CED CIVIL ENGINEERING PROJECT MANAGEMENT

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Our Ref: 3084-02
Date: 20 October 2022

RE: BULK CIVIL ENGINEERING SERVICES STATEMENT: ERVEN 1719 AND 1427 GA-RANKUWA

1. INTRODUCTION

City of Tshwane intent to subdivide erven 1427 & 1719 Garankuwa , (approximately 10.806 and 11.1743 hectares in size)into Residential erven.

The proposed site is located to the south of the established Ga-Rankuwa Unit 23.

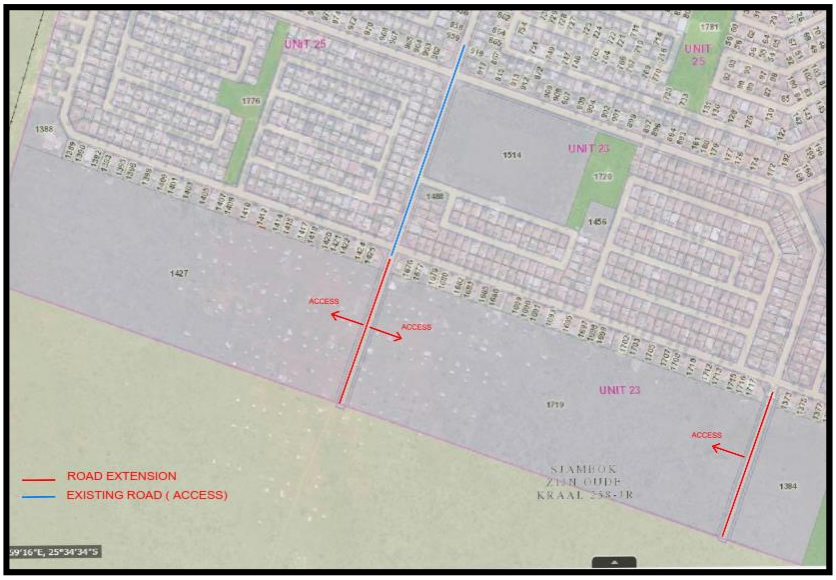
Locality plan

2. DEVELOPMENT INFORMATION

The intended land use will be for Residential 1 rights with erf sizes between 200 – 250 m², yielding 368 residential erven in total for erf 1427 and 384 residential erven for erf 1719.

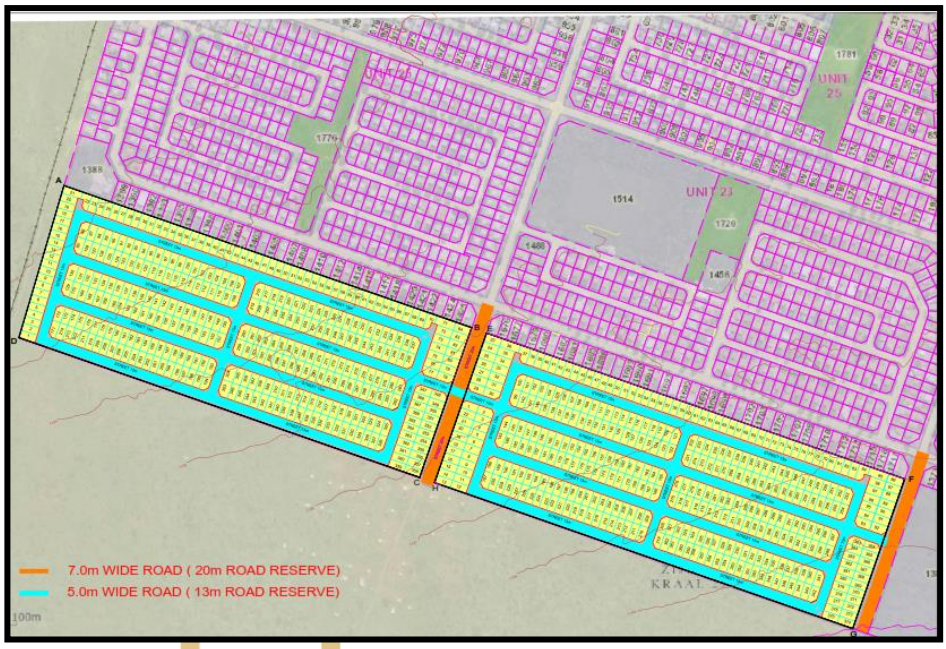
3. ROADS

Access to the site will be obtained through the existing roads (from north to south) terminating on the northern boundary of the proposed development. As per the CoT GIS extract image a road reserve for two road extensions are identified along the eastern boundary of erf 1427 and western boundary of erf 1719 as well as the eastern boundary of erf 1719. The internal road network for the proposed development would gain access from these road extensions.



