

| CONTRACT NO.          | SCANNING NO.         | FILE NO.                                | CONTRACT TYPE           | DEPARTMENT             |
|-----------------------|----------------------|-----------------------------------------|-------------------------|------------------------|
| MV                    |                      | 13/5                                    | Memorandum of Agreement | ENGINEERING            |
| CONTRACTING PARTY     |                      | DETAILS/COMMENTS                        |                         | RESOLUTION NO AND DATE |
| Emfuleni Municipality |                      | Bulk Services Contribution              |                         |                        |
| START DATE            | EXPIRY DATE          | RENEWAL DATE AND PERIOD                 | LIST RELATED CONTRACTS  |                        |
| 17/05/2011            |                      |                                         |                         |                        |
| ANNEXURES             | RENTAL / AMOUNT      | ESCALATION %                            | ERF NO.                 | TOWNSHIP               |
|                       | R5.80 per kilo litre | To be determine on yearly basis in July |                         | Doonbul Savanaba       |
| METHOD OF TERMINATION | NOTICES FOR BREACH   | OTHER NOTES                             |                         |                        |
|                       |                      |                                         |                         |                        |



**SIGNING OF MEMORANDUM OF AGREEMENT (MOA) INCLUSIONARY  
ADDENDUM AGREEMENT BETWEEN MIDVAAL LOCAL MUNICIPALITY  
AND EMFULENI LOCAL MUNICIPALITY –**

13/5/2013

**MEMORANDUM OF AGREEMENT – INCLUSIONARY ADDENDUM, SAVANNA CITY AGREEMENT**

The Midvaal Local Municipality herein represented by **Mr. A.S.A de Klerk** in his capacity as **Municipal Manager** hereby confirm approval of the **inclusionary addendum agreement** entered into by and between **Midvaal Local Municipality** and **Emfuleni Local Municipality** (as per attached copy of the agreement).

The Executive Director: Engineering Services: **Mr. Steph Coetzee** as head of the department wherein the agreement is undertaken in conjunction with the Executive Director : Corporate Services confirms compliance with all legal and contractual obligations of the agreement, whereas the **Executive Director: Finance** confirms compliance to all financial procedures and the availability of the funds for the duration of the contract.

Any contract/agreement signed on behalf of Midvaal Local Municipality, without the signature of the Municipal Manager, shall be declared null and void.

*No agreement/contract will be executed, unless the implementing department is in possession of a duly signed copy of such agreement.*

02/08/2013  
Date

02/08/2013  
Date

5/8/2013  
Date

5/8/2013  
Date

**Engineering Services**  
(Head of Department)

Corporate Services

Finance

Municipal Manager

Issued and sent on 21/06/2013

The HEAD OF DEPARTMENT MUST INITIAL EVERY PAGE AND SIGN AS WITNESS AT THE END OF THE CONTRACT

13/5/160

# INCLUSIONARY ADDENDUM AGREEMENT

## MEMORANDUM OF AGREEMENT ENTERED INTO BY AND BETWEEN

THE LOCAL MUNICIPALITY OF EMFULENI

and

THE LOCAL MUNICIPALITY OF MIDVAAL

Three handwritten signatures in black ink are located in the bottom right corner of the page. The signatures are stylized and appear to be of different individuals.

MEMORANDUM OF AGREEMENT ENTERED INTO BY AND BETWEEN

THE LOCAL MUNICIPALITY OF EMFULENI  
(hereinafter referred to as "ELM")

herein represented by **MR SAMUEL SEQOANJANE SHABALALA** in his capacity as  
Municipal Manager duly authorized thereto by the ELM;

and

THE LOCAL MUNICIPALITY OF MIDVAAL  
(hereinafter referred to as "MLM")

herein represented by **MR ALBERTUS STEPHANUS ABRAHAM DE KLERK** in his capacity  
as a Municipal Manager of the MLM duly authorized thereto.

Handwritten signatures of the representatives of the Local Municipality of Emfuleni and the Local Municipality of Midvaal.

