

17 Harrison Street
Marshalltown

P O Box 61542
Marshalltown 2107
Tel: (011) 688-1400 Fax: (011) 688-1556



Johannesburg Water

CLIENT: **TSAKANI NGOBENI**

JWRFQPM624 - BEREA SEWER PIPE REPLACEMENT - TOPOGRAPHICAL SURVEY

31 July 2019

9-Aug-19 18:00

REQUEST FOR QUOTATION



80 DAYS

QUOTATIONS WILL BE EVALUATED ON THE 8020 POINT SCORING SYSTEM. 80 POINTS WILL BE ALLOCATED TO PRICE AND THE REMAINING 20 POINTS WILL BE ALLOCATED FOR BBBE AND PREFERENTIAL PROCUREMENT
ALL SUPPLIERS RESPONDING TO QUOTATIONS SHOULD BE REGISTERED ON CENTRAL SUPPLIER DATABASE(CSD)
JW CONTACT PERSON: Paul Mabatlane Mangoshe
TEL: (011) 688 1408 Fax (011) 688 1556 Email: paul.mangoshe@water.co.za

1	COLLATION OF CADASTRAL DATA				
1.1	Collation of cadastral data as per the explanatory notes in specification 3.4.2 (See attached Specification)	Sum	9419		
2	FIELD WORK : SURVEY POINTS: FOR EXISTING ROAD RESERVE COLLECTOR SEWERS - 9419 LONG				
2.1	Surveys of X, Y, Z co-ordinates of all above-ground key points picked for the survey, including all manhole cover and invert levels, indicate direction of flow for existing sewer and storm water services if any within the project boundary intersecting the line to be surveyed. List of suburbs - project area under Scope of Works: Strip width (minimum 5m)	m	9419		
3	SURVEY BEACONS				
3.1	Identification and protection of existing beacons for use in survey reference	Sum			
3.2	Establishment of new beacons within survey area for survey purposes where existing beacons are insufficient or do not exist	Sum			
4	DIGITAL TERRAIN MODEL AND MAPPING				
4.1	Processing and preparation of the survey points (of area and description given in 1 & 2 above into ASCII format, together with the DTM, DWG and DXF of the master drawing; and all the explanatory notes as per specifications 3.4.5, 3.4.6 & 3.4.7. (See attached specifications)	m	9419		
4.2	Submit all the required information processed in 4.1 on a DVD	Sum			
<p>CONDITIONS</p> <p>1. QUOTATIONS RECEIVED AFTER CLOSE OF BUSINESS ON THE CLOSING DATE WILL NOT BE ACCEPTED. 2. QUOTATIONS WITHOUT BRAND NAMES WHERE REQUIRED WILL NOT BE ACCEPTED 3. PRICES QUOTED MUST BE AS PER THE UNIT INDICATED AND BE EXCLUDED OF VAT 4. QUOTATIONS WITHOUT THE SUPPLIER'S AUTHORISED SIGNATURE WILL NOT BE ACCEPTED. 5. ACCEPTANCE OF A QUOTATION WILL BE SUBJECT TO JOHANNESBURG WATER'S SUPPLY CHAIN POLICY</p>					
<p>OFFICIAL STAMP</p> <p>AUTHORISED BY:</p> <p>SIGNATURE:</p> <p>DATE:</p>					

Volume	1	2		
Part	C1	C2	C3	A



REQUEST FOR QUOTATION FORM

TO:	ALL PROSPECTIVE SERVICE PROVIDERS
PROJECT NAME:	Procurement of Professional Topographic Survey Services for Berea
REQUESTOR:	Johannesburg Water SOC Ltd
QUOTATION REF:	Berea Sewer Pipe Replacement
QUOTATION NO:	TBA
NOTICE NO:	XXXX
QUOTATION TO BE DELIVERED BY:	dd June 2016 at 16h00

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Johannesburg Water hereby invites tenders from interested parties for the **above mentioned professional topographic survey services around the City of Johannesburg.**

The project entails the provision of professional topographical services for the **existing reticulation, bulk and midblock sewers** to Johannesburg Water to facilitate the design of some sewer networks projects around the City.

Quotations are requested from experienced topographical survey service providers with 5 years minimum company similar experience to render the above service. This quotation must be accompanied by a Company Profile with contactable reference letters from previous clients.

