



**water & sanitation**

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA

# COORDINATION AND DEVELOPMENT OF POTENTIAL TYPES OF RENEWABLE ENERGY POWER PLANTS, CENTRAL OPERATIONS

Presented by:  
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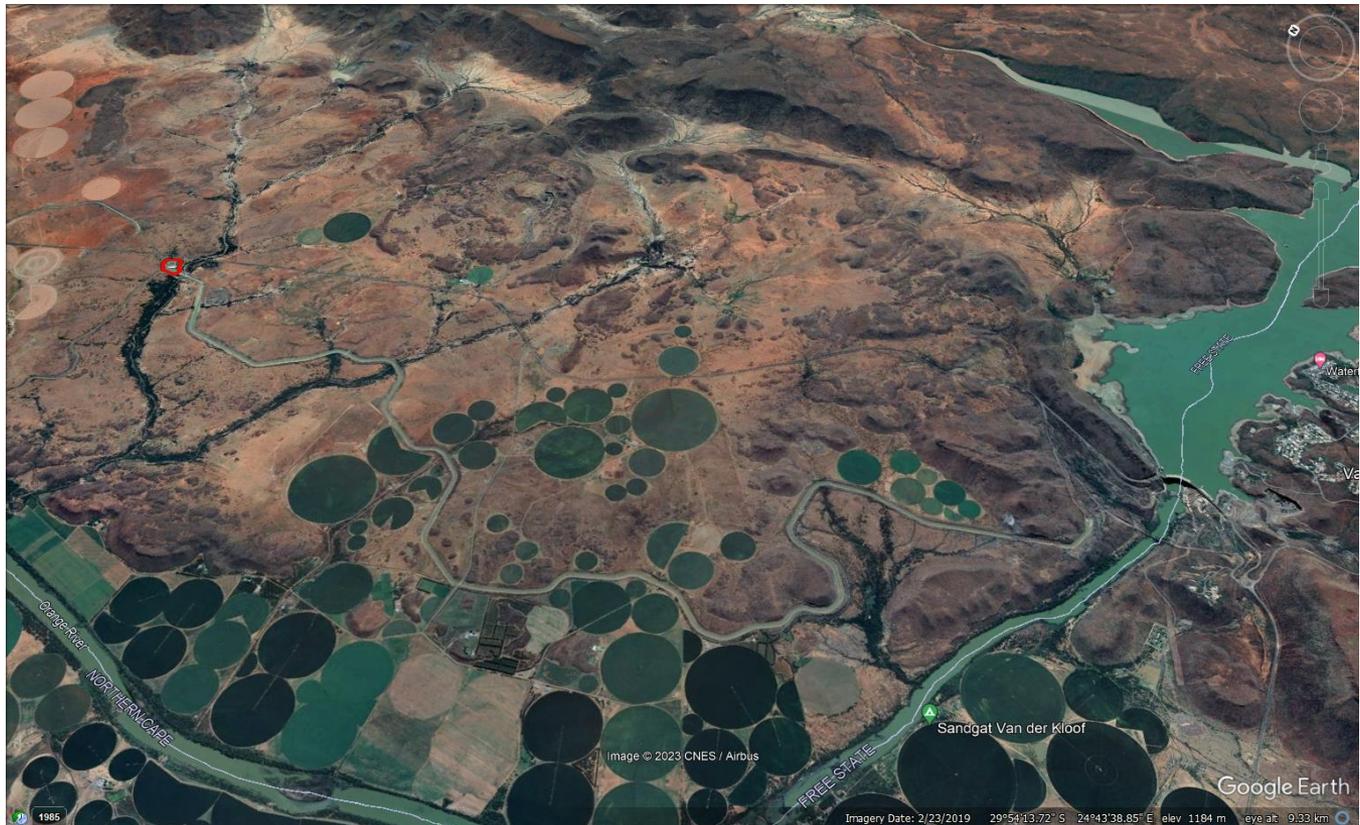
**30/03/2023**

## AGENDA

- **AREAS OF INTEREST**
  - Scheiding Pump Station (FS, Vanderkloof)
  - Tienfontein, (FS, Wepener)
  - Nottingham (NC, Douglas)
  - Zaaihoek (KZN/MP, Wakkerstroom)
  - VRESAP (GP/MP, Vaal Marina)
  - Grootdraai and Tutuka (MP, Standarton)
  - Grootfontein (MP, Secunda)
  - KWASAP / Rietfontein (MP, Secunda)
  - Heyshope (MP, Piet Retief)
  - Geelhoutboom (MP, Piet Retief)
  - Jericho (MP, Amsterdam)
- **QUESTIONS**