WHEREAS

Both parties were established in terms of Section 12 (1) read with Section 14(2) of Act 117 of 1998 and bound by the terms and conditions laid down there under as set out in General notice 6765 of 2000 published in the Provincial Gazette Number 141 on 1 October 2000;

WHEREAS

Section 41 of the said notice deals specifically with the succession in law in respect of assets, resources, liabilities, obligation rights and all the administrative and other records of disestablished municipalities which section reads as follows:

(1) In terms of section 14(1) of the Municipal Structures Act the new municipalities, as from the effective date, became the successors in law of the disestablished municipalities in respect of all the assets, resources, liabilities, obligations, rights and all the administrative and other records of a disestablished municipality to the extent that the whole or any portion of the area of the disestablished municipality falls within the boundaries of the district municipal area in accordance with the following rules:

(a) Assets, resources, liabilities, obligations, rights and administrative and other recordings relating to a specific function and power of a disestablished municipality or the performance of a specific area, are allocated to the new municipality which, in terms of section 84(1) and (2) or 85 of the Municipal Structures Act, is responsible for the performance of the specific function and power in that specific area.

(b) Assets, resources, liabilities, obligations, rights and administrative records other than those referred to in sub-clause (a) are allocated to the new municipality in whose area the administrative headquarters responsible for the control of such assets, liabilities,

and administrative records, immediately before the effective date, was located.

- (2) A new municipality to whom assets, resources, liabilities obligations, rights or records were allocated in terms of sub-clause (1) may, by agreement with another new municipality within the district municipal area, and must if the MEC directs, transfer or cede any of those assets, resources, liabilities or records to that other new municipality.

WHEREAS

Both parties (the Local Municipalities) were desirous to enter into specific agreements in terms of section 45 of the Notice for the purposes of facilitating the continuation of efficient and effective service delivery in their respective areas and subsequently have entered into an agreement for water and sanitation on 17 May 2011.

AND WHEREAS

As per previous agreement, all new development(s) to take place in both Local Municipalities area of jurisdictions after the signing of the abovementioned agreement will be added by way of on Addendum(s) to the original Cross Boundary Agreement.

AND WHEREAS

This Savanna City Agreement will thus be added as an addendum to this original abovementioned agreement.

## 1. DEFINITIONS

In this agreement, clause headings shall not be taken into account in construing the contents hereof, and unless inconsistent with or otherwise indicated by the context –

- 1.1. **“administrative aspects”** means any administrative function to secure the registration of a servitude including, but not limited to, obtaining sworn valuations, surveyor approved diagrams and all negotiations and conclusion of contracts to acquire servitudes with the owners of affected properties;

- 1.2. **“COD”** means Chemical Oxygen Demand;



- 1.3. the **"COUNCIL"** means Emfuleni Local Municipality (ELM);
- 1.4. the **"DEVELOPMENT"** means the development of the PROPERTY to be undertaken on the terms and conditions of this agreement;
- 1.5. **"ENGINEER"** means a professional engineer registered by the Engineering Council of South Africa;
- 1.6. **"LAY-OUT PLAN"** means the Surveyor General approved phased lay-out plan in respect of the township or any amendment thereof;
- 1.7. **"POLICY"** means the policy on Engineering Services Contribution Charges applicable within the area of jurisdiction of the COUNCIL, a copy of which is attached hereto and initialled by the parties for identification purposes;
- 1.8. **"PROCLAIM"** or any variation thereof or its translation in Afrikaans, in relation to a township, means the date upon which a township is declared an approved township by the Premier of Gauteng or any other authorised authority in terms of the provision of the Town planning and Townships Ordinance, No 15 of 1986, as amended and "proclaimed" and "proclamation" (together with their variations in the Afrikaans translation) shall have a corresponding meaning;
- 1.9. **"PROPERTY"** means the remainder of portions 1, 9, 10, 11, 12 & 18 of the Farm Doornkuil 369 IQ. The township is to develop in phases and is to be known as Savanna City Proper and extensions 1 to 10.
- 1.10. **"TOWNSHIP"** means the proposed SAVANNA CITY PROPER AND EXTENSIONS 1 TO 10.
- 1.11. **"TOWNSHIP DEVELOPER"** means Savanna City Developers Proprietary Limited.
- 1.12. **"MLM"** means MIDVAAL LOCAL MUNICIPALITY includes its successor-in-title and permitted assigns;
- 1.13. One gender shall be deemed to include the other gender and the singular shall include the plural, and vice versa, as well as legal persona.
- 1.14. **"SWCW"** means ELM Sebokeng Waste Water Treatment Works.

