

NOVEMBER 2016



**ASSESSMENT REPORT ON REMAINDER OF PORTION 132 FARM
DRIEFONTEIN 87-IR (PRIMROSE)**

JOB 150

Prepared By:

Mshandukani Geotechnical Consultant

Mashudu Shandukani (Pr.Nat.Sci) Pr. Reg No: 400309/12

Project Manager (Geotechnical & Dolomite section)

Tel: 012 656 0527 Cell: 072 570 9181

Email: info@mshandukani.co.za

Address: 6763 Seedcracker Str, Unit B12 Heuwelsig Office Park

Celtisridge, Centurion, 0130

Prepared For:

Attention: Pilusa Mashamaite

Ekurhuleni Metropolitan Municipality

Cnr Margaret Ave & Kempton Road

Kempton Park

1620

Email: pilusa.mashamaite@ekurhuleni.gov.za



CONTENTS

PAGE

1.	BACKGROUND AND SITE DESCRIPTION	3
2.	SITE INSPECTION	3
3.	ASSESSMENT	4
4.	RECOMMENDATIONS	5

APPENICES

FIGURES

FIGURE 1: LOCALITY MAP

FIGURE 2: REGIONAL GEOLOGY AND GEOHYDROLOGY MAP

FIGURE 3: SINKHOLE POSITION AND WET SERVICES MAP

1. BACKGROUND AND SITE DESCRIPTION

Possible sinkhole development located at remainder of portion 132 farm Driefontein 87-IR was reported to Mr M Letsosa of Ekurhuleni Metropolitan Municipality (EMM). Mshandukani Holdings was instructed to conduct an on-site inspection to determine the severity and possible cause of the problem and to recommend necessary action to be taken. The position of the affected area was recorded by using a handheld GPS and is given below using the WGS84 (South African) co-ordinate system.

Address	X	Y
Main Reef road, Remainder of portion 132 farm Driefontein 87-IR, Primrose	28.164021	-26.192780 S

The available geological information 1:250 000 geological map (2628 EAST RAND) indicates that the stand is underlain by quartzite and conglomerate of the Johannesburg Subgroup of the Central Rand Group of the Witwatersrand Supergroup (Non-dolomitic) (Fig 2).

2. SITE INSPECTION

A site inspection was conducted on 11 November 2016 by J Shivambu. The investigation was done in the presence of the community leader who resides in the area. The area was inspected in order to determine the cause and extent of the problem so that appropriate recommendations for further action could be made.

The following was observed (refer the Photographs)

- A big hole occurred in the middle of the yard very close to the shack.
- The hole is 0 m away from the shack and is approximately 7m wide and approximately 5m deep.
- No municipality wet services running along where the sinkhole occurred was observed.
- No current leaking of EMM wet services were observed during investigation.