Existing roads layout

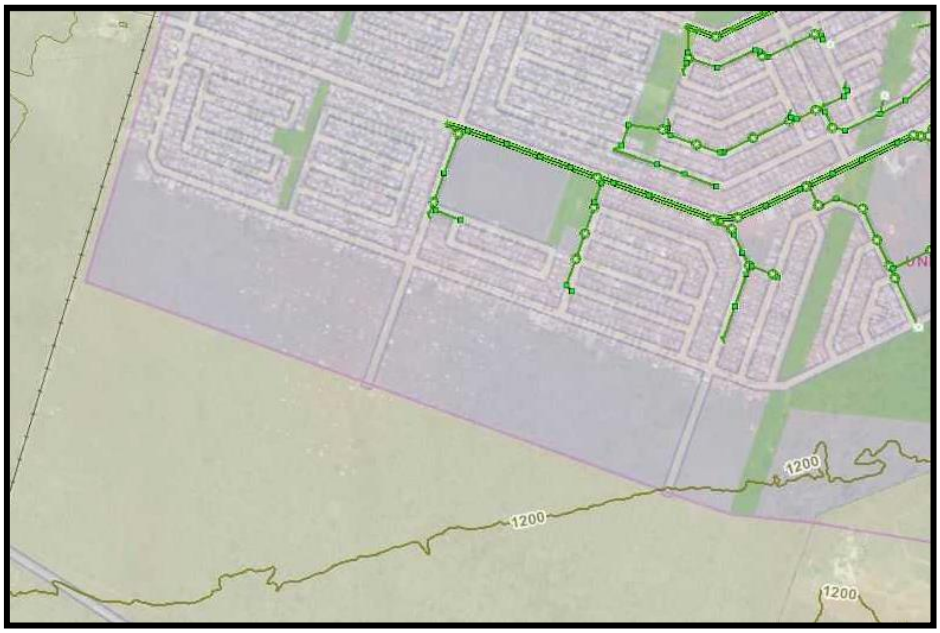
As per the proposed subdivision plan, all internal road reserve widths will be 13m wide with 5m wide roads



Internal Roads layout

4. STORMWATER

As per the below extract image from the CoT as-built drawings, there is no available stormwater connection points available for the proposed development. The site drains naturally towards the north western corner of the development. The internal stormwater network, consisting of a pipes and kerb inlets would discharge in the north western corner. A stormwater cut off system would be installed along the northern boudnary to prevent stormwater runoff from the development to flow into the established lower lying erven along the northern boudnary.



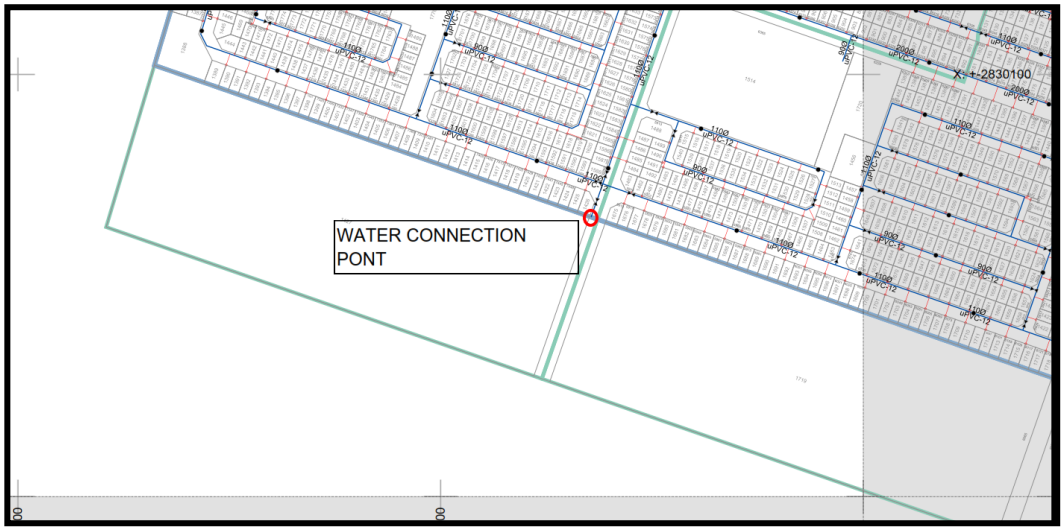
Existing stormwater layout

As per the proposed subdivision plan the internal stormwater network, consisting of pipes and kerb inlets would discharge in the north western corner.

Internal Stormwater layout

5. WATER SUPPLY

An existing 110mm diameter water line runs inside the access road reserve along the eastern boundary of erf 1427 and western boundary of erf 1719 terminating at the northern boundary of the proposed development. The internal water network for the proposed development would be connected unto this waterline.



