



**BA PROCESS FOR CASTEEL DAM
SAFETY REHABILITATION PROJECT**

2ND Round of Public Engagement



AGENDA

1. Welcome and Introductions
2. Basic Assessment Process and PPP
3. Project Motivation
4. Project Description
5. Specialist Studies
6. Key Impacts
7. Key issues raised during 1st Round of engagements
8. Way Forward and Discussions




INTRODUCTIONS

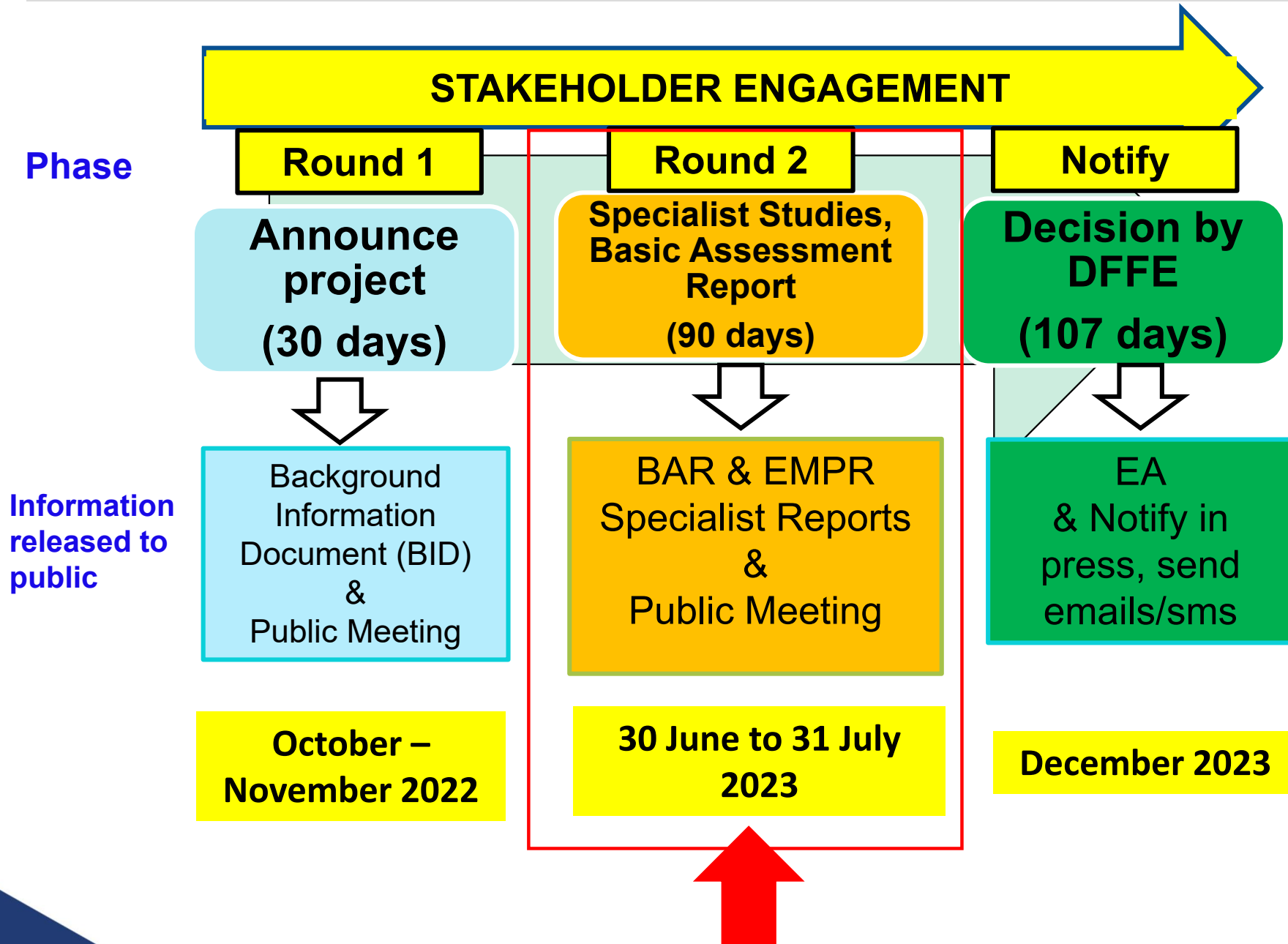
- **Naledzi Environmental Consultants (Pty) Ltd**
Role is to conduct the Basic Assessment (BA) process
To obtain environment authorisation to commission the project
- **Department of Water and Sanitation:**
Strategic Infrastructure Asset Management (SIAM)
Sub-directorate: Dam Safety Surveillance
Role to undertake the Casteel Dam Rehabilitation works.
- **Translator - Absalom Malope / Lauderick Selowe**



