 (Listing Notice 1) and activities 12 and 14 under GNR 324 (Listing Notice 3) of the EIA Regulations. The access road upgrade and creation do not trigger any activity thresholds.</p> <p>Activity 48 (GNR 327) and activity 23 (GNR 324) will be excluded from the application since it deals with the expansion of dams.</p>	
4.3	The BA and public participation process plan including the schedule were outlined (see slide 12 for more detail).	
4.4	<p>Based on the Screening Tool Report (STR) the site overlaps several environmental sensitivities and confirmed geographic areas for which several specialist studies are required (see slide 13 for details). The most significant sensitivities include:</p> <ul style="list-style-type: none"> • Very High sensitivity theme for terrestrial and aquatic biodiversity • High civil aviation theme • Medium plant and animal species theme 	
4.5	<p>The EAP will commission the following specialist studies since the rest of the STR-recommended studies are considered superfluous. i.e. (see slide 14)</p> <ol style="list-style-type: none"> 1) Terrestrial Biodiversity 2) Aquatic Biodiversity 3) A Heritage Statement/exemption will be submitted to SAHRA since no heritage resources were found onsite during the site verification visit. 	
5	Recommendations by DFFE	Action
5.1	Listed activities - DFFE agrees with the identified listed activities for the project. The project application form can be amended if more activities are identified as the BA process unfolds.	S Dlamini DFFE Case Officer
5.2	Specialist Studies - A Traffic Impact Statement / Assessment must be commissioned for the project. The project will generate construction traffic over twenty-four (24) months which includes haulage of construction material between a commercial quarry and Casteel Dam along the R40. A specialist Heritage Statement/exemption letter must be submitted to SAHRA.	
6	Way Forward	Action
6.1	<p>The minutes of the meeting will be prepared and sent to DFFE for approval as a true reflection of discussions and recommendations.</p> <p>The recommended specialist studies will be commissioned (i.e. Traffic) and the public participation process will commence in September 2022 to announce the project.</p>	M Botha Naledzi
7	Closure M Botha and Dr D Musetho thanked the DFFE for their recommendations. The meeting was closed at 10:20 am.	

APPENDIX A

COPY OF MEETING PRESENTATION



BASIC ASSESSMENT PROCESS

PROPOSED CASTEEL DAM SAFETY REHABILITATION PROJECT,
FARM KASTEEL 231-JU, CASTEEL, BUSHBUCKRIDGE LOCAL
MUNICIPALITY, EHLANZENI DISTRICT, MPU

DEFF PRE-APPLICATION REFERENCE NO. 2022-08-0009

25 AUGUST 2022



NALEDZI
ENVIRONMENTAL CONSULTANTS (PTY) LTD

Agenda

1. Introductions
2. Background (by DWS)
3. Project Overview
4. STR Site Sensitivities & Aspects of Project
5. BA Process (listed activities, process, timeframe)
6. Specialist Studies
7. Q & A
 - DFFE inputs on listed activities and specialist studies identified
 - Any additional requirements?
 - At which stage will DFFE require site inspection
 - Record DFFE comments to be addressed by the specialists and EAP
(Purpose of meeting)
8. Way Forward and Close

Introductions

CA:



APPLICANT:



**Directorate: Strategic
Infrastructure Asset Management**

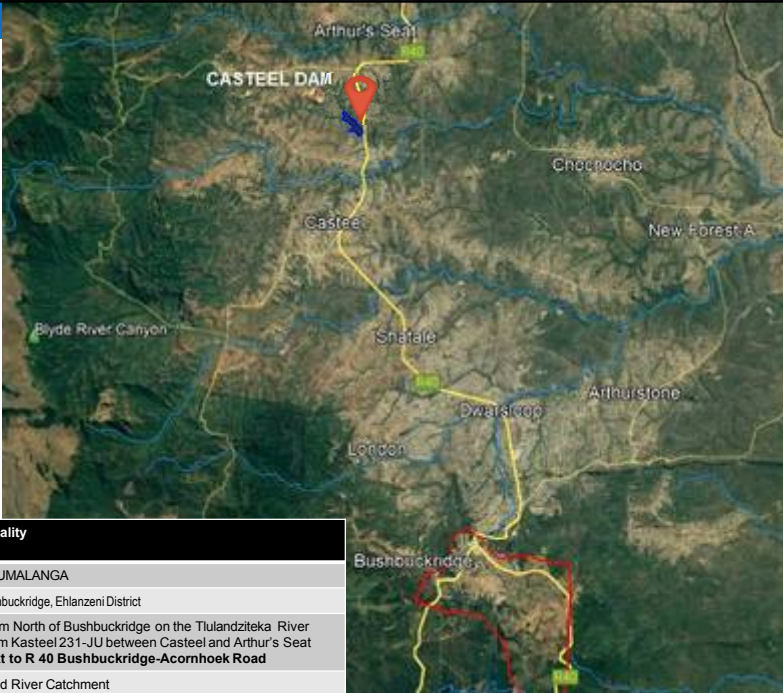
APPOINTED EAP:



Background


- ❑ DWS: SIAM custodian of all department dams in charge of dam safety
- ❑ Achieved through the Dam Safety Evaluations (DSE) and Dam Safety Rehabilitation Programme (DSRP).
- ❑ All DWS dams undergo a DSE every 5 years in terms of Dam Safety Regulations. Any safety risks identified at dams are placed on DSRP for repair.
- ❑ The latest Casteel DSE Report identified several risks at the dam i.e.
 - Steep slope on the downstream slope of dam may cause failure
 - Dam seepage
 - Eroded gully further downstream of the spillway channel
 - Outlet works are non-functional
- ❑ Casteel Dam has been placed on the DSRP to address the risks

Project Overview



Casteel Dam	Locality
Province	MPUMALANGA
Municipality	Bushbuckridge, Ehlanzeni District
Locality	15km North of Bushbuckridge on the Tlulandziteka River Farm Kasteel 231-JU between Casteel and Arthur's Seat Next to R 40 Bushbuckridge-Acornhoek Road
Catchment	Sand River Catchment


Locality Map
Casteel Dam, Farm Kasteel 231-JU




Casteel Dam	Description
Type	Medium-sized earth-fill embankment dam (Cat. II Significant Hazard Potential)
Capacity	1.18 million m3
Surface Area	16 Ha (Dam wall height 16.6m; Crest of 255m in length)
Spillway	Sharp Crested weir on right flank and outlet works (125m3/s)
Purpose	Built in 1965 to supply irrigation water to the rural community

Project Overview (Risks Identified)


Steep downstream slope of dam
- Rotational failure




Spillway channel cant handle RMF



Seepage below dam – CVB formed



Large donga below spillway



Project Overview (Scope of Works)

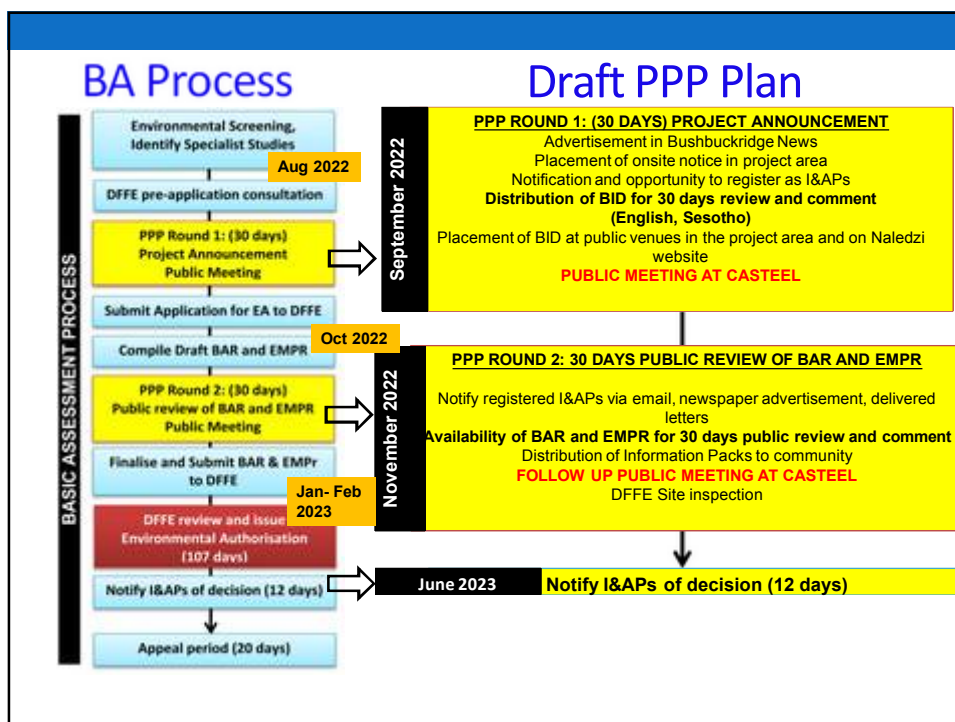
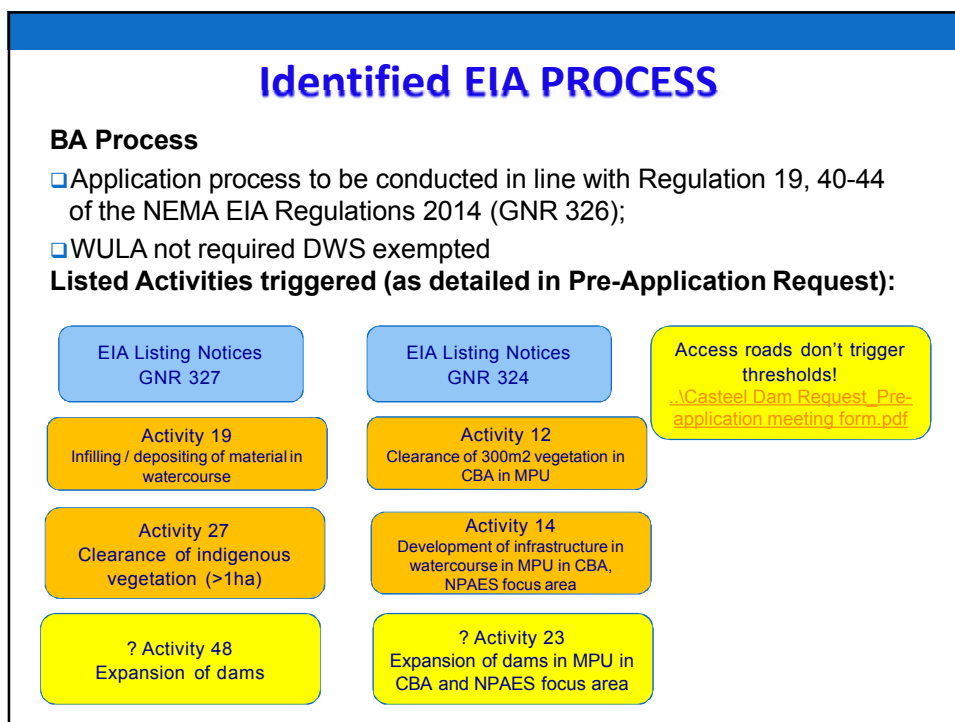
- (1) **28 500 m2 rehabilitation works @ main dam embankment and spillway i.e. Construct**
 - Chimney and Toe drains to intercept seepage from the dam wall (incl. collector pipes)
 - Refurbish dam outlet works
 - Stabilise the downstream slope by flatting it
 - (i.e. add earthfill and gravel layer to downstream slope, widen embankment crest by 1m)
 - Raising the non-overspill embankment crest by 2m to accommodate recommended maximum flood
 - (incl. raise concrete wall next to spillway to new crest level)
 - Slope Spillway channel to (right and left flank) to 1: 0.75
 - Line spillway using Amoflex / Geocell (erosion protection) and construct a new training wall
 - Construct a paved walkway on the dam crest
- (2) **0.9 Ha Site Establishment area north-east of the dam for site offices**
- (3) **Upgrade existing gravel road from R40 to dam embankment (<1km length < 4m wide) by adding imported gravel material**
- (4) **Alternative access road also to be used during construction through Casteel settlement to access spillway section on right flank of dam.** Short 350m section of access road would need to be created to access the spillway through old fields.