## **2. SANITATION**

### **2.1. LINK SERVICES**

- 2.1.1. The MLM will, at its costs, install the link services from the Internal Sewer Reticulation to connect the DEVELOPMENT to the existing ELM outfall sewer located to the east of Ironsyde as well as to the new proposed outfall sewer to be installed / constructed by COUNCIL.
- 2.1.2. MLM will enter into a separate Service Level Agreement with the TOWNSHIP DEVELOPER to ensure that the obligations imposed on MLM contained within this addendum that are relevant to the TOWNSHIP DEVELOPER are addressed.

### **2.2. BULK SANITATION**

#### **2.2.1. Outfall Sewer**

- 2.2.1.1. A maximum peak flow discharge of 55ℓ/s from the DEVELOPMENT will be conveyed through the existing eastern Ironsyde outfall sewer. This peak flow discharge of 55ℓ/s into the outfall sewer line will be maintained and kept operational by the COUNCIL at a monthly cost to the MLM as stipulated in 2.2.1.6.
- 2.2.1.2. A maximum peak flow discharge of 366ℓ/s from the DEVELOPMENT will be conveyed through the new proposed Bulk Outfall Sewer Main to be installed by the COUNCIL. This peak flow discharge into the new outfall sewer line will be maintained and kept operational by the COUNCIL at a monthly cost to the MLM as stipulated in 2.2.1.6.
- 2.2.1.3. COUNCIL shall install a new outfall sewer line to convey the effluent originated from the DEVELOPMENT and other future developments up to the SWCW.
- 2.2.1.4. The route of proposed outfall sewer main is still to be determined and will be done in conjunction with the ENGINEER, the Executive Director Engineering

Services of MLM or his assignee, and the Deputy Municipal Manager: Basic Services of COUNCIL.

- 2.2.1.5.** Size of the proposed outfall sewer main to be determined by an ENGINEER to be appointed by COUNCIL at their cost to prepare a services report, which will be submitted to the Deputy Municipal Manager: Infrastructure Planning and Asset Management, Emfuleni Local Municipality for approval. The Engineering report will take into consideration the proposed future projected developments within the Midvaal Local Municipality, Johannesburg and Emfuleni Local Municipality area of jurisdictions in order to ensure sufficient capacity for projected developments for the next 10 years.
- 2.2.1.6.** COUNCIL will bill MLM for the transportation and treatment of abovementioned effluent at a rate of R5.80 per kilo litre excluding VAT where 79% of the fee will represent the cost for Transportation and 21% the cost for Treatment or else as otherwise agreed upon between both the parties. The tariffs indicated will be adjusted on 1 July of each year after consultation between all the parties. Change in the tariff (increase or decrease) will take into consideration the inflation rate and cost of operations.
- 2.2.1.7.** COUNCIL will install flow meters at both connections and MLM will be billed monthly for actual volume of effluent being discharged into the system of COUNCIL. These flow meters will be calibrated yearly at the cost of COUNCIL.
- 2.2.1.8.** Load and flow calculations are to be done annually in July at a cost of MLM in order to determine actual COD. Samples will be taken at the connection points of the Outfall sewer lines of ELM. Average COD to be 600mg/l. If COD average is less than 400mg/l a penalty will be levied at a cost of 10% of the monthly flow cost.
- 2.2.1.9.** In the interim and until such flow meter has been install the volume of effluent being discharged into the system of ELM will be calculated / assumed and will be verified every six (6) months, from the date of signing of this agreement, by COUNCIL. Should the effluent vary by more than five (5) percent, the bill to MLM will reflect the increased or decreased cost and be payable in respect of the

following six (6) months period. The stipulation of this clause will lapse once a flow meter has been installed by COUNCIL.

