

**ERF 19137  
(PROPOSED  
EXTENSION 8)**

**GEOTECHNICAL REPORT**  
Compiled by : GEOSSET cc  
Consulting Environmental and Engineering Geologists  
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Date : November 2017

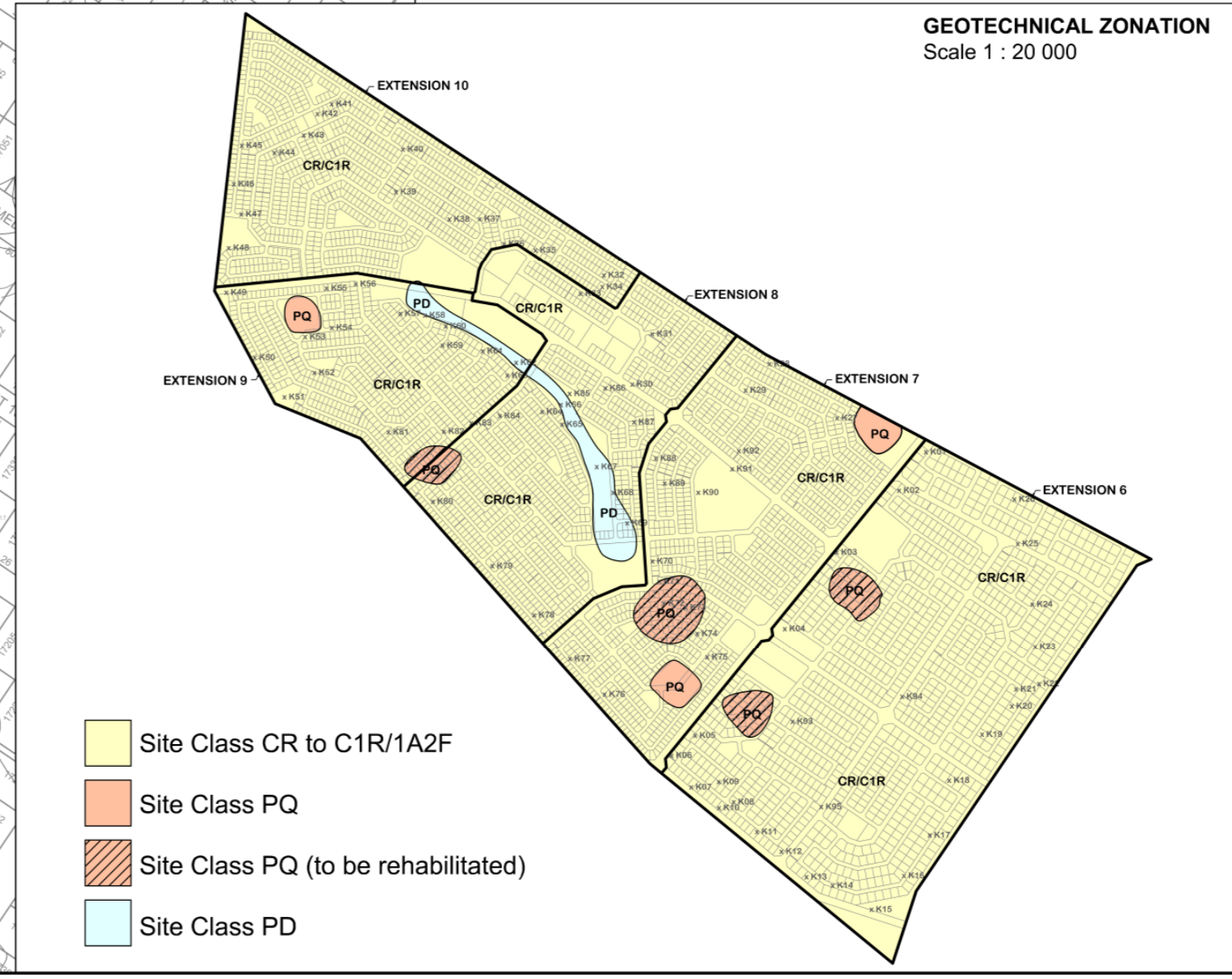
**Engineering Geological Zonation**

**Special Development with Risk:**  
Site Class CR to C1R/1A2F: This zone is characterized by very loose collapsible aeolian sand (C to C1) exhibiting an open texture, with thickness less than 0,75m, with less than 10mm movement measured at surface. The risk of hard pan calcrete, calcrete gravel and shallow rock and scattered rock calcrete boulders or rock outcrop (R) will restrict the placing of services. Pneumatic tools, a competent TLB or excavator or even blasting will be required during the placing of services. Foundations will require special foundation techniques with proper compaction and site specific drainage. It is classified as CR to C1R according to the NHBRC guidelines (1995) & SAICE Code of practice (1995) and 1A2F according to the classification for urban development (Partridge, Wood & Brink).

