

Appendix F

Water use license, SAHRA, services

Engineering services (Pieter Wilken, KLERK125-01SQces, January 2018)

stetmwater
Authority's reference
City of Tshwane
ITEM _ _ _ _ _

Date:
JAN 2018

Report no:
KLERK125-01
SQces

Report prepared by:

Pieter Wilken PrTech(Eng)
ECSA: 200470118
SARF: W30
NHBRC:14063701

PO BOX 31141
WONDERBOOMPOORT
0033

72 Fred Nicholson Street
Parktown Estate
Pretoria, 0084

CEL: 083 411 9605

FAX: 086 580 9150

e-mail:
pieter@wmaeng.co.za

PROPOSED REZONING FOR THE INSTALLATION OF LPG BULK STORAGE FACILITIES

ERF 125 KLERKSOORD EXT 2

CITY OF TSHWANE METROPOLITAN MUNICIPALITY

GAUTENG PROVINCE



ENGINEERING SERVICES

STATUS QUO REPORT

Pieter Wilken PrTech(Eng)

Since 1975

Specialist: Civil Eng Services; Roads; Traffic and Transportation Eng; Project management and control; Building construction control

Project Description:

Proposed rezoning application to make allowance for the installation of bulk gas storage facilities:

ERF 125 KLERKSOORD EXT 2

DECLARATION OF INDEPENDENCE

I, **Pieter Wilken PrTech(Eng)** hereby confirm my independence as a specialist and declare that neither I or any of my employees have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of which I was appointed as **Civil Engineering Technologist (Civil Engineering)** in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), other than fair remuneration for worked performed, specifically in connection with the **Status Quo** on **Engineering services** aspects for the **ERF 125 KLERKSOORD EXT 2** project.



Signed.....

Date: 31 JAN 2018

ERF 125 KLERKSOORD EXT 2

ENGINEERING SERVICES **STATUS QUO** REPORT

TABLE OF CONTENTS

1. INTRODUCTION	4
2. SITE INFORMATION.....	4
3. WATER.....	5
3.1 Bulk Water	5
3.2 Internal Water	5
4. SEWER.....	6
4.1 Bulk Sewer.....	6
4.2 Internal Sewer.....	6
5. ROADS	7
5.1 Bulk Roads	7
5.2 Internal Roads	7
6. STORMWATER.....	8
7. ELECTRICITY	8
8. CERTIFICATION, OPERATION AND MAINTENANCE	9
8.1 Bulk Services	9
8.2 Specific Services	9
8.2.1. Water	9
8.2.2. Sewage.....	9
8.2.3. Electricity	9
8.2.4. Roads and stormwater	9
9. REFUSE	9
10. CONCLUSIONS AND RECOMMENDATIONS	10

ERF 125 KLERKSOORD EXT 2

CIVIL ENGINEERING SERVICES REPORT

1. INTRODUCTION

EPG Gas Distributors are in the process to apply for a license for the installation of an LPG bulk storage at its depot at erf 125 in Amethyst Street, Klerksoord in Rosslyn.

We have been requested by the Town Planners, *Wes Town Planners* who are involved in the rezoning application, to do an assessment of the current services located in the region.

The purpose of this report is to submit the applicant/local authority with a concise report with regard to the current services located within the vicinity of the site. Detailed design of services will only be done once required by the CoT – this does not form part of this report.

2. SITE INFORMATION

The site is located within the Klerksoord Ext 2 suburb of the Tshwane Metropolitan Municipality region at 25 Ametis Street as shown below. The site has an area of approximately 2.18ha and is partially developed. The site is zoned for Industrial 2 businesses as defined in the Tshwane Town-Planning Scheme 2008.



Figure 1: Locality plan Erf 125 Klerksoord X2

3. WATER

3.1 Bulk Water

The bulk and connector water supply to the area is supplied by the City of Tshwane Metropolitan Municipality (CoT).

A bulk services network has been installed in the region. The design and confirmation of the water supply in this region are to be confirmed by the CoT.

The current water supply network past the site is graphically presented on the sketch below.