Quotations will be evaluated on price and preference with an **80/20-point system.**

Price - 80 points
 B-BBEE - 20 points
TOTAL - 100 points

The following documents are to be submitted with the Quotation:

- a) **A Certified copy of Company Registration**
- b) **A SARS TAX Clearance Certificate**
- c) **A BBEE Status Level Certificate**

Note: Failing to attach the B-BBEE Status Level Certificate will result in not being awarded the 20 Preference points.

Attached is the Schedule of Quantities and technical specifications for the proposed survey work, this will be utilized for pricing by bidders.

Formal written price quotations should be submitted through the following method:

- Submitted in a sealed envelope, clearly marked "**PROFESSIONAL TOPOGRAPHIC SURVEY, QUOTATION NO.---**", which will be placed in the TENDER BOX situated at the entrance to No. 17 Harrison Street, Marshalltown, Johannesburg, on or before the closing time and date, being 16h00 PM on dd June 2016.

For further enquiries with regard to the Request for Quotation, please contact Miss. Tsakani Ngobeni on (011) 688 6700, email: tsakani.ngobeni@jwater.co.za

Only bidders registered on the official database of Johannesburg Water SOC Ltd will be considered. Bidders who are not registered should be registered within 14 days of closing date hereof. Should you have any enquiries regarding your registration, please contact the Supply Chain Management Unit: 17 Harrison Street, Marshalltown, 2107, email: lthuteng.tabe@jwater.co.za or rouzert.loufoukazi@jwater.co.za.

The selection process will be subject to Supply Chain Management Policy of Johannesburg Water. Quotations which are late, incomplete, not completed in black ink, unsigned or submitted by facsimile or electronically will not be accepted; and Johannesburg Water will not necessarily accept the lowest or any proposal and reserves the right to withdraw a quotation without furnishing reason or award a bidder in whole or in part and to more than one bidder.

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1	COLLATION OF CADASTRAL DATA				
1.1	Collation of cadastral data as per the explanatory notes in specification 3.4.2	Sum	1		
2	FIELD WORK : SURVEY POINTS: FOR EXISTING ROAD RESERVE COLLECTOR SEWERS –9419m LONG				
2.1	Surveys of X, Y, Z co- ordinates of all above-ground key points picked for the survey, including all manhole cover and invert levels, indicate direction of flow for existing sewer and storm water services if any within the project boundary intersecting the line to be surveyed. List of suburbs - project area under Scope of Works: Strip width (minimum 5m)	m	9419		
3	SURVEY BEACONS				
3.1	Identification and protection of existing beacons for use in survey reference	Sum	1		
3.2	Establishment of new beacons within survey area for survey purposes where existing beacons are insufficient or do not exist	Sum	1		
4	DIGITAL TERRAIN MODEL AND MAPPING				
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4.2	Submit all the required information processed in 4.1 on a DVD	Sum	1		
SUBTOTAL EXCLUDING VAT					
ADD VAT (15%)					
TOTAL AMOUNT					
NAME OF SUPPLIER:					

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AUTHORISED BY:	
SIGNATURE:	
OFFICIAL STAMP	

****PLEASE NOTE:**

1. The above costs must include the Preliminary and General Costs for mobilisation of resources; scope verification; gathering of desktop information, documents and maps each time survey is required.
2. Due to access challenges in certain suburbs the service provider may be requested to work during the weekends.
3. Payment will be made upon completion of the work within 30days of submission of statement.

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C1 SCOPE OF WORK

C1.1 Employer's Objectives

The objective of the Employer is to appoint an experienced Service Provider to provide topographic surveys for the road reserve collector sewer to enable the proper design of projects and also for preparation of as-built drawings after construction. The project shall cover the following suburbs.

Berea	Region D	9419
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Johannesburg Water SOC (Ltd) reserves the right to award the contract in whole or in part and to more than one service contractor.

C1.2 Description of the Services

The Service Provider shall be required to carry out the services as governed by the South African Council for Professional and Technical Surveyors (PLATO Act 40 of 1984 as amended) and thus ensure that all design and construction projects the Employer executes during Contract Period of Performance are properly designed and the as-built drawings are updated accurately.