- 2.2.1.10.** The total volume of flow to be discharged to the SWCW, after completion of the DEVELOPMENT will not exceed 11Mℓ/day.

### **2.2.2. Sebokeng Waste Water Treatment Works**

- 2.2.2.1.** COUNCIL will accept the effluent generated from phase 1 of the DEVELOPMENT up to a maximum of 2.5Mℓ/day prior to the completion of proposed phase 1 upgrades required at the SWCW.

- 2.2.2.2.** Planned upgrades at the SWCW will make provision for estimated effluent discharge volumes to be generated from the proposed DEVELOPMENT.

## **3. BULK SERVICES CONTRIBUTION**

- 3.1.** MLM shall be liable for the payment of an Engineering Services Contribution with regard to the bulk sewerage system (conveyance and treatment) in accordance with the approved COUNCIL POLICY.
- 3.2.** ELM by virtue of Section 63 (1) of the Townships & Town Planning Ordinance 15 of 1986 (Transvaal/Gauteng), is entitled to demand payment of contributions with regard to the Bulk Engineering Services provided or to be provided for the DEVELOPMENT from MLM.
- 3.3.** Current Engineering Services Contribution will be payable as follows and set out as per the attached Annexure A:
- Phase I – R5,761,656.00
  - Phase II – R19, 744,912.00
  - Phase III – R 10,229,390.00
  - Phase IV – R 18,337,883.00
  - Phase V – R 12,084,514.00

This translates into an allocation of 11Mℓ/day capacity to the DEVELOPMENT.

- 3.3.1. The costs have been calculated based on the current 2012/13 POLICY (Attached Annexure B). COUNCIL is however currently busy with a review of the rates via its Master plan process and Engineering Services Contribution Cost payable will thus be calculated in accordance with the rate structure used on the date of PROCLAMATION. Engineering Services Contribution Costas stated in 3.3 above shall be revised from time to time to accord with the annual review of the POLICY.
- 3.3.2. The Contributions calculated by ELM as at the date of Proclamation are due and payable to ELM immediately within a period of 60 (sixty) days after proclamation of the separate phases of the DEVELOPMENT as per the approved LAY-OUT PLAN.
- 3.3.3. Payments not made on due date shall be subject to escalation which may annually or otherwise be implemented by ELM in accordance with the POLICY requirements.

#### **4. ACQUISITION OF SERVITUDES, SITES AND OTHER ADDITIONAL RIGHTS REQUIRED**

- 4.1. The parties agree that the cost for the acquisition of all servitudes and sites required to provide for the proposed outfall sewer main referred to herein, shall be borne by the COUNCIL, as well as all cost incurred for the acquisition of all servitudes and sites for the removal and relocation of existing Bulk Services.
- 4.2. The COUNCIL shall arrange for all administrative aspects for the acquisition of such servitudes and sites referred to in 4.1 above. The cost of administration and acquisition of servitudes and sites referred to in 4.1 above, will be borne by COUNCIL.
- 4.3. The COUNCIL undertakes not to sell, alienate or otherwise deal with any erf within the proposed route outline in respect of which a servitude has to be registered as set out above, alternatively and in the event of the COUNCIL alienating such erf, the COUNCIL shall secure the relevant owner's right to register such servitude, without the owner incurring any costs in respect thereof.



- 4.4. In the event that expropriation is required for the new proposed outfall sewer line, such expropriation is the responsibility of COUNCIL.
- 4.5. After conclusion of the route determination the COUNCIL will start with the Environmental Impact Assessment process immediately.
- 4.6. Bulk outfall sewer to be protected by servitudes to be registered in favour of the COUNCIL. It is agreed that the servitudes shall comply with the following conditions:
- 4.6.1. the COUNCIL shall have 24 hour access to the servitude for its officials and contractors for the execution of work on behalf of the COUNCIL;
- 4.6.2. no permanent structures, big shrubs, or trees are allowed over or in the servitude area;
- 4.6.3. during the maintenance of the services located within the servitude area, the necessary repair to damaged paving and other improvements will be for the account of the owner of such improvements and the COUNCIL will not be held liable for any damages whatsoever;
- 4.6.4. the owners affected by the servitude will be informed of the existence of the bulk outfall sewer on their properties;