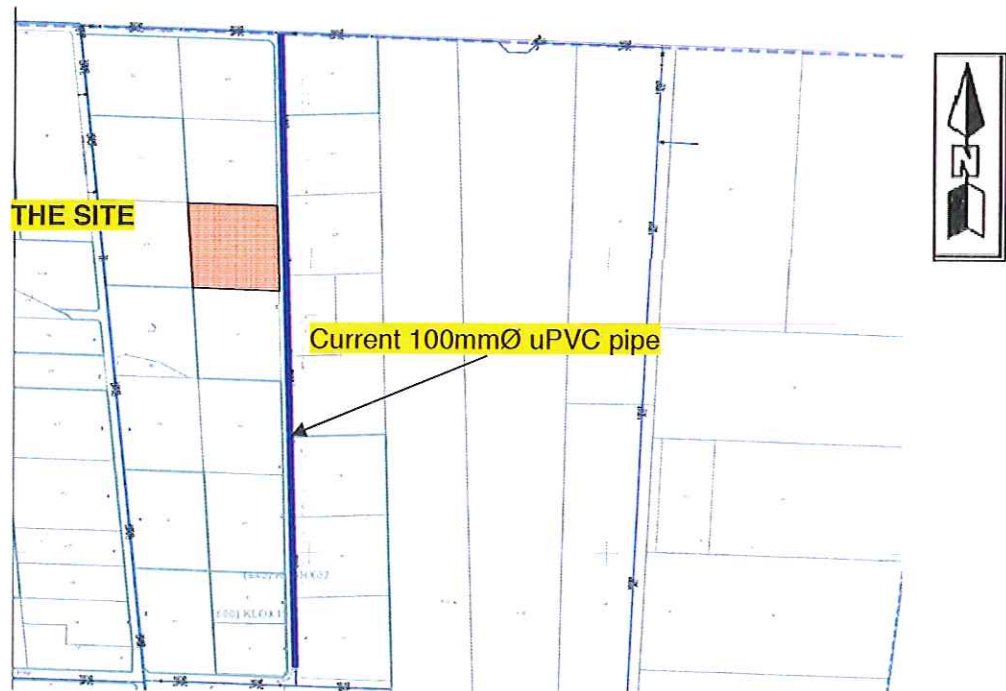


Figure 2: Current water network

3.2 Internal Water

This is to be designed and installed by the developer to the standards required by the CoT Department of Water and Sanitation. The level of service will be a full standard metered connection with municipal pressure. The internal water supply must be sufficient to ensure that the minimum fire control measures are met.

4. SEWER

4.1 Bulk Sewer

The bulk and connector sewer service to the area is provided by the CoT Department Water and Sanitation. A 150mmØ sewer pipe is installed along Ametis Street with a connection point for the site at the south-eastern corner of the site.