## SCHEIDING PUMP STATION

- **Scheiding Pump Station is located on the following coordinates 29.902837 s and 24.701852 e.**

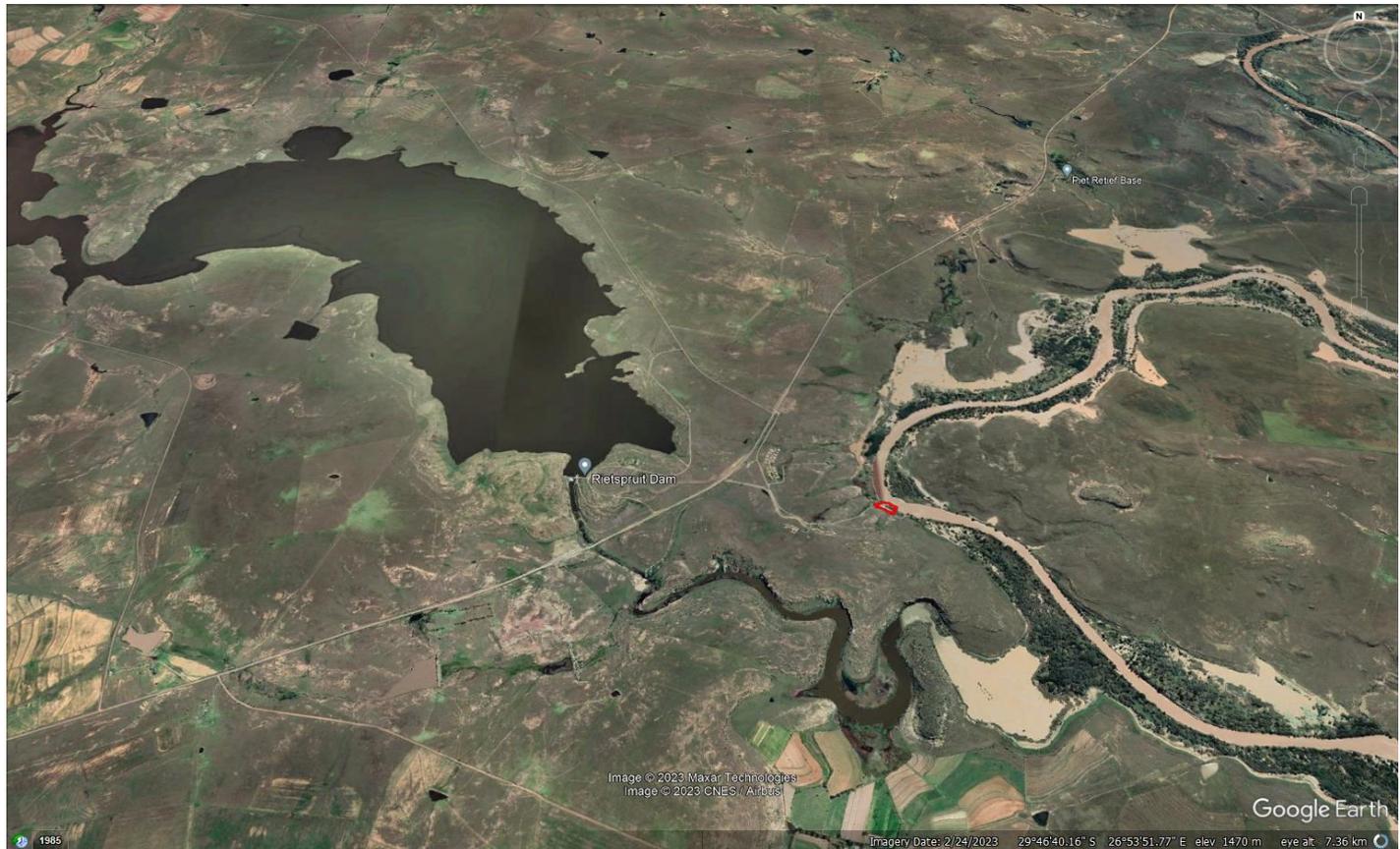


## SCHEIDING PUMP STATION

- **Max Delivery Capacity (m<sup>3</sup>/s) – 19 m<sup>3</sup>/s with Seven (7) Pumps.**
- **Electricity NMD: 10,0 MVA**
- **Receives water from Vanderkloof Dam, via a canal. The dam a capacity of 3,236 million cubic metres and a surface area of 133.4 square kilometres**

## TIENFONTEIN PUMP STATION

- Tienfontein Pump Station is located on the following coordinates 29.783946 s and 26.910288 e.