## 5. DUTIES AND OBLIGATION

- 5.1. Both parties shall take all reasonable steps to remove sand, silt, solid articles or other obstructions, which they may find in their sewers to avoid same entering the sewerage pipelines of the ELM.
- 5.2. Both parties shall take reasonable precautions, including regular inspection of their own sewer reticulation systems and regional outfall sewers to prevent and guard against more than 15% of the infiltration or the entrance to the sewers of storm water and infiltration water.
- 5.3. Subject to any other contractual arrangement entered into between the parties, the control, management, maintenance and operation of all main sewerage pipelines and wastewater treatment works operated by, and located within the area of the

ELM shall be vested entirely and solely in ELM.

- 5.4. ELM shall in its operation of the bulk wastewater treatment works take the necessary steps to ensure the said works is operated in an efficient and optimal manner including necessary maintenance and replacement/upgrades of equipment to ensure that the works operate optimally and efficiently for its intended purposes.

## **6. PAYMENT**

- 6.1 It is agreed that if a party to this agreement must be billed, such party will be sent an invoice per hand, telefax or electronically on the last working day of a month or as soon as possible thereafter and payment will be made to the other party within 30 (thirty) calendar days after dispatch.
- 6.2. It is hereby agreed that the parties may instead of paying monies over to one another, also set-off debt owed to each other, on condition that it is within the time limits as indicated in the agreement.

## **7. INTEREST**

It is agreed that if payment in full, in respect of an invoice, as mentioned in Clause 6 is not received in time, interest at prime plus (5%) five percent per month will be payable by the defaulting party.

## **8. NOTICES**

All notices in respect of this agreement should be directed to the Municipal Manager of the parties.

## **9. AMENDMENT OF AGREEMENT**

- 9.1. The arrangement and procedures in respect of the services mentioned in this agreement will remain in force indefinitely, except where otherwise mentioned in writing and signed by both parties.

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- 9.2. Any amendments to this agreement due to practical considerations will be reduced to writing after mutual agreement has been reached.

## **10. INFORMATION OF DEVELOPMENTS**

Should there be any development of a substantial nature in the areas mentioned in this agreement, which may have an effect on any Municipal Services rendered by the parties hereto or contemplated herein, MLM or ELM will inform each other timeously of such development.

## **11. VERIFICATION OF METER READINGS**

- 11.1. Whenever there is a responsibility in terms of this agreement on a party to verify the readings of a meter, then such party will in writing inform the other party at least seven working days before the readings of a meter is verified, when and where the verifying process will take place.
- 11.2. All new infrastructure upgrade or discontinuation of Municipal services by MLM in areas supplied through an ELM area must be cleared in advance with the Engineering Services Department of ELM and vice versa.
- 11.3. The parties hereto, agree that as ELM has the insurable risk ELM will ensure that proper arrangements are made in respect of insurance cover for all assets and that such insurance will include public liability cover in respect of work done by the party or by one party on behalf of the other, and will be paid for by ELM

## **12. RESOLUTIVE CONDITION**

This agreement is subject to the resolute condition that should the TOWNSHIP DEVELOPER not accept the conditions imposed on it by this agreement within 60 days or such further period as might be agreed upon between the parties, from the date of signature hereof in a Service Level Agreement to be concluded between it and MLM, then this agreement will lapse and neither party will have any claims against the other party of whatever nature, which claims are respectively waived and abandoned.

## **13. CESSION/ASSIGNMENT**

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MLM and / or ELM shall not, without the prior written consent of the other, cede or assign this agreement.

#### **14. INDEMNITY**

MLM and ELM shall and hereby do indemnify each other against any liability, loss, claim or proceedings whatsoever, whether arising in common law or by statute, consequent on personal injuries to or the death of any person arising out of or in the course of or caused by the installation of the services unless due to any act or omission of each other's servants or agents.