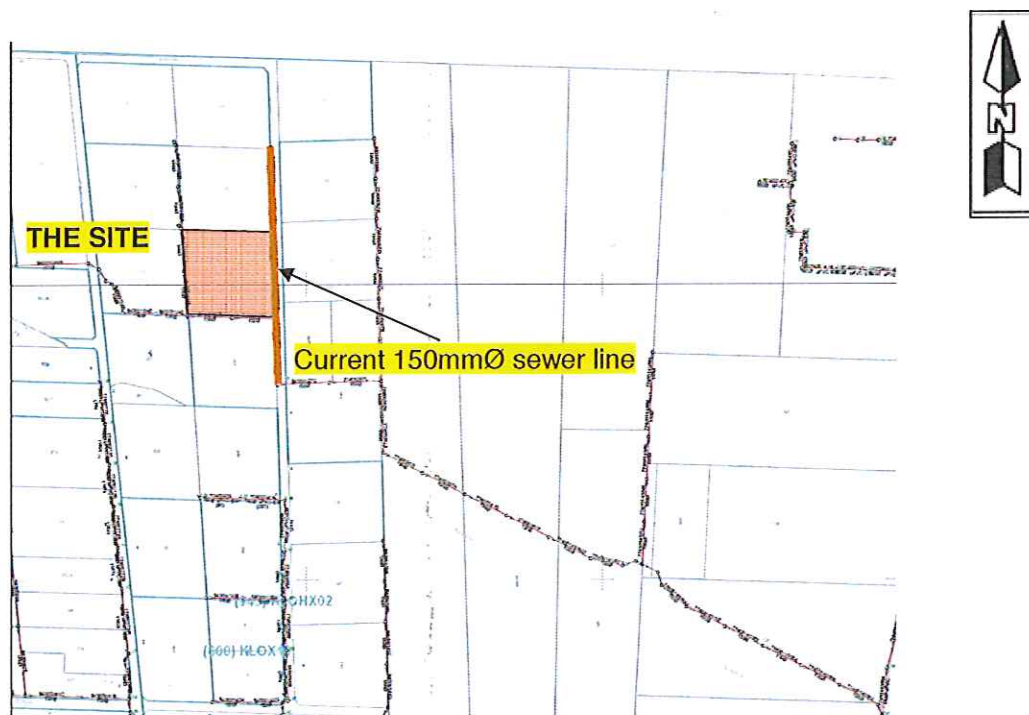


Figure 3: Current sewer network

4.2 Internal Sewer

The internal waterborne sewage reticulation is to be installed by the developer to standards required by the CoT and as per the applicable Building Regulations. The connection from the site must be installed as a 150mmØ connection according to the CoT's guidelines and design standards.

5. ROADS

5.1 Bulk Roads

Bulk and connector routes to the development are via the existing network of the CoT as well as the Gauteng Provincial Authority.

The access to the site is off Ametis Street as shown on the sketch below. This street has currently no classification as per the Roads Master Plan for the region. It is assumed that this section of the road past the site is classified as a Class 5 route as it ends as a cul-de-sac route and has no through function.



Figure 4: Current road network in region

5.2 Internal Roads

The internal and access road to the site must comply with the minimum requirements of the CoT and must be constructed as dust-free routes.

6. STORMWATER

There is currently no official stormwater network located within the vicinity of the site. The closest stormwater connection point in the region is located along Willem Cruywagen Street that is located to the southwest of the site.

The site has a downward gradient of approximately 1.6% as shown on the sketch below.