PURPOSE OF THE BA PROCESS

- Submit application for EA to DFFE.
 - Conduct BA Process in line with NEMA EIA Regulations 2014/2017.
 - Inform the DFFE and public of the project:
 - Environmental impacts (negative & positive); and
 - Helps to develop mitigation measures to manage the negative impacts.
 - **Environmental impacts** are offered in a **Draft Basic Assessment Report (BAR)**.
 - **Management measures** to be observed are recommended in the **Environmental Management Programme (EMPR)**.
 - The reports draw from field surveys, **specialist studies** and **public inputs** which is submitted to DFFE for decision making.
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BA PROCESS



STATUS QUO OF BA PROCESS

- Notified public of the project from 17 October to 15 November 2022.
- Conducted 1st round of public meetings on 25 & 26 October 2022.
- Application for EA submitted to DFFE on 28 June 2023.
 - **DFFE Project Reference no. 14/12/16/3/3/1/2789**
- Draft BAR available for public review now until 31 July 2023.



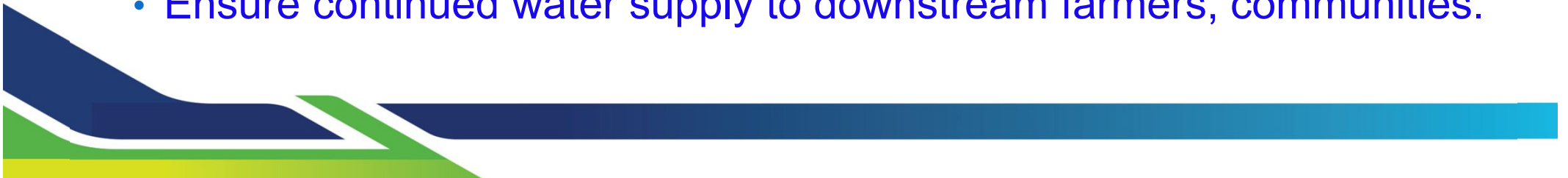
PURPOSE OF THE THIS MEETING

1. Confirm the final project details
2. Discuss key identified impacts and management measures
3. Give feedback on key issues raised at 1st public meeting
4. To record any further comments for inclusion in the Final BAR & EMPR to DFFE



PROJECT MOTIVATION

- DWS responsible for operation and maintenance of state dams.
- Casteel Dam have safety risks that may cause dam failure:
 - Steep embankment that may fail during floods
 - Dam wall is infested with termites
 - Outlet works is defective (temporary siphon)
 - Spillway is freely draining creating a large donga
- DWS will repair the defects to:
 - Improve the safety of Casteel Dam to ensure compliance with NWA Dam Safety Regulations (GNR 132)
 - Prolong the structure's lifespan
 - Ensure continued water supply to downstream farmers, communities.



SAFETY RISKS

- 2001 DWS installed an emergency siphon pipe to provide downstream communities with drinking water. Siphon defective. Now temporary pipe releasing water.
- Large Donga
- Termite infestation
- Rill erosion along banks



PROJECT DESCRIPTION

- 1) Rehabilitate main embankment, spillway, outlet works.
- 2) Rehabilitate donga erosion with rubble masonry, 1,2m concrete barrier along donga.
- 3) Build a Pedestrian Bridge over spillway
- 4) Expand concrete intake tower bridge
- 5) Upgrade and realign existing access road to the dam
- 6) Establish temporary site office area
- 7) Create 2nd construction access road to spillway section of the dam.