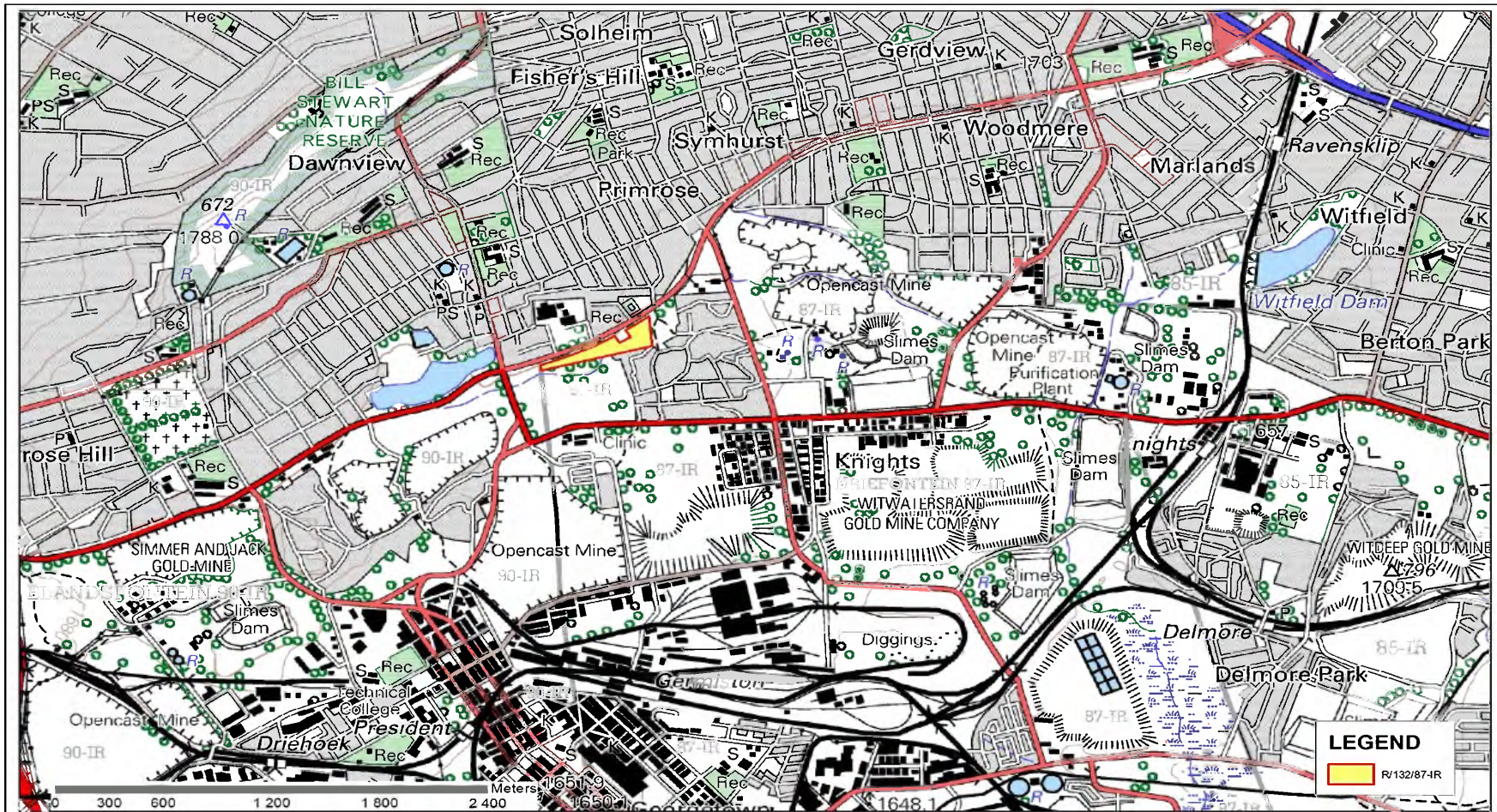
3. ASSESSMENT

From the investigations done, the area is an informal settlement and there are no municipal wet services running through where the sinkhole occurred. The hole could be due to old mine shafts below the ground. The sinkhole was barricaded.



4. RECOMMENDATIONS

- The area is non-dolomitic and it was previously used as mine shaft, therefore the DMRS cannot react on this matter.
- The municipal's Human Settlement department should vacate the residents as the area is unsafe.
- It is recommended that the Department of Mineral Resources and/or Council of Geoscience explore the extent of the hole and backfill if possible.
- If possible the Department of Mineral resources should investigate the old shafts around the area if they were rehabilitated properly and advise accordingly.



PROJECT: THE APPOINTMENT OF DOLOMITE SPECIALIST CONSULTANTS TO EKURHULENI METROPOLITAN MUNICIPALITY ON AN "AS AND WHEN REQUIRED" BASIS WITH ALL DOLOMITE RISK MANAGEMENT RELATED SPACE, INVESTIGATIONS, SUPERVISION ON REHABILITATION OF SINKHOLES AND REMEDIAL WORK.

PS-CP-53-2013



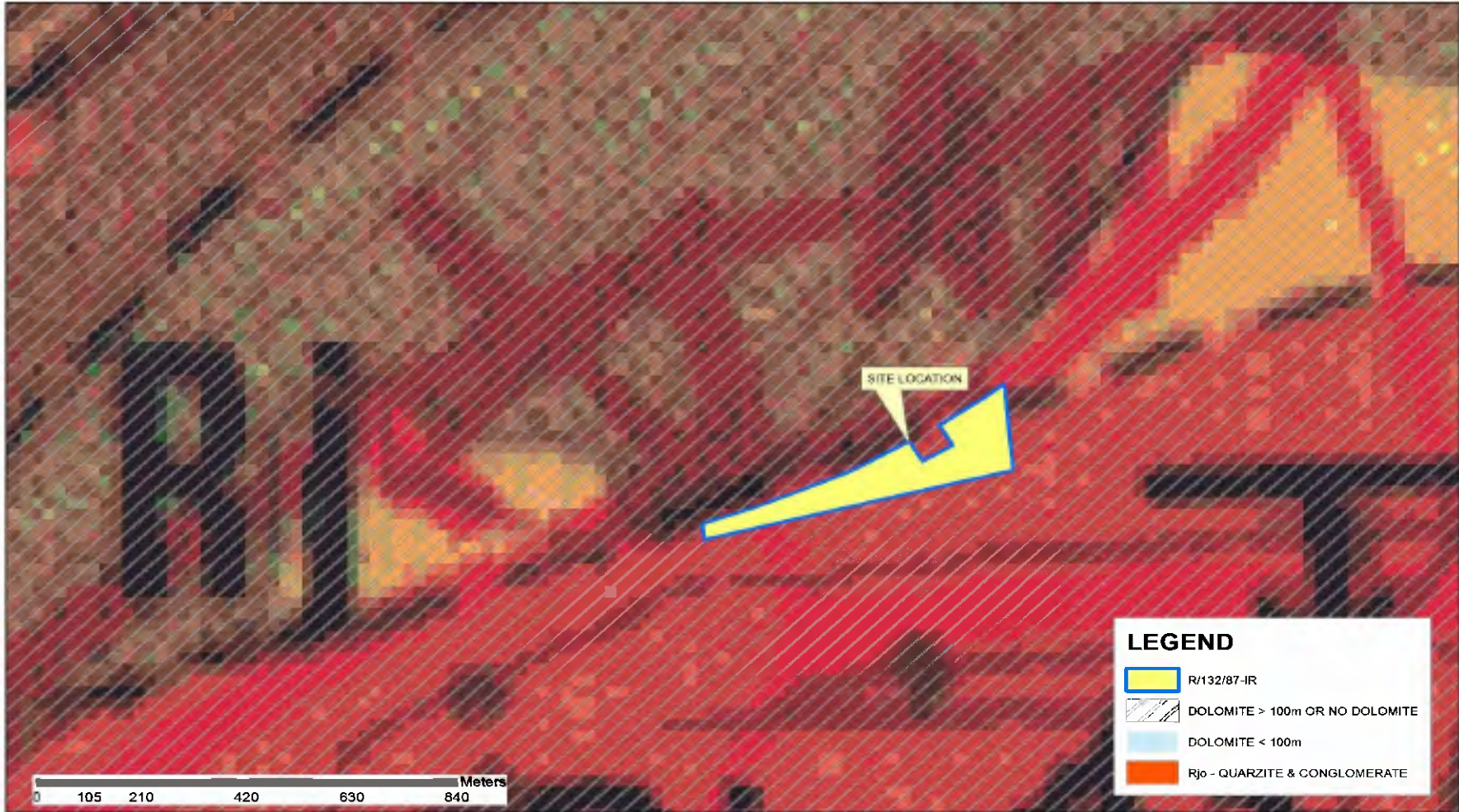
JO107:REM OF PTN 132 OF DRIEFONTEIN 87-IR

