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City of Johannesburg
Johannesburg Water SOC Ltd

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www.johannesburgwater.co.za

Date: 27 March 2017

Our Ref.: Bryanston
Your Ref.: TIT 17/01

TSHAWE INFRASTRUCTURE TECHNOLOGIES

P.O. BOX 11416
MAROELANA
0161

ATTENTION: Ms. ML Matseke

Dear Madam

SCHEME REPORT
BRYANSTON RE/1/58, 2/58 AND RE/58

Your Report submitted on 06 March 2017 and attached documentation refers.

Johannesburg Water acknowledges receipt of your report. The report is acceptable to JW subject to the attached comments received from Infrastructure planning which must be adhered to.

The proposed development was evaluated against the following development control measures:

Details of Proposed Development Conditions:

Zoning: Business
Primary Rights: Offices
Height: Multi storey
Total Area: 11 106m²

1. General Comments

- 1.1. The proposal to extend the water and sewerage reticulation to the proposed development such that each erf has an individual metered water connection and an individual sewer connection at the lowest point is approved and will ensure compliance with the requirements of Johannesburg Water.

Directors:

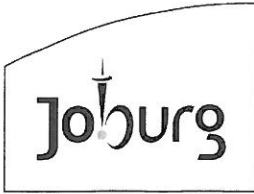
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- 1.2. All services to be taken over by Johannesburg Water must thus comply with the minimum requirements of Johannesburg Water in respect of materials used, design standards used in the design of the systems, construction drawing standards and construction methodology where these requirements supersede currently recognised guidelines and/or regulations.
- 1.3. Water and sewer mains which are to be taken over by Johannesburg Water are to be designed to be located in roadways which are to be handed over to the City of Johannesburg or which have right of way servitudes registered over the roadways in favour of the City of Johannesburg for the access to and maintenance of installed municipal services. Note that sewers in servitudes in private property are acceptable, however, this must be motivated to Johannesburg Water prior to the submission of construction drawings for approval.
- 1.4. Servitudes across private property within which sewer mains are located and ROW servitudes within which both sewer and water mains will be located must be shown on the proposed construction drawings and the SG diagrams must accompany the final as built drawing for the project.
- 1.5. Water mains, which provide metered connections to erven in the development, must be designed in terms of layout to be far enough from erf boundaries to allow for the installation of water meters at 90 Degrees to the water main (the minimum acceptable distance is 1.5 meters).
- 1.6. Johannesburg Water utilises fire hydrants for maintenance purposes to enable sections of water main to be scoured of water prior to undertaking maintenance work and for air release once the maintenance work has been completed. Thus fire hydrants must be placed to comply with both maintenance and fire fighting purposes and each section of isolate able water main must have a hydrant at both the highest point on the line as well as on the lowest pint of the line in addition to hydrants for fire fighting purposes.
- 1.7. Cross section of roadway must be designed such that distances between services are such that each service can be excavated safely without having other services suspended in mid-air.
- 1.8. Section of water main that will be isolated for maintenance purposed must be isolatable by a maximum of three valves (if more than three valves will be required then this must be motivated to Johannesburg water). Each section must not shut down more than thirty consumers at one time.

2. Engineering Drawings

The following are the requirements with respect to the content of construction drawings that are to be

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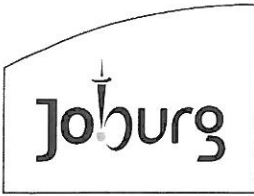
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submitted for approval.

- 2.1. Prior to any construction being undertaken on site, an engineering drawing (or drawings) is to be submitted for approval:
- 2.2. All water and sewer project drawings shall be on Johannesburg Water's (the Company's) standard drawing title block;
- 2.3. Layout drawing(s) shall show the following:
 - 2.3.1. ---A north arrow;
 - 2.3.2. Sufficient cadastral information of existing surrounding development to allow the easy location of the proposed development;
 - 2.3.3. The standard notes of the Company together with any specific project notes by the engineer;
 - 2.3.4. A legend identifying the symbols used on the drawings;
 - 2.3.5. Contours appropriate to the scale of the drawing(s);
 - 2.3.6. New water and sewer mains are to be marked boldly with existing services being marked lightly;
 - 2.3.7. The boundaries of proposed and existing servitudes and dimension are to be clearly marked;
 - 2.3.8. The distances of water and sewer mains from boundaries;
 - 2.3.9. The proposed position of both water and sewer connection points are to be shown as well as dimensioned or described (for example 10 meters east of west meaning 10 meters east of the western boundary of the erf in question);
 - 2.3.10. The position and depth to invert of proposed sewer manholes to be marked on the drawings;
 - 2.3.11. The title is to contain a correct cadastral description of the location of the project as well as a description of what the drawing depicts;
- 2.4. The set of drawings is to include the following:
 - 2.4.1. ---Layout plan showing the layout of proposed new water and sewer mains;
 - 2.4.2. A long section of the proposed sewer mains;
 - 2.4.3. The designs for the anchor blocks for the water mains (for pipe jointing systems that do not lock pipes section together e.g. spigot and socket joints). Note that where services are congested and distances between services is the minimum acceptable then only high impact uPVC pipes jointed by means of victaulic clamps

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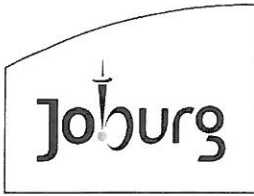
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for water mains will be accepted.;

- 2.4.4. Copies of the Company's relevant standard drawing as prepared by the Company's engineers. (A copy of the latest standard drawings can be obtained from the writer).
- 2.5. Layout drawing(s) shall make reference to the Company's standard drawings even though these drawings are included in the set of drawings.