Dam capacity will NOT be expanded/increased



PROJECT DESCRIPTION: DOWNSTREAM WATER USERS

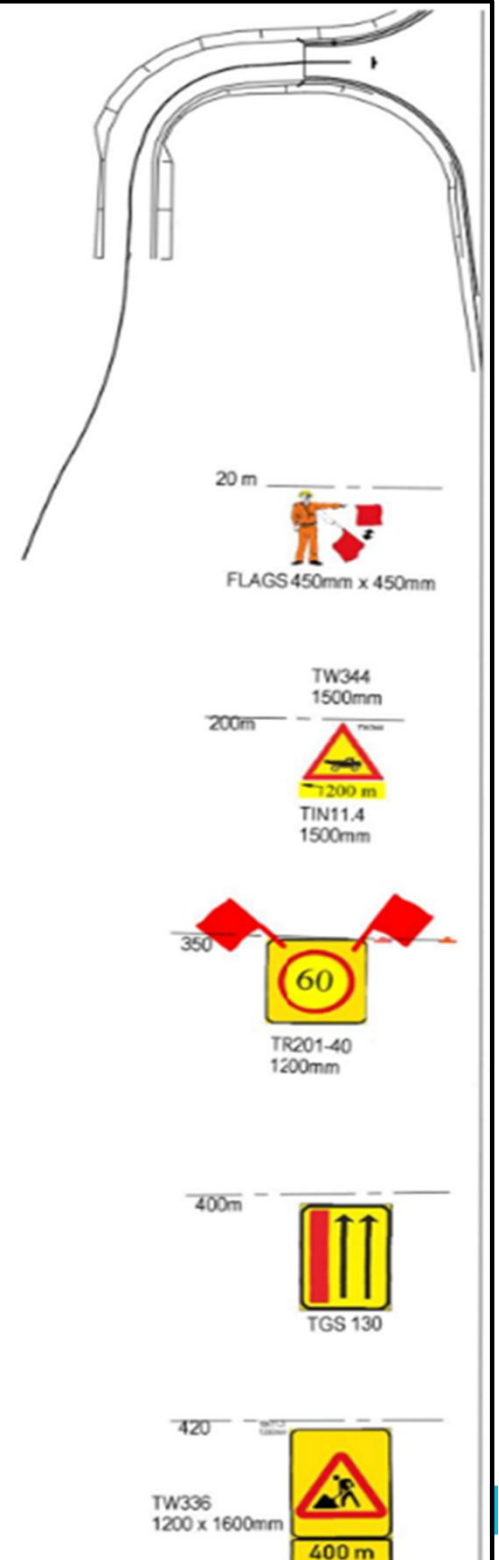


- A pipe is currently releasing water downstream.
- During repairs, existing outlet pipes @ dam will be available to release water downstream.
- Once repairs are done, water will continue to be released through the new outlet works as usual.