#### **15. DISPUTE RESOLUTIONS**

- 15.1. In the event of any dispute between the Parties arising from this Agreement the relevant provisions of the Intergovernmental Relations Framework Act, 2005 relating to settlement of intergovernmental disputes shall apply as amended from time to time.
- 15.2. In the event that such Act is repealed in its entirety or chapter 4 is repealed without such Act or chapter being replaced with a suitably applicable Act and or chapter the following shall apply:
- 15.3. Any dispute arising out of or in connection with this agreement or the subject matter of this agreement shall be determined by arbitration in this clause, notwithstanding that the rest of the agreement may be void or voidable or may have terminated or been cancelled, this clause being a separate divisible agreement. Claims in delict or based on unjust enrichment or for rectification of this agreement are included.
- 15.4. In the event of any such dispute arising and in the event that the parties are unable to resolve said dispute an arbitrator agreeable to the parties shall be appointed to determine and resolve the dispute.
- 15.5. In the event that the parties are unable to agree to an arbitrator, then:-
  - 15.5.1. In the event of the matter being primarily of a legal nature the arbitrator shall be appointed by the chairman of the Bar Council of Gauteng, which arbitrator shall be an advocate of not less than 15 (fifteen) years standing;

Handwritten signatures and initials in the bottom right corner of the page. There are three distinct signatures: one on the left, one in the middle, and one on the right. Below the middle signature, the date '2019' is written.

- 15.5.2. In the event of the dispute being primarily of a financial or accounting nature shall be appointed by the chairman of the South African Institute of Chartered Accountants whom shall be a practicing auditor of not less than 10 (ten) years standing;
- 15.5.3. In the event of the dispute being primarily of an engineering nature shall be appointed by the Chairperson of the Engineering Council of South Africa who shall be a practicing civil engineer with not less that 10 (ten) years standing;
- 15.5.4. in the event of the matter being primarily of any other nature shall be an advocate of not less than 15 (Fifteen) years standing appointed by the chairman of the Bar Council of Gauteng.
- 15.6. The arbitration shall be held in Johannesburg and the parties shall endeavor to ensure that the process of arbitration is completed within 120 (one hundred and twenty) days after lodgment of the dispute. The arbitration shall be governed in terms of the provisions of the Arbitration Act of 1965 (or as amended from time to time).
- 15.7. The arbitrator shall determine the procedure to be followed in his discretion.
- 15.8. The arbitrator shall have full and unrestricted powers in relation to the arbitration, in particular but without limiting the generality of the foregoing:-
- 15.8.1. Shall have the powers set out in terms of Section 21(1) of the Arbitration Act;
- 15.8.2. may have regard to his personal knowledge of the facts and any expert knowledge which he may have relating to the issues in dispute provided that he shall afford the parties the opportunity of challenging the knowledge he claims to have; and
- 15.8.3. may make such award or awards whether interim, provisional or final as he may consider appropriate including without limitation, ex parte awards, declaratory orders, interdicts, awards for specific performance, restitution, damages, penalties, interest, and costs.
- 15.9. The arbitrator shall within 14 (fourteen) days of the hearing furnish reasons for his award if so requested by either party.



15.10. Any party which is substantially successful in any such arbitration proceedings shall be entitled to an award of full indemnity for all costs reasonably incurred by that party on the scale as between attorney and own client.

## 16. DOMICILIA AND NOTICES

The ELM chooses *domicilium citandi et executandi* for all purposes of this Agreement at:

CIVIC CENTRE  
c/o Klasie Havenga Street and Frikkie Meyer Blvd  
VANDERBIJLPARK

The MLM chooses *domicilium citandi et executandi* for all purposes of this agreement at:

CIVIC CENTRE  
c/o Mitchell and Junius Streets  
MEYERTON

## 17. MISCELLANEOUS

This agreement correctly reflects the intention of the parties and constitutes the entire agreement between the parties. No variation of, addition to, consensual cancellation or notation of this agreement and waiver by any one party of any of its rights hereunder shall be of any force or effect unless reduced to writing and signed by the parties or their authorized agents.

