

ANNEXURE C3.2: SCOPE OF WORK FOR RFQ: -10416528.

GRADING AND MAINTENANCE OF GRAVEL ACCESS ROAD THROUGH RW FARM.

1. PURPOSE

Rand Water - Environmental Management Services maintains the gravel access road through Rand Water Farm and currently requires quotations from Service Providers with previous experience of road grading and construction to safely undertake the maintenance and grading of the gravel access road.

2. SPECIFICATION

The entire gravel road linking the two tar roads is to be graded. Portions of the gravel road need to be closed off during construction and this is to be undertaken in accordance with legislation providing both the necessary warning signage, barricading and staff to control and direct motorists safely through the construction area for the duration of the work.

Two hundred cubic meters of old ash material can be collected approximately 3.5Km from site and brought to site and used as filling in five different areas as indicated on the site sketch plan. ($5 \times 40\text{m}^3 = 200\text{m}^3$) The appointed Service Provider will be required to provide the necessary equipment and staff to load and transport the old ash to site. Soil / gravel currently on the verges of the gravel road is to be graded onto the road and used as fill to level the road and create the desired road camber in order to remove storm water off the road and reduce any pooling of water. Where surrounding soil levels are higher than the road and water is likely to cross the road these soil verges can be used to channel water down the side of the road to the next water off shoot. Care must be taken so as not to grade deeper than what is required to create the desired road camber, causing disturbance to the existing compacted road base.

A v-drain is to be created along either side of the gravel access road where ground water is currently surfacing. The ground water is to be contained within the v-drain and channelled down the side of the road and directed to the next available water offshoot. The side of the v-drain that borders the road is to be sufficiently low enough to allow surface stormwater runoff to enter the v-drain and to be channelled to the next available water off shoot.

The existing water off shoots are to be graded to aid water in flowing off the gravel road and not returning to cross the road again at a different point. The water off shoots is to be opened a minimum of 30m in length and must gradually get deeper to allow for some silting and should be approximately 500mm deep / lower than the road surface at its furthest point from the road. The mouths of the water off shoots are to be neatly raked to ensure that water running down the verges of the road exit the road at the next available water off shoot and do not continue to run down the verge of the road or cross the road again.

Once the road has been graded, the road is to be watered with a water cart or water truck and then compacted with a minimum of a 3-tonne compactor to bind the materials graded onto the road. The appointed Service Provider is required to hold a progress meeting with EMS management once the road grading and compaction is nearing completion prior to having the plant removed from site.

The existing concrete deflection berms as well as the mountable kerbing that edges the paving of the bell mouths should not be damaged with the grading and compaction of the road and the level changes approaching and leaving the berms and bell mouths is to be gentle so as not to pose a danger to motorists using this access road.

All concrete, tar and paved areas along the gravel access road are to be swept clear of any surface soils once grading and compaction is completed, and all concrete bollards are to be returned and securely compacted into position adjacent to the deflection berms if removed for grading purposes.

On the Eastern side of Kromvlei road opposite the gravel access road is a sand road that leads to the old railway bridge below the R59 freeway and water travelling down this road crosses Kromvlei road and travels down the gravel access road. To reduce the amount of water travelling down the gravel access road a diagonal berm has been created to re-direct the water off this road into the adjoining veld area before it crosses Kromvlei road. This diagonal deflection berm / off-shoot / gully is to be regraded to ensure that water can be diverted into the veld away from the gravel access road.

The appointed Service Provider will be required to provide Rand Water - Environmental Management Services with their SHE file complete with all appointments and copies of staff