FIGURE 1: LOCALITY MAP
(REF. MAP: 2628 AA JOHANNESBURG 1:50 000)

Witwatersrand Holdings (Pty) Ltd
 11th Floor, 102-104
 8th Floor, Limpitsocker Str
 Cecil Ridge, Centurion, Pretoria
 P.O. Box 27 81 018 8592
 Tel: +27 12 666 02361
 Fax: +27 12 666 02324
 E-mail: pasha@witwatersrand.co.za
 Website: www.witwatersrand.co.za

Projection Information
 Transverse Mercator
 Central Meridian = 28°
 False Easting = 0
 False Northing = 0
 Scale Factor = 1
 Datum = WGS 84





LEGEND

- R/132/87-IR
- DOLOMITE > 100m OR NO DOLOMITE
- DOLOMITE < 100m
- Rjo - QUARZITE & CONGLOMERATE

0 105 210 420 630 840 Meters

PROJECT: THE APPOINTMENT OF DOLOMITE SPECIALIST CONSULTANTS TO EKURHULENI METROPOLITAN MUNICIPALITY ON AN "AS AND WHEN REQUIRED" BASIS WITH ALL DOLOMITE RISK MANAGEMENT RELATED SPACE, INVESTIGATIONS, SUPERVISION ON REHABILITATION OF SINKHOLES AND REMEDIAL WORK.

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JO150:REM OF PTN 132 OF DRIEFONTEIN 87-IR

FIGURE 2: GEOLOGY MAP
(REF. MAP: 2628 EAST RAND GEOLOGICAL SERIES 1:250 000)

Mshandukani Holdings (Pty) Ltd
 Hummelig Office Park
 1802 Succesvolweg Stee
 Celis Ridge, Centurion, Pretoria
 Mobile: +27 81 848 0839
 Tel: +27 12 656 0236 |
 Fax: 012 650 0527
 E-mail: info@ms-handukani.co.za
 website: www.mshandukani.co.za

Projection Information

UTM
 Datum: WGS 84
 Spheroid: Everest
 Prime Meridian: 30°
 Scale Factor: 1
 Units: Meter

N
 1:7 163



LEGEND

- SINKHOLE POSITION
- R/132/87-IR
- SEWER_LINES
- WATER_LINES

PROJECT: THE APPOINTMENT OF DOLOMITE SPECIALIST CONSULTANTS TO EKURHULENI METROPOLITAN MUNICIPALITY ON AN "AS AND WHEN REQUIRED" BASIS WITH ALL DOLOMITE RISK MANAGEMENT RELATED SPACE, INVESTIGATIONS, SUPERVISION ON REHABILITATION OF SINKHOLES AND REMEDIAL WORK.

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JO107:REM OF PTN 132 OF DRIEFONTEIN 87-IR

FIGURE 3: SINKHOLE POSITION AND WET SERVICES

Mahandukani Holdings (Pty) Ltd
 KwaMashu Office Park
 6902 Sedocrocker Str
 Celis Ridge Centurion/Pretoria
 Mobile: 012 91 910 9522
 Tel: 012 958 0236 |
 Fax: 012 690 0227
 E-mail: info@mahandukani.co.za
 website: www.mahandukani.co.za

Projection Information
 Transverse Mercator
 Central Meridian = 30°
 False Easting = 0°
 False Northing = 0°
 Scale Factor = 1
 Datum = WGS 84