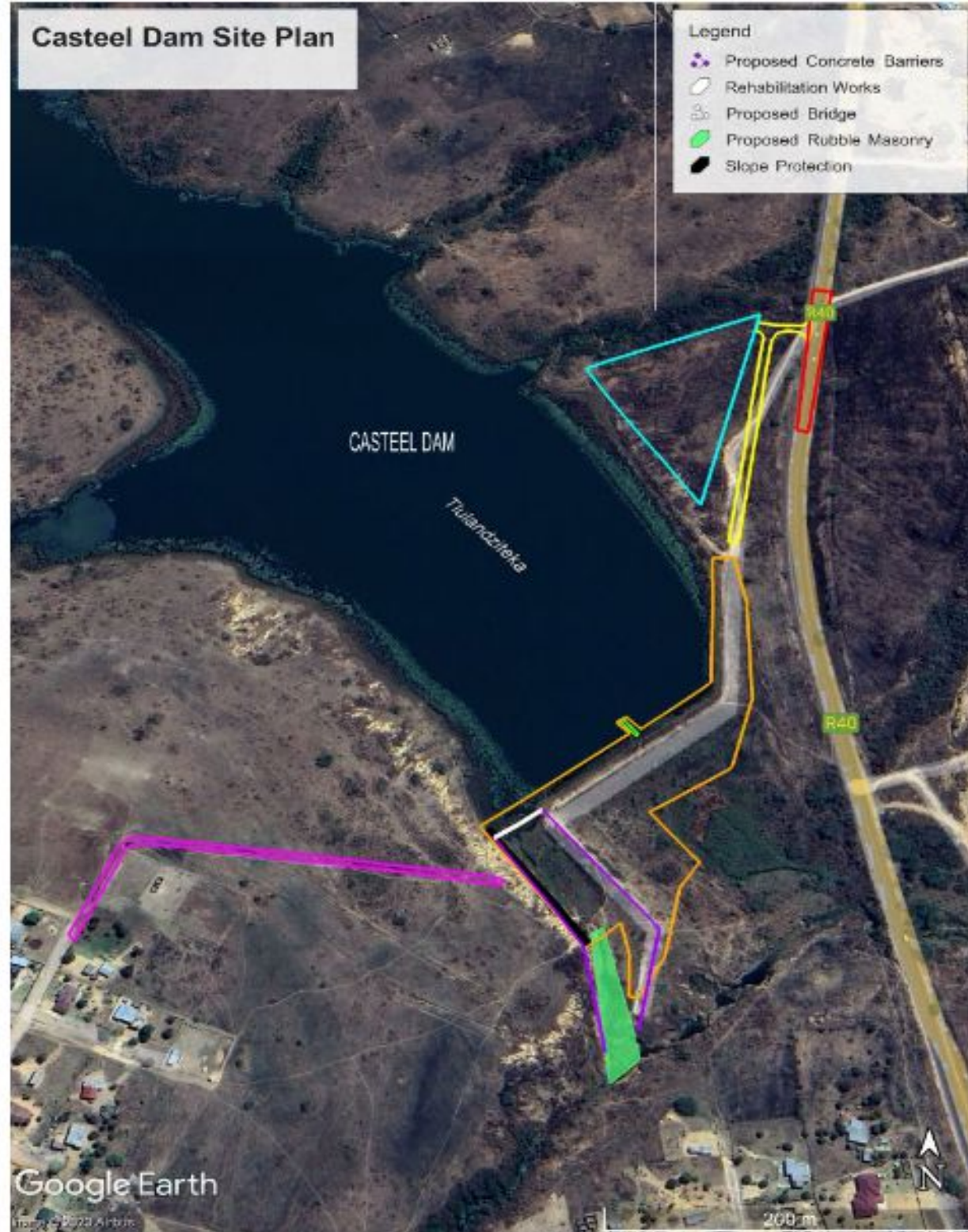


PROJECT DESCRIPTION: CONSTRUCTION MATERIAL

- Sourced from a licensed commercial quarry i.e., Agin Court.
- Hauled to site using 6 Ton trucks within the first 3 months of the construction period.
- Slow turning construction vehicles may pose a safety risk to road users.
- Temporary construction signs and flagmen will be placed along the R40 at the Casteel Dam access road to reduce traffic speeds to 60km/hr.



Casteel Dam Site Plan



- Legend**
- Proposed Concrete Barriers
 - Rehabilitation Works
 - Proposed Bridge
 - Proposed Rubble Masonry
 - Slope Protection