C1.3 Extent of the Services

The Service Provider's shall be required to provide the summarised services, among others:

- a) Collection and Collation of cadastral information for each project area.
- b) Identification or establishment of survey beacons
- c) Field work - surveying
- d) Production of digital terrain models (DTMs)
- e) Mapping and Production of detailed survey drawings

C1.4 Brief

3.4.1 Scope

This Specification describes in general terms the requirements for the cadastral work, basic survey, ground control and drafting of contour plans, and for the preparation of a digital terrain model in ASCII format.

Generally the scope of the Works is as follows.

- a) The obtaining of all relevant cadastral information for the site, the drafting of the cadastral information on the survey key plan, any field survey that may be required in

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this regard, and supplying copies of all relevant Surveyor General diagrams and compilation of plans upon completion.

- b) The drafting of topographical and other detail covering the site as specified hereinafter and of contours and the storage thereof in drawing files at the mapping scale and with the contour interval specified.
- c) The preparation of a digital terrain model for the site, or for portions thereof, at the point spacing and to the accuracy specified hereinafter.

3.4.2 Collation of cadastral data

- a) The Surveyor is required to collect all data describing the cadastral boundaries and servitudes registered over all properties covering the site and in respect of which deeds of tenure have been registered in the Deeds Registry for the Province/Region in question.
- b) The cadastral information supplied by the GIS department of local authority shall be taken as a guide, but the primary source of cadastral information shall be the offices of the Surveyor-General for the Region/Province in question. The Surveyor shall obtain photostatic or similar copies of these diagrams, as well as copies of all existing cadastral compilation sheets.
- c) Cadastral boundaries shall be plotted by means of co-ordinates and not by means of angles and distances.

3.4.3 Field work

- a) The survey shall be based on the Lo-system WGS84 of the national triangulation.
- b) All points shall be located in the X, Y and Z directions according to land-survey methods generally accepted in the Republic of South Africa so as to ensure that the required degree of accuracy is achieved. All points that are fixed shall be checked and confirmed in the field.
- c) The elevations of the permanent survey stations shall be determined by a total station (or any other approved survey equipment) from the appropriate national geodetic benchmark.
- d) The Surveyor shall identify and list the trig beacons that he used as traverse terminals, or for the fixing of survey stations by trigonometrical survey methods.

3.4.4 Survey Beacons

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- a) The Surveyor shall note that the value of the basic survey depends largely on the permanence of its reference points.
- b) Provisionally 1 permanent survey beacon shall be set in concrete and clearly marked for every km in each suburb. Alternatively, existing permanent structures can be used as permanent survey beacons.
- c) The survey beacons shall be numbered sequentially starting at BM01, and continuing BM02, BM03 etc. by means of a punched strip of aluminium at least 1,3mm thick firmly set into the concrete.
- d) The Survey stations shall be established on the site at a spacing not exceeding 300m (horizontal).
- e) Permanent survey station beacons must be placed such that potential influence from unstable surrounding material is avoided.

3.4.5 Digital Terrain Model

- a) The digital terrain model shall consist of ASCII files stored on disc and supplied to the Engineer.
- b) The design files of the package used when the DTM was generated shall also be provided. (E.g. Model Maker .tot files, Civil Designer .blk files etc.).
- c) Separate files shall be provided for spot heights and for detail points or it must be clearly separated when contained in one file.
- d) Each point shall be recorded on disc in the following order:
 - ◆ Point description (code or short name)
 - ◆ Y co-ordinate
 - ◆ X co-ordinate
 - ◆ Z co-ordinate
 - ◆ Connecting line reference (where applicable)
- e) The Surveyor shall supply a list explaining the point description codes to the Engineer together with the DTM.
- f) The accuracy of any point in the digital terrain model, whether a spot height or a detail point height, shall be such that the mean square error of the elevation of such points as determined from the digital terrain model when compared with the elevations as determined in the field, shall not exceed 100mm, unless otherwise agreed.

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- g) The general point spacing shall be 5m. This average grid shall be supplemented in areas of sharply varying topography with detail terrain points (that is along break lines).