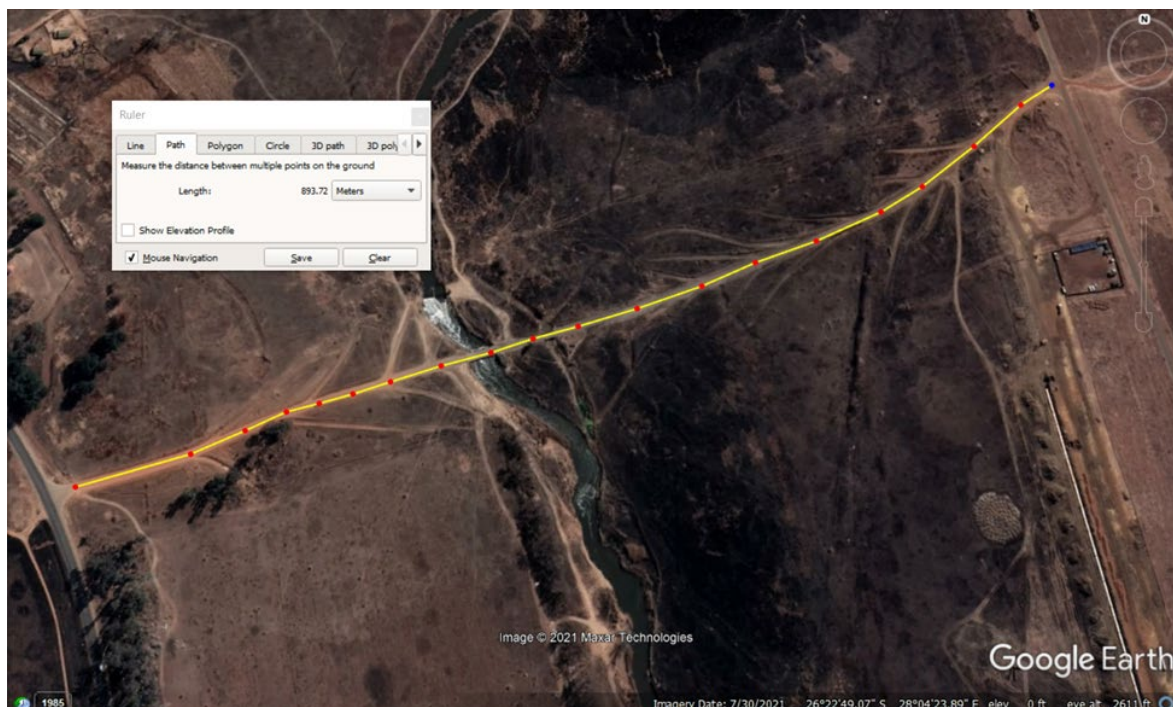
Identity, drivers' licences and operator certificates. Once the SHE file has been approved all staff undertaking work on site will be required to attend a safety induction prior to commencing on site.

3. OBJECTIVES OF THE WORK.

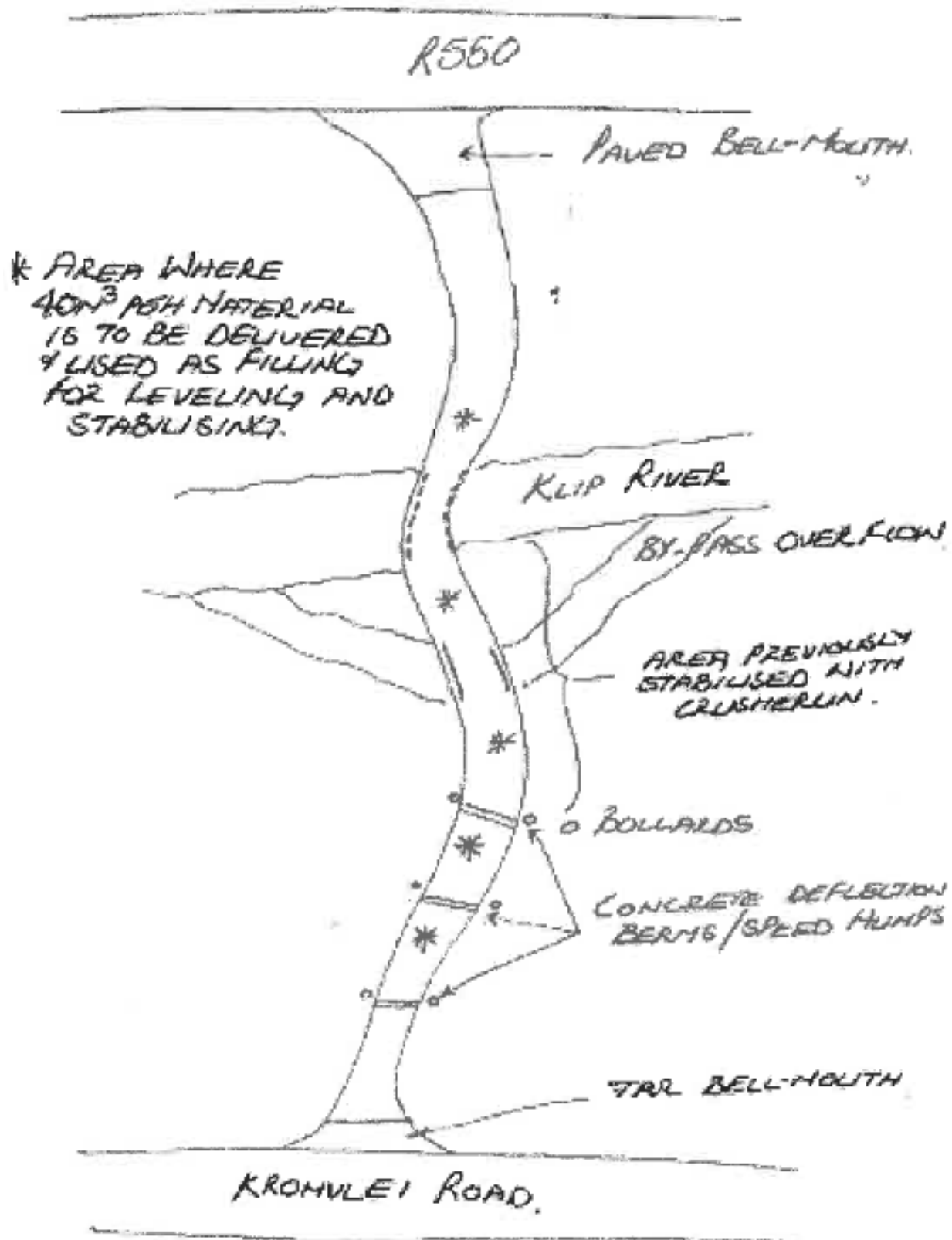
- a) To safely grade and maintain the gravel access road through Rand Water farm.
- b) To collect and deliver 200m³ old ash from the redundant railway line adjacent to the Rand Water shooting range and to use this ash as a filler material which is to be mixed with soil on the verges of the gravel access road for levelling and stabilisation.
- c) To reduce the need for Rand Water staff travelling between Vereeniging or Zuikerbosh to either Central Depot or Zwartkopjes and vice versa from taking alternative longer routes to avoid the gravel access road.
- d) To reduce the risks of vehicles being damaged or getting stuck on the gravel access road.
- e) To ensure that runoff water on the eastern side of Kromvlei is re-directed into the veld and that any runoff stormwater that crosses Kromvlei road is able to do so without hinderance and that this stormwater is not directed to travel down the gravel access road.