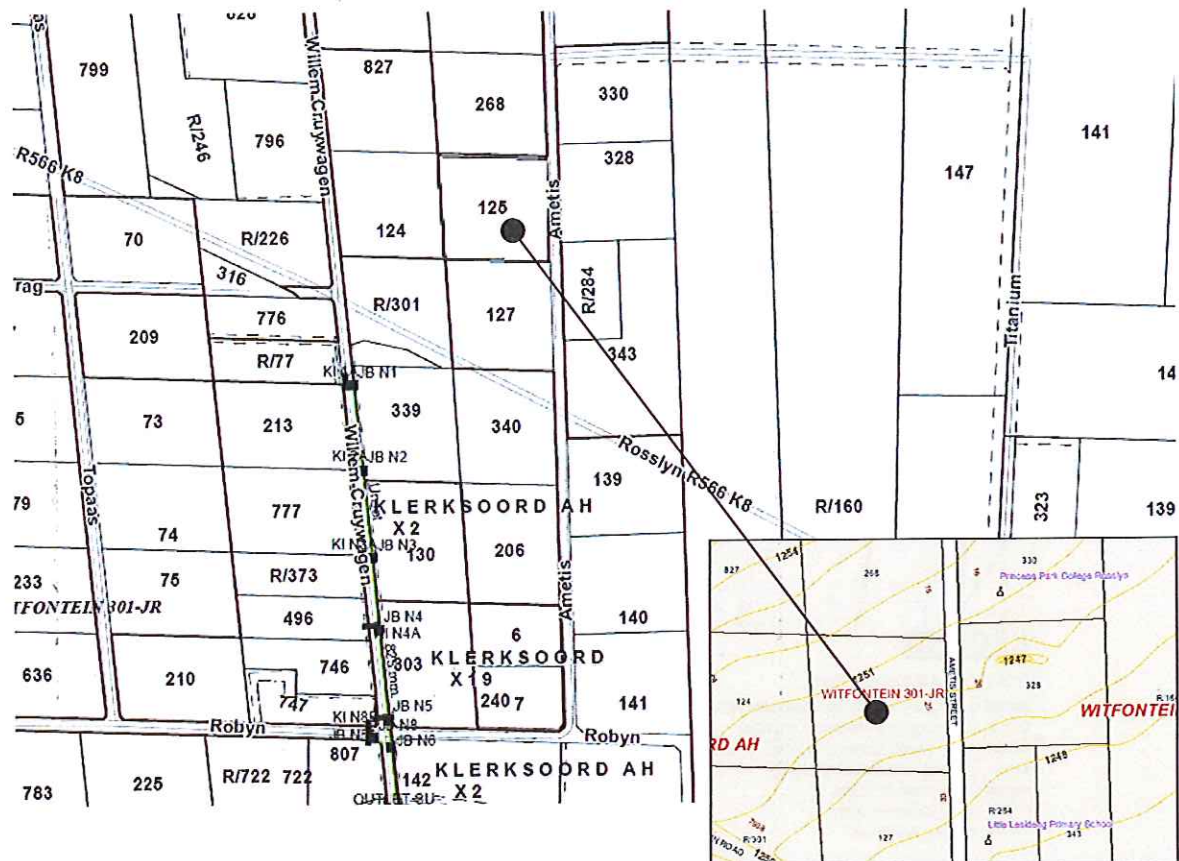


Figure 5: Current stormwater network

The additional development will not concentrate runoff into the adjacent properties or street network. Development of paved areas must however be planned with circumspection to ensure that stormwater runoff is not increased or that it is not contaminated by any chemicals that may be spilled on the site. Specific measures to may have to be implemented to contain stormwater on the site to ensure that erosion does not occur or that stormwater is concentrated on the site.

It is recommended that an attenuation pond is to be constructed at the lowest point of the site to retain stormwater runoff on the site with an outflow equal to the pre-development phase runoff for the site.

7. ELECTRICITY

A bulk services installation is developed in the region that could provide electricity as and when required by the development.

8. CERTIFICATION, OPERATION AND MAINTENANCE

8.1 Bulk Services

Bulk and connector services are to be operated and maintained by the relevant by departments of the CoT. No external works may be amended or changed by the developer/applicant without the consent of the CoT and the registration of the required wayleaves for work outside the site boundaries.

8.2 Specific Services

The certification of acceptable standards of installation, operation and maintenance of the relevant internal services (within the development boundaries) are to be structured as follows:

8.2.1. Water

- Certification of installation of the water reticulation to the correct standard to be provided by the CoT Department of Water and Sanitation;
- Maintenance of reticulation up to individual erf boundary by the CoT Water & Sanitation Water meters read by the CoT Water & Sanitation; and
- Billing and collection of payment by the CoT

8.2.2. Sewage

- Certification of installation of wastewater reticulation to correct standard to be provided by the CoT Department of Water & Sanitation; and
- Maintenance of reticulation on the site to be done by the developer/owner of the site.

8.2.3. Electricity

- Certification of installation of the electrical reticulation to correct standard to be provided by CoT Electricity;
- Maintenance of reticulation up to individual erf boundary by CoT Electricity;
- Electricity meters read by CoT; and
- Billing and collection of payment by CoT.

8.2.4. Roads and stormwater

- Certification of the construction of the roads to the correct standard to be provided by the CoT Department of Roads and Stormwater;
- Maintenance of roads by CoT;
- Certification of the construction of the stormwater facilities to the correct standard to be provided by the CoT Department of Roads and Stormwater as and when required; and
- Maintenance of all stormwater facilities and open spaces on site by the developer/owner of the site.

9. REFUSE

- Refuse removal from the road reserve adjacent to the erf to be by the CoT Environmental Management; and
- Onsite refuse removal and handling to be done by the developer/owner.

10. CONCLUSIONS AND RECOMMENDATIONS

It is concluded from the information contained in this report that the site is located in an area where existing services are readily available except for the accommodation of stormwater runoff from the site. Specific measures may be required by the CoT to accommodate the stormwater runoff from the site.

It is therefore **recommended that the application for the installation of bulk gas storage facilities is to be approved** from engineering services point of view and that the developer is to pay the services contributions and install upgrades of the services as and when required by the City of Tshwane.

Project Description:

Proposed rezoning application to make allowance for the installation of bulk gas storage facilities:

ERF 125 KLERKSOORD EXT 2

ENGINEERING SERVICES STATUS QUO REPORT

I declare that I am confident in the results of the studies undertaken and conclusions drawn as a result of it as described in this status quo report.



Pieter Wilken PrTech(Eng)

Signed.....

Date: 31 JAN 2018