



POLOKWANE MUNICIPALITY

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Civic Centre Cnr Landdros Maré & Bodenstein Streets Polokwane 0699 South Africa

Reference: JF REYNECKE

14 February 2007

Kamekho Town Planners
P.O. Box 4169
POLOKWANE
0700

ATTENTION: CHARLOTTE VAN DER MERWE

Sir

TOWNSHIP DEVELOPMENT: HOLDING 92 IVYDALE AGRICULTURAL HOLDINGS

There are bulk water supply lines in the area of the proposed site. The applicant must apply for a water connection, upon which water shall be delivered at such location(s) as the Manager Water and Sanitation, in his absolute discretion, may define as the most suitable or convenient location for delivery. The Developer will be liable for the cost as well as the installation of the connection and connecting service, from the location as determined by the Manager Water and Sanitation, to the development as well as for the installation of the internal services of the development.

The water supply must comply with all relevant legislation and specification as may be requested by the Manager Water and Sanitation, including fire protection.

There are also sewer lines in the area of the development to which the sewer reticulation of the proposed development may connect, at a location indicated by the Manager Water and Sanitation in his sole and absolute discretion. The Developer will be liable for the cost as well as the installation of the connection and connecting service, from the location as determined by the Manager Water and Sanitation, to the development as well as for the installation of the internal services of the development.

The sewer services must comply with all relevant legislation and specification as may be requested by the Manager Water and Sanitation.

After approval of the appropriate rights the applicant should enter into a service agreement with the Municipality, which should address the issue of designing of the services, the approval of the design plans as well as the supervision during the construction phase.

We trust you find this in order.

Yours faithfully

AB MÜLLER
MANAGER: WATER & SANITATION

#371954



van den Berg

Consulting Civil & Structural Engineers
Raadgewende Siviele & Strukturele Ingenieurs

Our Ref :
Ons Verw.:

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2 February 2007

Victorious Investments 7 (Pty) Ltd
P.O. Box 791
EMPANGENI
3880

Attention: Mr. C. Otto

Dear Sir,

**PROPOSED DEVELOPMENT: HOLDING 42, IVYDALE AGRICULTURAL HOLDINGS,
POLOKWANE - REPORT ON PROPOSED SERVICES**

Herewith our report on the services for the proposed development.

(a) **Layout:**

The layout is 24 housing blocks with 8 residential units per housing block. The housing blocks are spaced with 7 blocks along the northern boundary, 6 along the southern boundary and a double row of 13 blocks between the boundary blocks. Along the western end of the site a communal soccer field is situated for recreational purposes for the residents and guests.

Access to and from the site is via a separate entrance and exit from and into Smuts Road extending along the eastern boundary of the site.

(b) **Streets and Parking:**

Access to and from the site is via a 7.5m wide paved street extending from the entrance off Smuts Road at the north-eastern end of the site and exiting into Smuts Road at the south-eastern end of the site.

Parking is provided for as perpendicular parking along both sides of the street being 2.5m wide and totalling 325 bays. This represents an average of 1.69 bays per unit which is well above the required 1.25 - 1.5 bays per unit. The length of each bay is 5m with overhang in the front and with the 7.5m wide street as maneuvering space, this satisfies all town planning requirements. (See drawing V-256-G003A).

A geotechnical report, as prepared by Messrs. DIGES, indicates that from ground level to a depth of 500mm below ground level hillwash occurs. Tests revealed that this material is not suitable for compaction by vibratory means. If topsoil of 200mm is removed, the proposed layer works extend a further 505mm down which should be below the hillwash.

The proposed layerworks for the paving is: 30mm Premix on 125mm G4 on 150mm C4 on 200mm insitu material stabilised with 3% OPC.

The traffic generated by this development, as per a report prepared by Messrs. INFRAGEN Consulting Engineers, will have very little impact on Smuts Road as well as the intersections of Smuts Road with Thabo Mbeki Street (N1), Marshall Street and Kidds Drive. No geometric improvements of Smuts Street or at the above intersections will be necessitated by the additional trips generated by this development. The only requirement from this study is 20m between the edge of Smuts Road and a gate or boom at the entrance for staking of traffic as well as the provision of the incoming and out-going lanes. Staking of the out-going traffic can take place within the complex and thus only 8m has been allowed between the gate or boom and the edge of Smuts Road. This is depicted on drawing V-256-G005A.

(c) **Stormwater Control:**

Accommodation of stormwater will be via an underground piped system collecting water from catchpits situated within the streets, down the side of Smuts Road to an existing pipe and culvert system crossing the N1 road to the north of the site.

Pipes have been sized to accommodate a 5 year Return Design Storm of the area with mean annual rainfall of 450mm.

Due to the topography and location of the site, the site lies outside the 1:100 year flood line.

The system is depicted on drawings V-256-T001A and T002.

(d) **Water Reticulation:**

Water supply to the site will be from a 200mm diameter Fibre Cement municipal pipe extending along the eastern boundary of the site. The source of water is the municipal water supply system and is deemed to be secure and reliable.

The internal reticulation has been designed for middle income double storey units with Average Daily Demand of 750 litres /day per unit and peak factor of 3.

The proposed reticulation is depicted on drawing V-256-W001A.

Fire Fighting Reticulation:

Water for the fire reticulation will also be from the 200mm Fibre Cement municipal water main extending along the eastern boundary of the site.

The reticulation has been sized to cater for a single fire hydrant operating and delivering 20 litres sec at minimum pressure of 1.5 bar under instantaneous peak demand condition. Hydrants have been spaced not more than 90m apart and allowance was made for a fire hose reel at ground and first floor level of each housing block.

A twin pump booster connection situated at the entrance to the complex has been allowed for and the reticulation to be class 16 minimum. The layout is depicted on drawing V-256-W002A.

(e) **Sewer Reticulation:**

Sewerage will be collected by an internal reticulation and connected to a 200mm municipal pipe situated south of the NI via a pipe along Smuts Road as depicted on drawings V-256-R001A and R002.

The internal reticulation has been designed for flows emanating from 750 litres/day. Average Daily Demand of domestic water. A cleaning velocity in the reticulation of minimum 1m/s will at least be achieved once daily and a peak factor of 2.5 has been used.

(f) **Refuse Collection:**

Four refuse collection areas have been provided on the four corners of the site along Smuts Road as well as Lowton Road running along the western boundary of the site. This will enable refuse collection by the Municipality without having to enter the site physically. (See plan V-256-G003A).

(g) **Telkom:**

Provision has been made for ducts for a complete internal Telkom reticulation. (See drawing V-256-G010A).

All services have been designed in accordance with requirements and in conformation with "Guidelines For The Provision Of Engineering Services And Amenities In Residential Township Development".

The designs and basic details as described above have further been discussed with officials of the respective Departments Of The City Of Polokwane who confirmed the adopted standards as well as availability of bulk services required by the development.

We trust that you will find this report in order. If however more information or action is required, please do not hesitate to contact this office.

Yours faithfully


J.M. VAN DEN BERG
bc