## TIENFONTEIN PUMP STATION

- **Max Delivery Capacity (m<sup>3</sup>/s) – 6,0 (4,0m<sup>3</sup>/s due to canal capacity) with six (6) Pumps**
- **Electricity NMD: 3,65 MVA**
- **Receive water from the Caledon River, pump the water into Raising Main, up to canal running from Tienfontein to Kalkfontein Dam**

## NOTTINGHAM PUMP STATION

- Nottingham Pump Station is located on the following coordinates 29.161031 s and 23.697609 e.

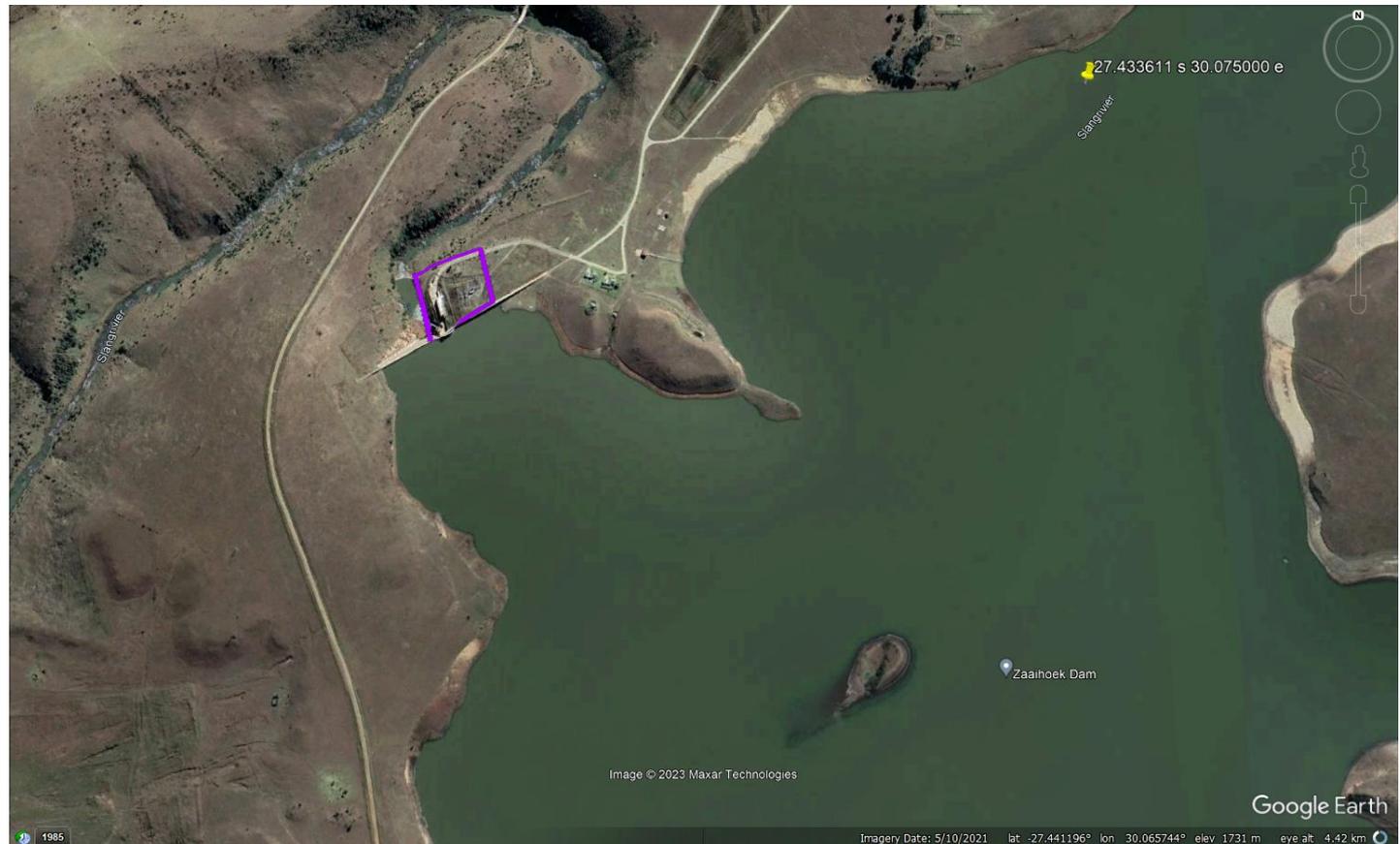


## NOTTINGHAM PUMP STATION

- **Max Delivery Capacity (m<sup>3</sup>/s) – 10,10 m<sup>3</sup>/s with ten (10) Pumps.**
- **Electricity NMD: 7,2 MVA**
- **Receive water from the Orange River, pump into Raising main, then split into two pipes, then water run into canal running past Douglas into Douglas Weir**