3.4.6 Mapping

- a) One master drawing (incorporating all survey layout plans) shall be supplied to the Engineer on disc in DWG and DXF formats.
- b) The contour interval shall be:
- ◆ 0,5m for ground slopes less than 10 per cent; and
 - ◆ 1,0m for ground slopes in excess of 10 per cent.
- c) The accuracy of the contours shall be such that the mean square error of the elevations of the checkpoints as determined by interpolation between contours when compared with the elevations as determined in the field shall not exceed half the contour interval unless otherwise specified. The mean square error shall be computed from the formula:

$$MSA = (\text{Sum } (dh^2)/n)^{0.5}$$

Where "dh" is the vertical error of each checkpoint and "n" is the total number of checkpoints.

- d) The grid spacing shall be 100m.

3.4.7 Details on drawings

This (drawing) plan shall show the following detail:

- a) All farm, district, and regional boundaries and all portions and subdivisions thereof. In urban areas individual ervens and stand numbers should be shown.
- b) All original farm names and farm portions/subdivision numbers, including the full description of each portion of subdivision. In urban areas the appropriate township description shall be indicated.
- c) All property owners including their registered addresses. This requirement shall not apply for erven in proclaimed townships.
- d) The centreline of any major roads, railway lines or other prominent features.
- e) Contours at the interval and to the accuracy specified.
- f) Contour values at frequent intervals.

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- g) All permanent survey stations at the spacing specified, including a co-ordinate list for all such survey stations. The co-ordinate list shall indicate the Lo-system and survey datum used.
- h) All natural topographical features, such as rivers, streams, eroded areas, gullies, etc. The names (if any) of such features and the directions of flow where applicable, should be indicated on the layout plans.
- i) All man-made topographical features, such as excavations, quarries, cuts, embankments and fills, including all break point, toe- and pick-point lines.
- j) Bush, scrub and plantations, cultivated and wooded lands, rock outcrops, individual trees which are landmarks and so forth; the outline of such areas should be properly shown wherever it is clear cut.
- k) Roadways (showing tarred width), road shoulders, footpaths and associated structures (bridges, culverts, etc.) with the destination of all main roads leaving the sheet being shown. Bridge openings and culvert sizes, road numbers or street names and kilometre boards should also be shown.
- l) Power and telephone lines (showing individual poles/pylons of power lines and telephone carrier routes).
- m) All underground pipelines, or cables and associated structures (manholes, valve chambers, reservoirs etc.), the position of which can be ascertained from surface indications. Detail regarding the diameter and purpose of such pipelines should be added where such detail is readily available.
- n) Gates and fences (differentiating between ordinary, stock-proof, jackal-proof and security fences) etc. All access points to main roads should also be indicated.
- o) Wells, boreholes and windmills.
- p) All existing buildings, ruins and such like.
- q) Existing survey and trig beacons that can be identified with the mapping area (for example those alongside provincial and/or national roads), with directions to all adjoining beacons, the stations number and the reduced level. In addition a co-ordinate list indicating the Lo-system, the co-ordinates of the individual points and/or beacons the survey date should be included.
- r) 1: 50 000 topographic maps showing the trig beacons used must be supplied as well.
- s) All place names, where these have been officially assigned.

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C1.5 Use of Reasonable Skill and Care

The Service Provider shall exercise reasonable skill and care in respect of the services required as per the Extent of the Services section.

C1.6 Co-operation with other Service Providers and Contractors

The Service Provider shall be required, for the successful execution of his service provision, to interact with other service providers and principal contractors appointed by the Employer.

C1.7 Reference Data

The Employer shall provide the Service Provider with all reference data and locality maps of the areas to be surveyed at the issue of each Work order.

C1.8 Particular Specifications

For the purpose of this Contract:

- a) Where gender terms are used, it shall be applicable to both male and female.

C1.9 Applicable National and International Standards

The following National and International standards shall be applicable to the service provision under this Contract:

- a) PLATO. 40 of 1984; and
- b) Any other standards as may be deemed necessary depending on the type of activity.

C1.10 Approvals

The Service Provider shall obtain approval from the Employer's representative with regard to the:

- a) authorisation;
- b) stopping sections of the works or complete works, unless the reason for stopping section of the works or the complete works is required to ensure the safety of the public, employees or sub-contractors of the principle contractor.

C1.11 Procurement

The Service Provider will take account of the Employer's Preferential Procurement Policy and broad-based black economic empowerment ownership participation requirements for this Contract and note that:

- a) The Employer reserves the right to conduct broad-based black economic empowerment ownership participation audits during the Contract Period of Performance to ensure that the appointed broad-based black economic empowerment ownership is either maintained or improved during such period. Thus the Employer reserves the right to verify or re-verify the Service Provider's or any sub-contractor appointed by the Service Provider's Broad-based black economic empowerment status should he deem it necessary, without having to specify any reason. Such

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verification may be extended to include other preferential procurement criteria, should the Employer deem it necessary.