**Development with expected problems or increased cost**  
Site Class PQ: Quarried areas or borrow pits must be rehabilitated including backfilling with a controlled fill to engineer's specification before any development can take place.

**Undevelopable:**  
Site Class PD: Perennial drainage features where the 1:100 year flood line will determine or specify the allowable distance of development from rivers, usually 32m from the center of the river.

— Inferred Zone Boundary  
PQ Site Class Designation  
x K01 Test Position and Number



**NOTES:**

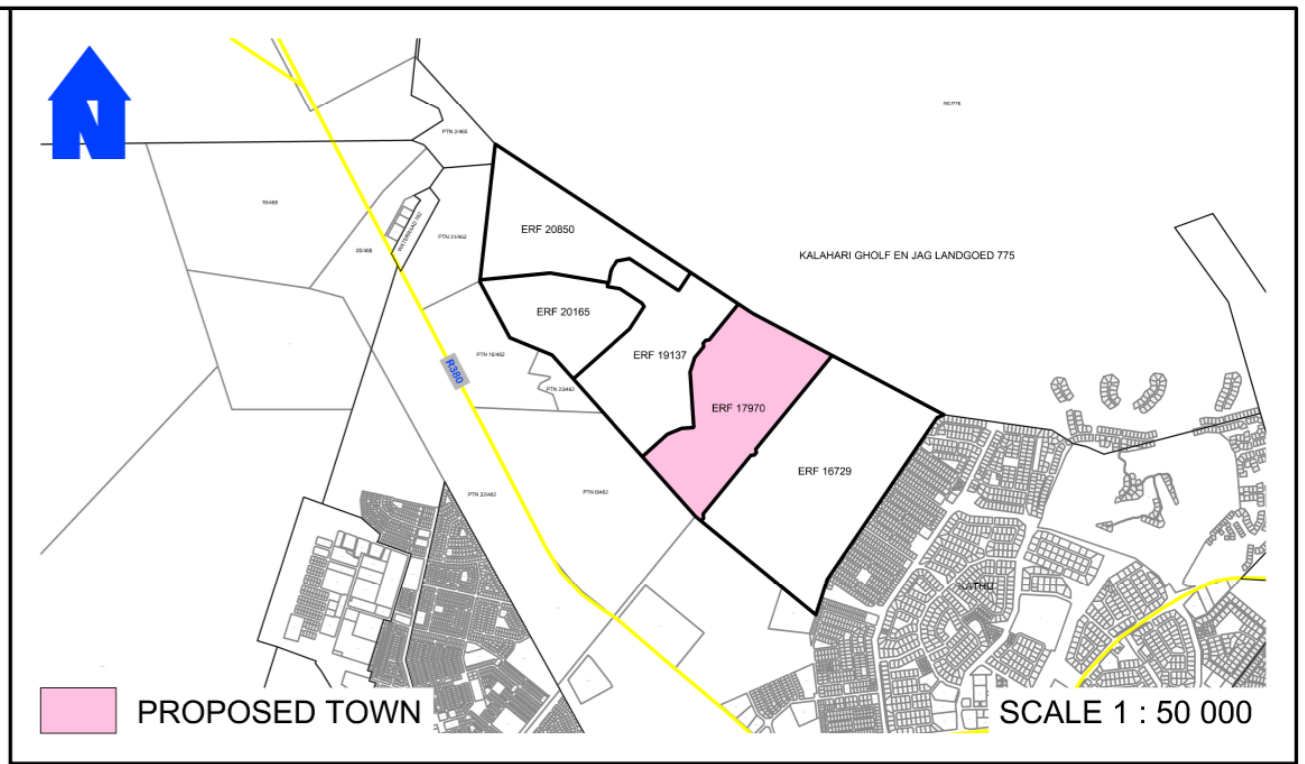
The figure A-B-C-D-E-F-G-H-J-K-L-M-N-O-P-Q-R-S-T-U-V-W-A represents the proposed town Kathu Extension 7.

No ingress to or egress from Govan Mbeki Avenue along the line(s) lettered a-b-s", t"-c-d, e-f-g-h; j-k; l-m-n; o-p-q and r-s-t as indicated on the layout plan.