Existing water layout

The calculated average daily water demand is:

Erf 1427: 368 erven X 0.7 kl / day = **257.6 kl / day**

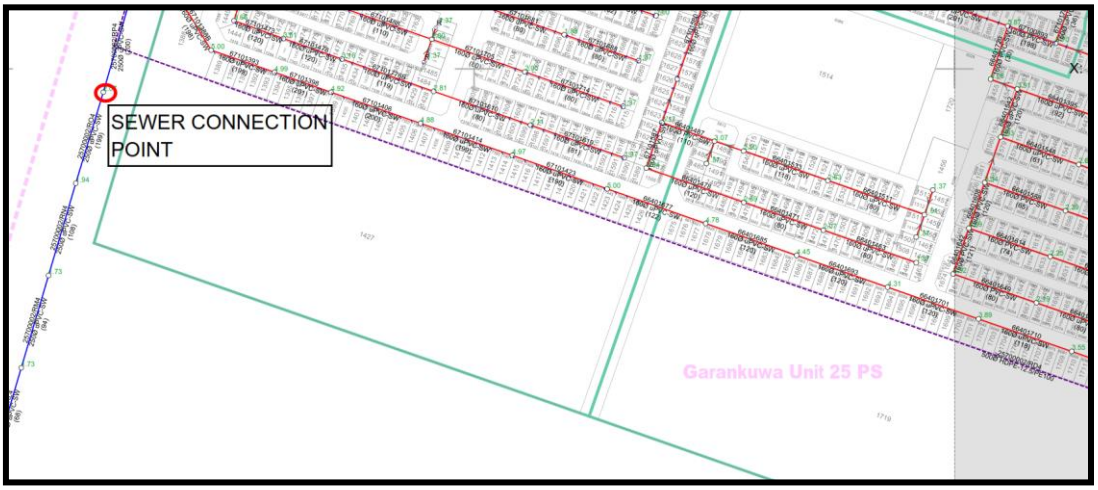
Erf 1719: 384 erven X 0.7 kl / day = **268.8 kl day**

No GLS assessment has been conducted. It is assumed that the development will be able to obtain a water connection from the existing 110mm diameter waterline. See below proposed sub-division plan

Proposed internal water layout

6. SEWER DRAINAGE

As per the attached CoT Sewer as-built drawing extract, an existing 250mm diameter sewer line runs along the western boundary of the proposed development. The internal sewer network would be connected unto this sewerline via a new 160mm diameter sewer connection line.



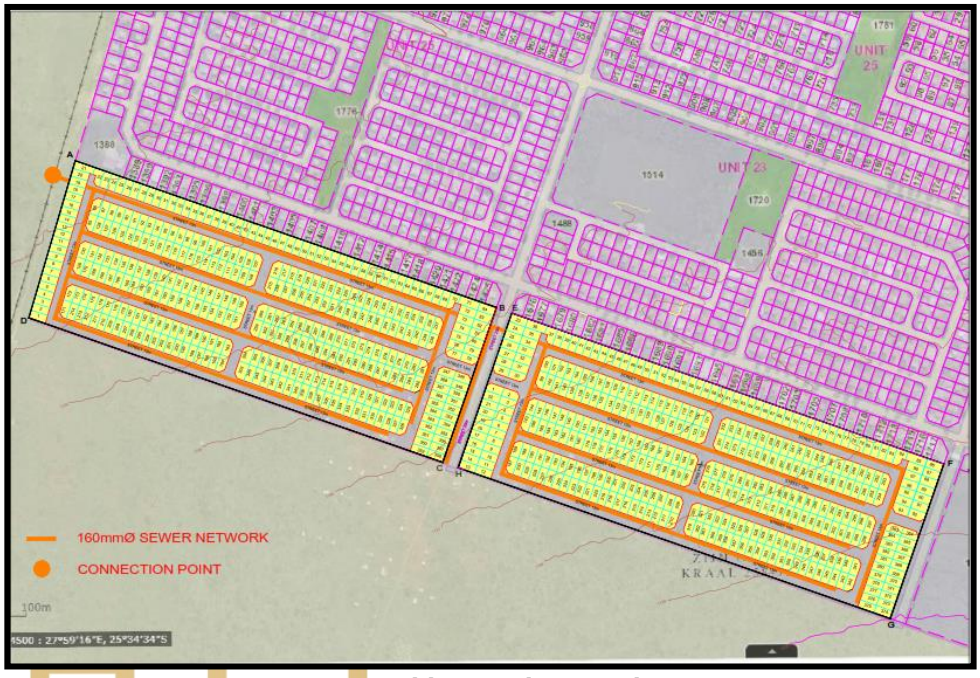
Existing Sewer Layout

The calculated average daily sewer demand is:

Erf 1427: 368 erven X 0.6 kl / day = **220.8 kl / day**

Erf 1719: 384 erven X 0.6 kl / day = **230.4 kl day**

No GLS assessment has been conducted. It is assumed that the development will be able to obtain a sewer connection on the existing 250mm diameter sewerline. See below proposed sub division plan.



Proposed internal sewer layout

Compiled by:

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Civil Engineering Developments
October 2022