GRADING AND MAINTENANCE OF GRAVEL ACCESS ROAD.

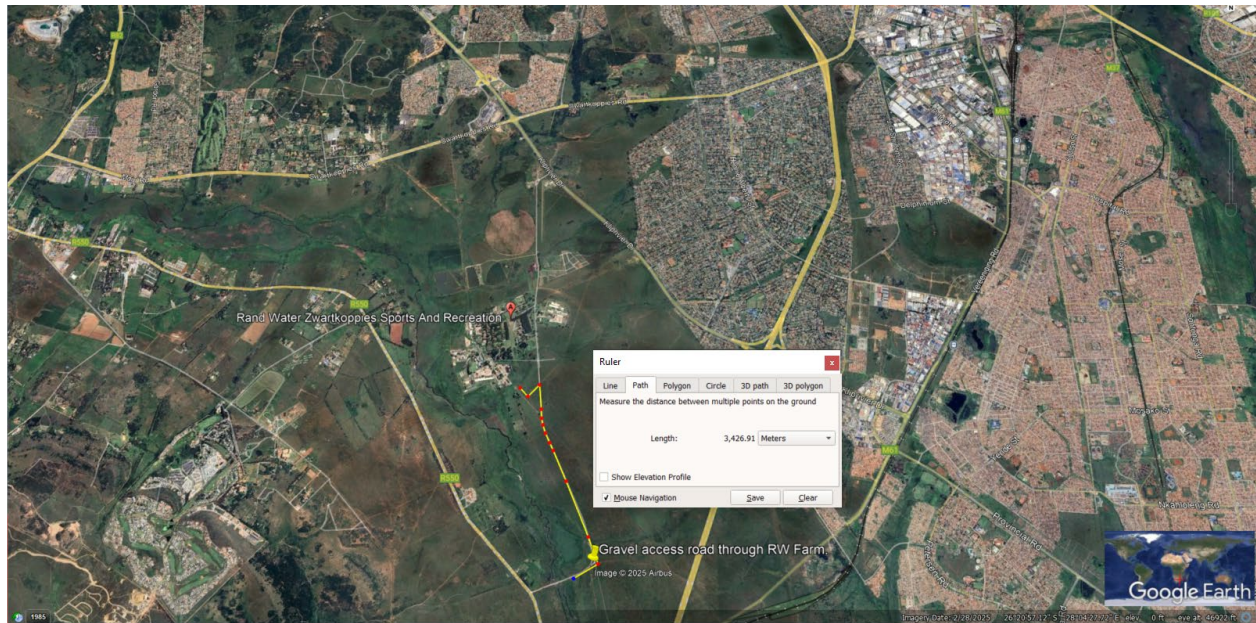
Google earth measurement, of the length of the gravel access road through Rand Water Farm.



Site sketch plan.



Google Earth indication of where the old ash can be collected. (Approximately 3.5Km.)



No.	Operational Area	Delivery Location
1.	Environmental Management Services - Nursery	EMS Corporate offices - 143 IR Kromvlei Road, Johannesburg. 26°22'40.49"S 28°04'33.39"E