- b) where broad-based black economic empowerment ownership participation is altered during the Contract Period of Performance, the Service Provide shall formally notify the Employer and indicate *how and when* such 'lost' broad-based black economic empowerment ownership participation shall be re-established.

C1.12 Access to land / buildings / sites

The Service Provider shall report to the property owner before entering the properties. JW will assist in this regards.

C1.13 Planning and Programming

C1.13.1 Planning

The Service Provider shall ensure that he:

- a) is well informed with regard to the Employer's overall implementation programme for projects and make available resources as required to efficiently complete required services on time to avoid delays to the implementation plan.

C1.13.2 Programming

The Service Provider shall, prior to commencement of any work, provide an activity schedule showing the total duration required to complete the survey required on each project.

The programme shall at minimum contain:

- a) Time Scale (minimum):
 - Days: Where the project period does not exceed three months.
 - Weeks: Where the project period exceeds three months.
- b) Tasks: Tasks shall be allocated timeframes. Where phases or stages are anticipated, all tasks related to the successful accomplishment of that phase of the project shall be grouped. Resources allocation and task dependency shall be indicated.
- c) Multiple Project Programming: Where multiple projects are part of the same Contract, the Service Provider shall provide a programme per project. However, where interdependency exists the programmes shall be integrated, but divided on the highest level per project followed subsequently by further divisions per phase or stage.
- d) Start and Finish Dates: All tasks shall have specific start and finish dates.
- e) Critical Path: All tasks forming the programme line that will establish any delays in the overall project period shall be clearly indicated and an indication of their sensitivity characteristics shall be provided.
- f) Progress Tracking: The Service Provider shall be required to periodically indicate the project progress per task graphically and on a percentage basis.

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- g) Non-working Time: All South African public holidays, weekends and the local traditional annual builder's break shall be incorporated in the programme.

Please note that due to access challenges the service provider may be requested to work during the weekends OR public holidays.

C1.14 Software Application for Programming

Only Windows Microsoft Project programming software package will be accepted.

C1.15 Format of Communications

All Contract communication shall be in English and in writing (letters, faxes and electronic mail).

C1.16 Key Personnel

The Service Provider shall be required to allocate sufficiently experienced personnel, with regard to PLATO No. 40 of 1984 as amended) requirements and the actual implementation thereof, to execute the Contract successfully. The following shall be the minimum key personnel required for each project executed:

- a) 1 X Professional Surveyor; and
- b) 1 X Surveying assistant.

C1.17 Management Meetings

The Service Provider:

- a) shall be required to attend monthly progress meetings with the Employer, at dates and venues to be agreed where technical and performance issues shall be discussed.

C1.18 Electronic Payments

The Service Provider shall provide all necessary information to facilitate effective electronic payment, as required by the Financial Department of the Employer.

C1.19 Professional Indemnity Insurances

The Service Provider shall provide two hard copies of the details of existing insurances with the returnable documents that form part of the Tender data. In the event of a Joint Venture or Consortium, the Lead Consultant shall be responsible to provide the Professional Indemnity Insurance for the entire Contract or Contracts tendered on.

C1.20 Daily Records

Where the Employer requires the Service Provider's to perform work on a time-and-cost basis, such work shall be remunerated on actual time and cost incurred by the Service Provider, who will be required to submit proof.

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C1.21 Payment Certificates

The Service Provider shall be required to complete progress report before he will be allowed to complete the standard payment certificate required to be submitted with his tax invoice. If required by the Employer, the Service Provider shall make himself available for a progress reporting training session to be facilitated by the Employer.

C1.22 Use of Documents by the Employer

All information (communications, documents or reports, including specialists reports) compiled by the Service Provider in the course of performing the service required for this Contract are the property of the Employer and may not be used by the Service Provider for any other duties other than those relating to this Contract without prior approval by the Employer.