As per DWS no expansion or construction of a new facility is proposed.



Project Overview (Construction)

- Construction Period: **24 months**
- **DWS Chief Directorate: Construction Management** will undertake construction
- Skilled labour provided by DWS, unskilled sourced from local community
- No borrow pit. All materials for rehabilitation works be sourced from commercial quarry



DFFE SCREENING TOOL FINDINGS

Generated for activities close to/within a watercourse

SENSITIVITIES	CONFIRMED GEOGRAPHIC AREAS	STUDIES REQUIRED
Very High Sensitivity <ul style="list-style-type: none"> • Terrestrial Biodiversity • Aquatic Biodiversity • Very High Agriculture High Sensitivity <ul style="list-style-type: none"> • Civil Aviation Medium Sensitivity <ul style="list-style-type: none"> • Plant species • Animal species • Palaeontology Low Sensitivity <ul style="list-style-type: none"> • Archaeological and Cultural Heritage • Defence 	Protected Area Expansion Strategy Terrestrial CBA Aquatic CBA Wetlands FEPA Sub catchment Freshwater Ecosystem Priority area – quaternary catchment	Terrestrial Biodiversity Aquatic Biodiversity Visual Archaeological Palaeontological Hydrology Socio Economic Impact Assessment

SPECIALIST INVESTIGATIONS TO BE COMMISSIONED

Studies	Why?
Terrestrial Biodiversity	Indigenous vegetation onsite and protected species (Marula, Aloe Simii) Vegetation however show high level of disturbance
Aquatic Biodiversity	Presence of CVB wetland, dam and river

Superfluous Studies:

- **Heritage:** Did walkthrough no resources found on site (Heritage Exemption)
- **Palaeontological:** SAHRIS Map show insignificant no study required
- **Visual:** Works proposed at original dam, no expansion of new facility and impact will be temporary. Situated in dense rural settlement
- **Social Economic:** Positive increased safety for community and unskilled job opportunities. Some nuisance impacts (dust, noise, traffic) but will be temporary and situated in dense rural settlement next to busy R40 road.

- **DO DFFE AGREE WITH THE APPROACH?**

Questions?



Naledzi Environmental Consultants

15

Our Contact Details

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**Desmond Musetsho /
Marissa Botha**



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Way Forward

- Prepare, distribute and finalise the minutes of the meeting to DFFE;
- Commission specialist studies as agreed upon at pre-app
- Notify pre-identified I&APs of project and distribute project BID
- Allow I&APs 30-day registration and comment period on BID
- Conduct a public meeting at Casteel