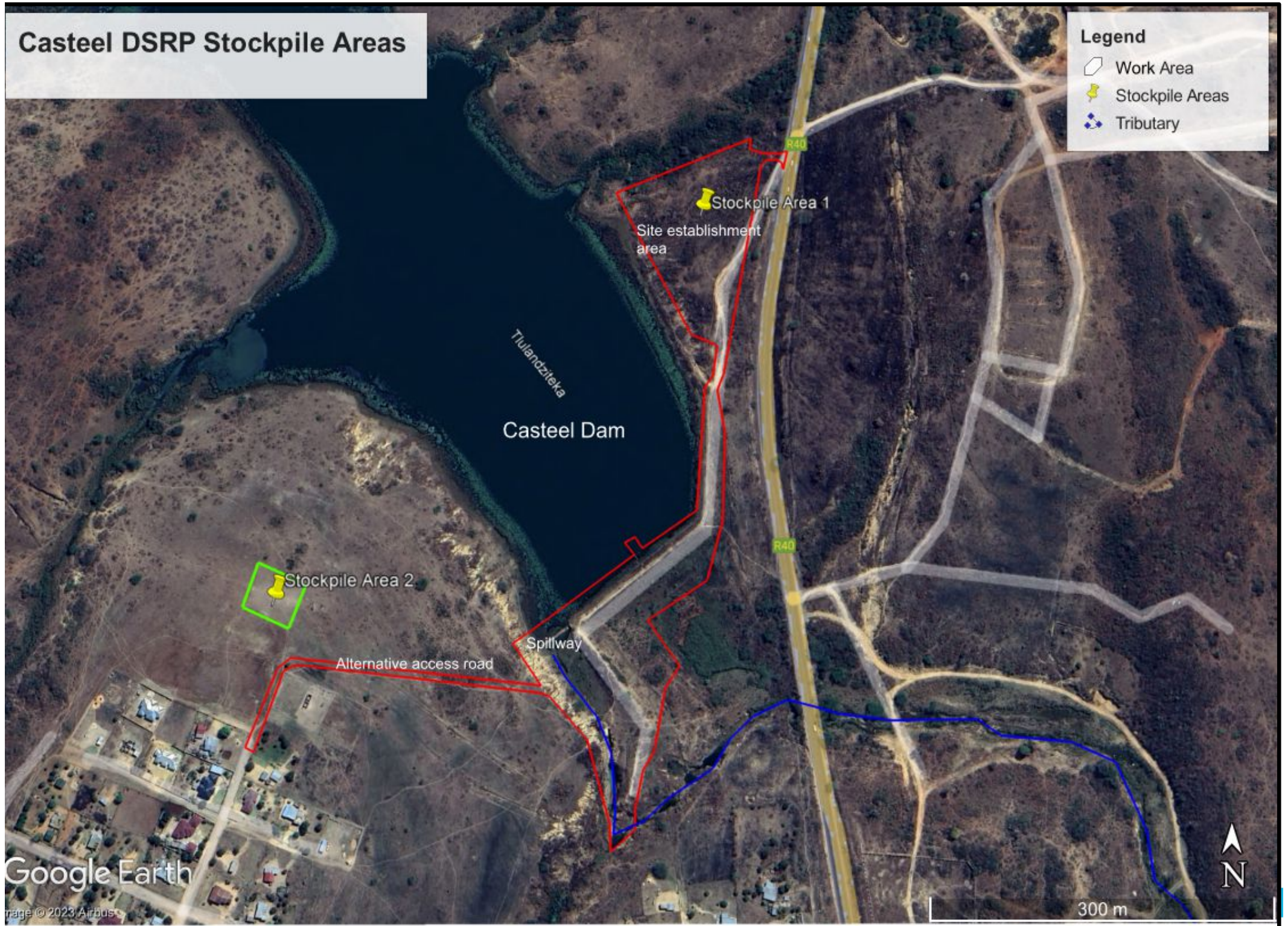
- LEGEND**
- Temporary signs & flagman on R40
 - Proposed temporary site area.
 - Proposed rehabilitation works.
 - Proposed slope protection
 - Intake Tower expansion
 - R40/Casteel Dam access road realignment
 - Proposed alternative access road.
 - Proposed Pedestrian Bridge
 - Proposed Rubble Masonry
 - Proposed Concrete Barriers

Figure 4-1: Site Plan showing the location of the proposed rehabilitation works.

Casteel DSRP Stockpile Areas

Legend

- Work Area
- Stockpile Areas
- Tributary



Google Earth

Image © 2023 Airbus

300 m

WHO WILL DO THE WORK? EMPLOYMENT?

- DWS Chief Directorate: Construction Management.
- Over 24-month construction period.
- Currently the number of employment opportunities are unknown and will be confirmed during the tender stage.
- DWS to use own skilled labour.
- Unskilled labour will be sourced from community.
- Project Steering Committee (PSC) will be established to select/identify local labour from the represented communities.