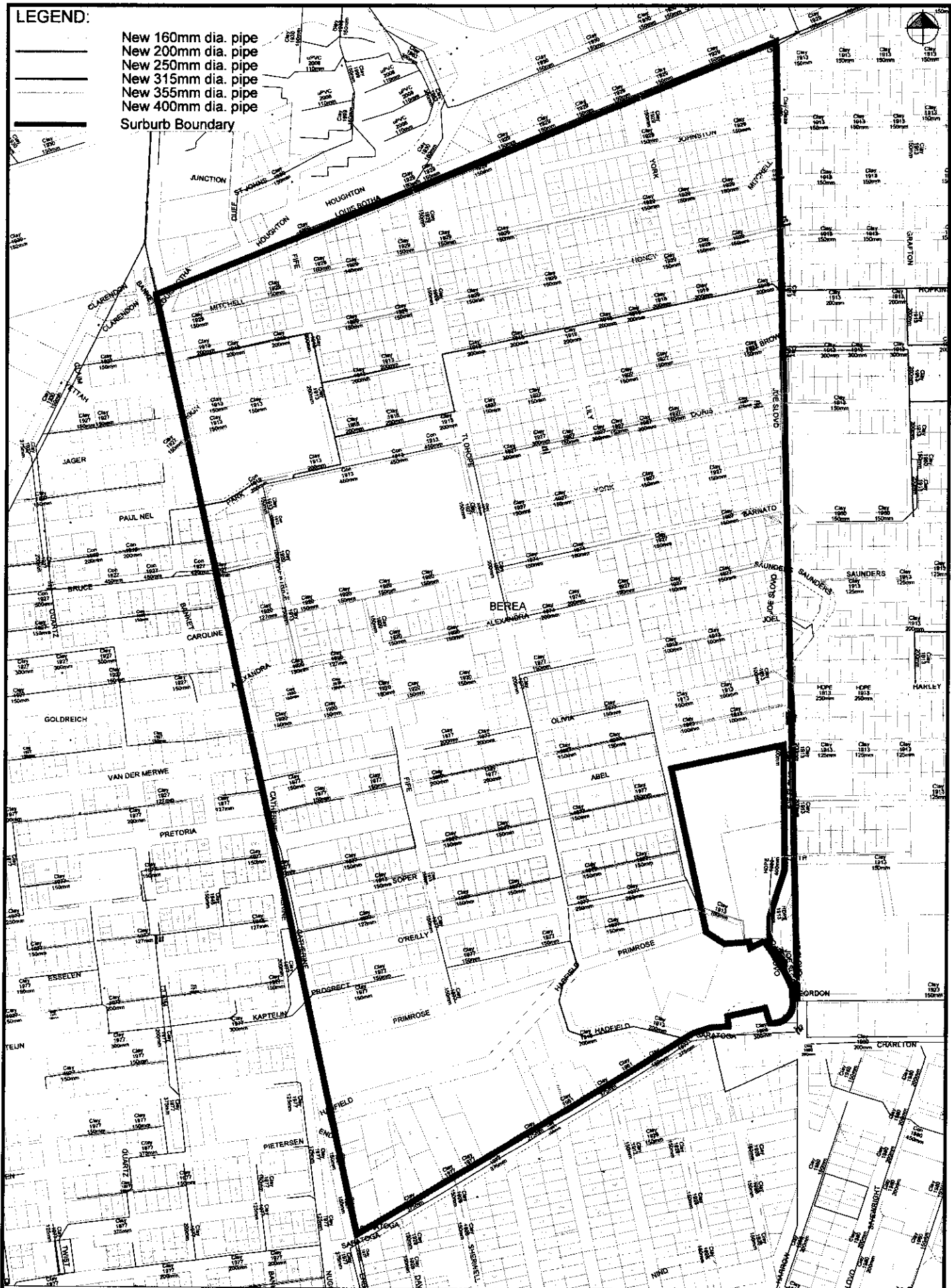
C1.23 Property provided for the Service Provider's use

The Service Provider shall provide all physical resources, including properties, for the successful execution of the Contract.

--- END OF PART ---

LEGEND:

- New 160mm dia. pipe
- New 200mm dia. pipe
- New 250mm dia. pipe
- New 315mm dia. pipe
- New 355mm dia. pipe
- New 400mm dia. pipe
- Suburb Boundary



July 2015

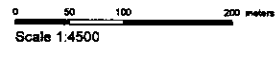


Figure PRP_S7
Berea