## ZAAIHOEK PUMP STATION

- **Zaaihoek Pump Station is located on the following coordinates 27.433611 s and 30.075000 e.**



## ZAAIHOEK PUMP STATION

- **Max Delivery Capacity (m<sup>3</sup>/s) – 4,4 m<sup>3</sup>/s with four (4) Pumps.**
- **Electricity NMD: 7.0 MVA**
- **Pumps Water from Zaaihoek Dam to Majuba Power Station and Grootdraai Dam, which has a capacity of 185,000,000 m<sup>3</sup> at FSL and covers approximately surface area of 1 244.6 ha.**

## VRESAP PUMP STATION

- **VRESAP Pump Station is located on the following coordinates 26.877425 s and 28.252023 e.**



## VRESAP PUMP STATION

- **Low lift and high lift pump station abstracting water from Vaal Dam and pumping via a rising main to Mpumalanga Area. Capacity of Lower Lift (m<sup>3</sup>/s) – 8,1 m<sup>3</sup>/s with six (6) Pumps and High Lift (m<sup>3</sup>/s) – 7,2 m<sup>3</sup>/s with four (4) Pumps**
- **Electricity NMD: 28,85 MVA**
- **Pumps Water from Vaal Dam to Vlakfontein Canal, which has a capacity of 2,609,799,000 m<sup>3</sup> at FSL and covers approximately surface area 320 square kilometres.**

## GROOTDRAAI AND TUTUKA PUMP STATION

- **Grootdraai and Tutuka Pump Station is located on the following coordinates 26.916890 s and 29.295545 e.**