3. Materials

- 3.1. All materials that are to be used in the extension of the existing system are to comply with this company's minimum materials specifications. (A copy of the latest material specifications and design guide document can be obtained from the writer).
- 3.2. The writer's recommendation is that the materials, which are used by the developer's contractor to undertake the works, are purchased from the Company's current approved suppliers.

4. Drawings Approval

- 4.1. The preparation of engineering drawings, supervision of the installation of the extension of this company's existing systems and preparation of as-built drawings are to be undertaken by an engineer competent to do so in terms of the National Building Regulation. This person will become the engineer for the project. (Please note, the engineer who prepared the construction drawings and who supervised the installation of the services is to sign the as-built drawing and certify them. The Company will not accept an as-built drawing from a second engineer unless the installed reticulation has been re-excavated, tested and approved in the presence of the second engineer and the Company's employees. Note, the Company will not be a party to copy right infringement and accept any drawing from an engineer which violates another engineer's copy rights.)
- 4.2. Any disputes between the developer and the engineer is to be resolved between the developer and the engineer. Johannesburg Water will not become involved in any dispute between the engineer and the developer. It is suggested the dispute resolution process of the South African Association of Consulting Engineers be followed in resolving disputes.
- 4.3. Johannesburg Water requires three paper prints of the engineering drawings for the project for approval purposes. However, the engineer is advised to submit a single set of paper prints to Johannesburg Water for perusal to ensure compliance with the requirements of the company prior to the submission of the final engineering drawings for the project.
- 4.4. Once the engineering drawings for the project had been approved by Johannesburg Water,

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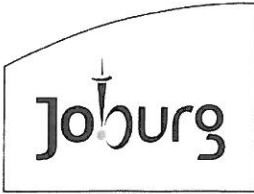
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one set of the approved drawings will be returned to the engineer, one will be retained by Johannesburg Water Development Control for record purposes and one set will be forwarded to the relevant Johannesburg Water regional office with a notification that the drawings have been approved.

- 4.5. Please note that the engineer is responsible for ensuring that the installed water and/or sewer main complies with the project specification and all legislative requirements, such as compliance with national building regulation, SABS 1200, municipal by-laws, etc. Thus the engineer must ensure that the developer has made adequate financial provision for inspections of the works as well as any tests such as compaction test on back filled material. The engineer will be held accountable for the completed works.

Note that all construction costs and costs associated with complying with the above requirements are for the developer's account.

Should any additional information be required please do not hesitate to contact the writer.

Yours faithfully

(C. Bello)

For **MANAGER: DEVELOPMENT CONTROL**

0116881621

claudio.bello@jwater.co.za

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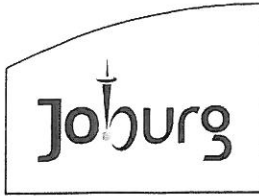
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10 March 2017

FROM

Clever Ndlovu
Planning Engineer
Infrastructure Planning
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011 688 1521
clever.ndlovu@jwater.co.za

TO

Claude Bello
Development Engineering Officer
Development Control
011 688 1621
011 688 1521
claudio.bello@jwater.co.za

CC

Victor Chewe
Planning Manager
Infrastructure Planning
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011 688 1521
victor.chewe@jwater.co.za

This memo is confidential and NOT for publication

Bryanston RE1/58,/2/58,RE58 – Outline Scheme Report

Dear Mr. Bello

I refer to your memo to Mr. Victor Chewe dated 2 February 2017 requesting comments on the Outline Scheme Report for the proposed Bryanston RE1/58,/2/58,RE58 development.

Water

The proposed development is located in the Bryanston Water Sub-districts and is to be supplied from the Bryanston Tower. There are upgrades that have been identified in the master plan that are applicable to the development. The 1.1Mℓ Bryanston Tower has got only 2.9hx AADD which is less than the recommended 6hrs as per JW guidelines. A new 1.5Mℓ tower is proposed, however an alternative direct supply from the Sandton supply could be an alternative. Master plan items MP-BS15.1 to 15.2 are required for the installation of a new tower and associated pipework.

An alternative PRV can be installed from the 750mm Sandton Bulk supply. The position and size of the PRV can be done at detail stage but the required flow peak flow will be 89.4ℓ/s.

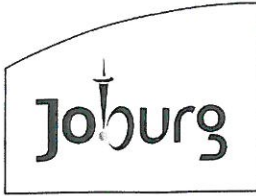
Note that these proposed upgrades are not yet in the capital plan but developers may implement the same. JW-Infrastructure planning will have to be engaged in the design of the upgrades.

Sewer

The proposed development is located in Diepsloot consolidation drainage basin. Portions of the existing JW sewer network downstream of the proposed development are currently under capacity with relative spare capacity below 30%. Additional flows from the proposed rezoning may exacerbate the problem. The

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following upgrades will be required to support the development. Only master plan items DP_E3.1 and 3.1a are required, with the rest subject to investigation.

These upgrades are subject to availability of funds and JW prioritization however the developer is not precluded from implementing the same at its cost which can be offset against bulk developmental contributions.

*Diameters from the master plan are only indicative, actual size of the pipes should be determined during detailed design using the ultimate peak flows and the available/possible slopes.

For further inquiries, please contact the writer.

Yours sincerely

Clever Ndlovu

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