KEY PROJECT IMPACTS INVESTIGATED

Specialist Study	Findings	Impact
Heritage	<p>No heritage sites were recorded.</p> <p>Community to confirm if any rituals undertaken at site? When?</p>	None
Terrestrial	<ul style="list-style-type: none"> The site is in a degraded state. 1 national tree and 2 provincially protected plant species recorded. Marula trees will be removed under permit from DFFE. Provincially protected plant species will be transplanted into adjacent habitat/ used in landscaping/re-vegetation at construction site. 	Low
Aquatic	<ul style="list-style-type: none"> Destruction of small portion of CVB Wetland downstream of dam. Rehabilitation works will not have a significant further impact on CVB. Function of the CVB can be restored by rehabilitating the disturbed area and controlling the spread of alien invasive vegetation. The minimum flows to be released from the dam during normal/high rainfall and drought periods are 10-32 litres/second and 8-16 litres/second, respectively. 	Mod-Low
Traffic	<ul style="list-style-type: none"> Road network will operate at acceptable level with added construction traffic. Slow construction vehicles enter/existing R40 at Casteel Dam may pose safety hazard. DWS to implement temporary construction signage and flagmen at the dam access intersection. Safe drop off and collection areas at the construction site for daily commuters on public transport must be provided. 	Low

OTHER IMPACTS

- Very low altered hydrology in river; water will be released through pipe downstream = Downstream users not affected.
- Nuisance dust and noise impact at nearby houses and along access route to spillway. Limit activities to daytime, water spraying along haul roads.
- Temporary restriction of fishing and grazing in works area at Casteel Dam. But other areas continue to be available.
- Create employment for local community, expenditure in area. PSC to be establish to select local labour.
- Ensure continued water supply to downstream users.



KEY ISSUES RAISED DURING 1ST ROUND OF MEETINGS

Issues Raised	DWS / Naledzi Response
<p>Dam must be fenced off, security controlled</p>	<p>DWS is not in the tradition to fence off its dams and would restrict community access to the dam i.e., fishing rights, recreational use, thoroughfare etc.</p> <p>Since this process will require time and independent consultation it is requested that this issue be treated outside the BA process to avoid the creation of delays. A comprehensive response to this request will be provided by DWS at the beginning of the tender stage.</p>
<p>Dam upstream supplying water to Casteel Dam. Did DWS evaluate this dam, and will it be rehabilitated?</p>	<p>Th dam is not registered with DWS. DWS does not have a legal mandate to spend funds on this structure, therefore, its rehabilitation will not form part of the rehabilitation of Casteel Dam.</p>
<p>How will rehabilitation work impact downstream users?</p>	<p>Water supply will not be interrupted and will continue to be released through existing temporary pipes.</p>
<p>Consider community beliefs/rituals performed at the dam.</p>	<p>Specialist did not identify any. Please confirm if rituals are performed, when and by whom?</p>
<p>Available job opportunities from project?</p>	<p>To be confirmed during tender stage.</p>
<p>What is the acceptable distance to be upheld between the residential stands and the dam?</p>	<p>At least 70 meters above the 1: 100-year or 1: 200-year flood line of the dam.</p>





Casteel Dam Safety Rehabilitation Project Floodline and Inundation Map



Author : A Tsitsa
Date : 10 May 2023
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Basemap : Google Satellite



WHAT IS NEXT?

Draft BAR has been released for 30-DAYS comment.

❖ **BAR available at:**

- Thusong Centre
- Tribal Offices of Moreipuso and Setlhare
- Faith Mission Church at Dingley Dale
- Naledzi website www.naledzi.co.za/publicdocuments

❖ **Comment can be submitted until 31 July 2023.**

❖ Comments Sheets available @ meeting/public venues.

Naledzi will incorporate and respond to public submissions.

Naledzi will submit Final BAR to DFFE for decision-making.

I&APs will be notified when EA decision is received. Casteel

SUBMIT YOUR COMMENTS TO:

Naledzi Environmental Consultants (Pty) Ltd

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ANY QUESTIONS ?