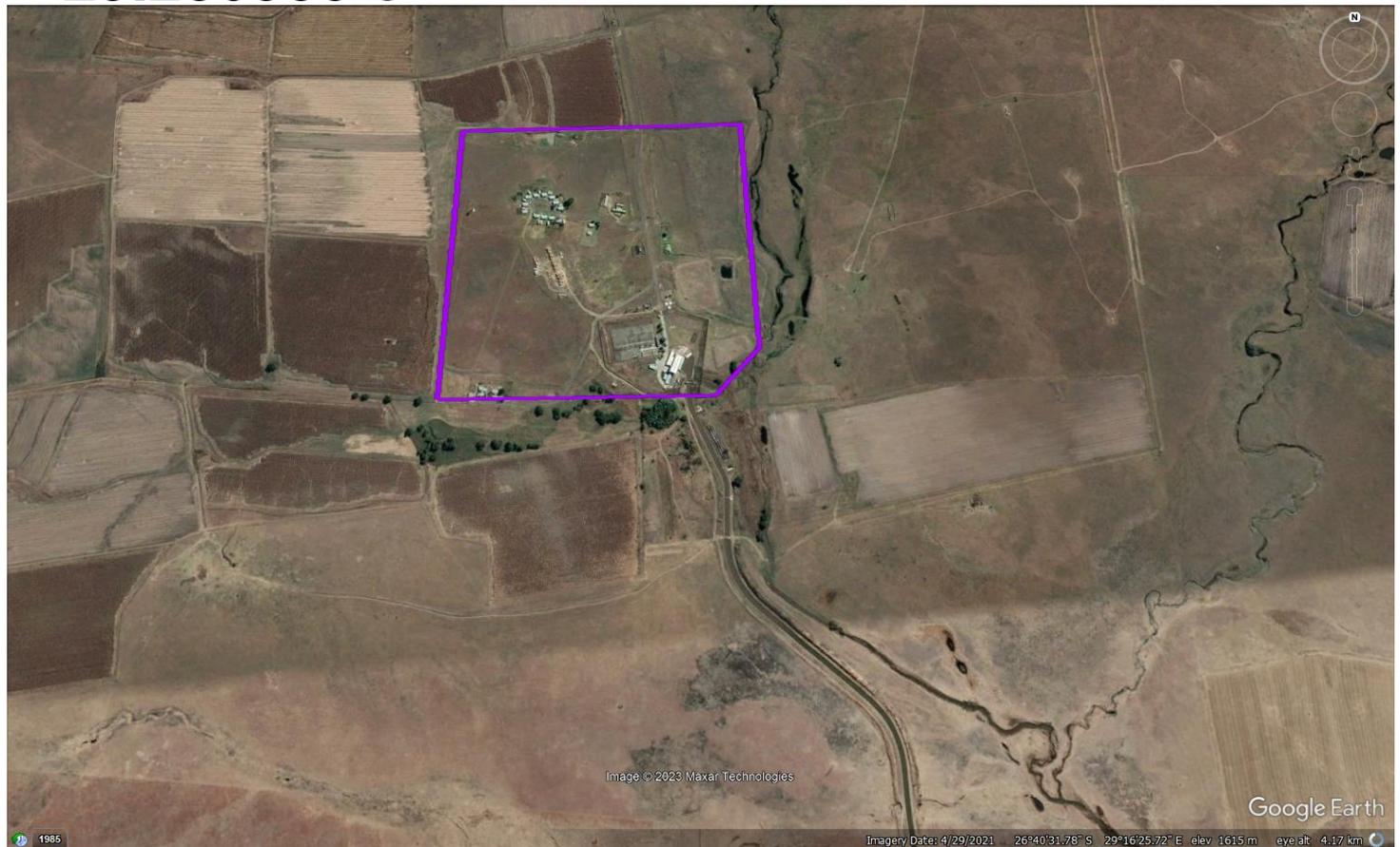


## GROOTDRAAI AND TUTUKA PUMP STATION

- **Max Delivery Capacity (m<sup>3</sup>/s) – 14,8 m<sup>3</sup>/s with eight (8) Pumps.**
- **Electricity NMD: 9,7 MVA**
- **Pumps Water from Grootdraai Dam to Tutuka Power Station and Grootfontein Pump Station. The dam has a capacity of 350,00 million cubic metres and a surface area of 5 500 ha.**

## GROOTFONTEIN PUMP STATION

- **Grootfontein Pump Station is located on the following coordinates 26.679122 s and 29.280935 e**



## GROOTFONTEIN PUMP STATION

- **Max Delivery Capacity (m<sup>3</sup>/s) – 5,5 m<sup>3</sup>/s with five (5) Pumps.**
- **Electricity NMD: 6,0 MVA**
- **Pumps Water from Grootdraai Dam via Vlakfontein Canal to SASOL Secunda. The dam has a capacity of 350,00 million cubic metres and a surface area of 5 500 ha.**

## KWASAP/RIETFONTEIN PUMP STATION

- **KWASAP/Rietfontein Pump Station is located on the following coordinates 26.356528 s and 29.214116 e.**



## KWASAP/RIETFontein PUMP STATION

- **Max Delivery Capacity (m<sup>3</sup>/s) – 7,483 m<sup>3</sup>/s with nine (9) Pumps.**
- **Electricity NMD: 3,2 MVA**
- **Pumps Water from Trichardsfontein Dam to Matla Power Station and other PS (Kendal, Kriel, Kusile and Matla 1). The dam has a capacity of 15,2 million cubic metres and a surface area of 245,9 ha.**

## HEYSHOPE PUMP STATION

- Heyshope Pump Station is located on the following coordinates 26.994722 s and 30.524722 e.



## HEYSHOPE PUMP STATION

- **Max Delivery Capacity (m<sup>3</sup>/s) – 6,8 m<sup>3</sup>/s with four (4) Pumps.**
- **Electricity NMD: 10,0 MVA**
- **Pumps Water from Heyshope Dam to Geelhoutboom Pump Station. The dam has a capacity of 445,00 million cubic metres and a surface area of 5 023.8 ha.**

## GEELHOUTBOOM PUMP STATION

- **Geelhoutboom Pump Station is located on the following coordinates 26.919722 and 30.329444 e.**



## GEELHOUTBOOM PUMP STATION

- **Max Delivery Capacity (m<sup>3</sup>/s) – 6,56 m<sup>3</sup>/s with four (4) Pumps.**
- **Electricity NMD: 18,3 MVA**
- **Pumps Water from Heyshope Dam to Nooitgedatch Dam and Grootdraai Dam. The dam has a capacity of 445,00 million cubic metres and a surface area of 5 023.8 ha.**

## JERICHO PUMP STATION

- Jericho Pump Station is located on the following coordinates  $26.657107^{\circ}$  s and  $30.483694^{\circ}$  e.



## JERICHO PUMP STATION

- **Max Delivery Capacity (m<sup>3</sup>/s) – 5,52 m<sup>3</sup>/s with six (6) Pumps.**
- **Electricity NMD: 15,0 MVA**
- **Pumps Water from Jericho Dam to Kendal, Kriel, Kusile and Matla 1 Pump Station. The dam has a capacity of 59,30 million cubic metres and a surface area of 982,5 ha.**



**THANK YOU**