No ingress to or egress from Anton Lembede Avenue along the line(s) lettered u-v; w-x; h-y; z-a'-b'; J-H-c'; d'-e'; f-g'; h'-j'; k'-l'; m'-n'; o'-p' and q'-r'-s'-c as indicated on the layout plan.

No ingress to or egress from Jeffrey Witbooi Avenue along the line(s) lettered t'-u'; v'-w'-x'; y'-z'-a"; b"-t; a-c"; d"-e"-f"; g"-h"-j"-k"; l"-m"-n"; o"-p"-q"; P-Q-r"; s"-R-l"; u"-S-v"; V-W-w" and x"-A as indicated on the layout plan.

No ingress to or egress from Seemeu Street along the line(s) lettered M-y"; z"-N-O-P; q"-a"-b"-c"; d"-e"-f"-g"-h"; j"-k"-l"; m"-n"-o" and p"-q"-r"-s" as indicated on the layout plan.



**LEGEND**

Proposed Zoning	Proposed Land use	Number of Erven	Erf Number	Area in Ha	% of Area
Residential zone IV	Residential house (low cost housing excluded) (Minimum 350m²)	1129	17971-18000; 18022-18049; 18051-18162; 18164-18411; 18414-18591; 18593-18598; 18598-18752; 18784-18804; 18806-18919; 18921-18939; 19041-19110	42.4280ha	54.6%
Business zone I	Business premises including, Institution, Authority use, Flats, Residential building	2	18587; 18920	1.4393ha	1.8%
Business zone II	Shop	2	18050; 18783	0.2758ha	0.4%
Institutional zone I	Place of instruction (Secondary School)	1	18412	4.3381ha	5.6%
	Place of instruction (Creche)	1	18562	0.3625ha	0.5%
Institutional zone II	Public place of worship (Church)	3	18163; 18805; 19040	0.6481ha	0.8%
Open space zone I	Public open space	3	19111-19113	1.6508ha	2.1%
Open space zone II	Private open space (Sportsfield)	1	18021	2.3953ha	3.1%
Transport zone II	Public street	23	19114-19136	24.0904ha	31.0%
Authority zone I	Authority use (Substation)	1	18413	0.0701ha	0.1%
<b>TOTAL</b>		<b>1166</b>	<b>17971-19136</b>	<b>77.6984ha</b>	<b>100%</b>

**STREETS**

Reserve Width	Length in Metre	% of Street Length
12m	10352m	59.8%
16m	2127m	12.3%
20m	2058m	11.9%
25m	2762m	16.0%
<b>TOTAL</b>	<b>17300m</b>	<b>100%</b>

**EXISTING SERVICES:**

- GLM Water network
- GLM Sewer network
- GLM Electricity network

Average Residential Erven Size : 375.9m²  
Erf sizes and dimensions subject to final survey.

**1 : 100 YEAR FLOODLINE**  
It is hereby certified in terms of the provisions of Section 144 of the National Water Act, 1998 (Act No.36 of 1998) that the township is not affected by a public stream.

**STREETS:**  
Maximum slope 1 : 6  
Minimum slope 1 : 294

**DESIGN OF TOWN LAYOUT**  
Maxim Planning Solutions (Pty) Ltd  
K. Raubenheimer Pr. Pln A/924/1996  
Tel. (018) 468 6366

**CONTOURS**  
The contour survey is in accordance with the standards laid down by the Regulations relating to Township Establishment and Land Use.  
Digital Orthophoto by: *Azura*  
Tel: (012) 8030346  
Date of Photography : December 2017  
System : WGS84 Central Meridian : Lo23

PR ENGINEER  
It is hereby certified that the town layout complies with the conditions and recommendations as stated in the Geological Report.

**DETAIL LAYOUT MAP  
PROPOSED TOWNSHIP  
KATHU EXTENSION 7**

0m 30m 60m 90m 120m 180m 240m 300m  
1cm = 25m  
SCALE 1 : 3 000

THE PROPOSED TOWN IS SITUATED ON A PORTION OF PORTION 1 AND A PORTION OF PORTION 2 OF PORTION 2 OF THE FARM KALAHARI GHOLF EN JAG LANDGOED No. 775, DIVISION KURUMAN.

GAMAGARA LOCAL MUNICIPALITY NORTHERN CAPE PROVINCE

Drawing Compiled by : A. Rossouw  
Drawings Nr. : 8/75/1  
Date : 2018/10/23  
Revision :

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**MAXIM**  
planning solutions  
ACCREDITED TOWN AND REGIONAL PLANNERS