## 18. COST

Each party shall be responsible for payment of their legal cost involved in the drafting of this Agreement.

## 19. APPLICABILITY



This Agreement regulating cross boundary service provision, will form an Addendum to the existing Services Agreement entered into by both parties on 17 May 2011. In as much as the terms of this agreement are not in conflict with the terms of the agreement dated 17 May 2011, the terms of the 2011 agreement will remain in force between the parties.

SIGNED AT VANDERBIJLPARK ON BEHALF OF THE ELM ON THIS 20<sup>TH</sup> DAY OF JUNE 2013.

AS WITNESSES:

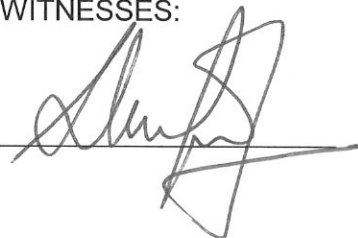
1. 

2. \_\_\_\_\_

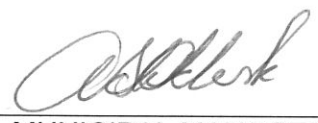
  
MUNICIPAL MANAGER

SIGNED AT MEYERTON ON BEHALF OF THE MLM ON THIS 20 DAY OF JUNE 2013.

AS WITNESSES:

1. 

2. \_\_\_\_\_

  
MUNICIPAL MANAGER

## Phase I

## Bulk Service Contribution: Sub-division, Land-use Changes &amp; Consent use

|      |                                           | Sub-division, Land-use Changes & Consent use |                   |                   |               |               | Land use after |        |                         |             |             |             |             |             |       |
|------|-------------------------------------------|----------------------------------------------|-------------------|-------------------|---------------|---------------|----------------|--------|-------------------------|-------------|-------------|-------------|-------------|-------------|-------|
|      |                                           | Unit                                         | WATER             | SEWER             | CONTRIBUTION  |               |                |        |                         |             |             |             |             |             |       |
|      |                                           |                                              | Demand KI per day | Runoff KI per day | Water R 2,530 | Sewer R 8,680 |                |        |                         |             |             |             |             |             |       |
| Code | Land Use                                  |                                              |                   |                   |               |               |                |        |                         |             |             |             | Water       | Sewer       | Total |
| 0    | Vacant/Open Space                         |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 01   | POS (A/H / Road Reserve                   | ha                                           | 0                 | 0                 | R 0           | R 0           | ha             | size   | m <sup>2</sup>          |             |             |             |             |             |       |
| 10   | Residential                               |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 10a  | Res 1 (>= 4 001m <sup>2</sup> )           | dwelling                                     | 3.2               | 2                 | R 8,096       | R 13,760      | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 10b  | Res 1 (2 001 - 4 000m <sup>2</sup> )      | dwelling                                     | 3.2               | 2                 | R 8,096       | R 13,760      | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 10c  | Res 1 (1751 - 2 000m <sup>2</sup> )       | dwelling                                     | 2.8               | 1.6               | R 7,084       | R 12,364      | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 10d  | Res 1 (1 501 - 1 750m <sup>2</sup> )      | dwelling                                     | 2.3               | 1.6               | R 5,816       | R 11,008      | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 10e  | Res 1 (1 001 - 1 500m <sup>2</sup> )      | dwelling                                     | 1.8               | 1.35              | R 4,554       | R 9,280       | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 10f  | Res 1 (751 - 1 000m <sup>2</sup> )        | dwelling                                     | 1.2               | 1                 | R 3,036       | R 6,860       | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 10g  | Res 1 (551 - 750m <sup>2</sup> )          | dwelling                                     | 1                 | 0.85              | R 2,530       | R 5,848       | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 10h  | Res 1 (450 - 550m <sup>2</sup> )          | dwelling                                     | 0.8               | 0.7               | R 2,024       | R 4,816       | # dwellings =  | size = | m <sup>2</sup>          | R 2,256,784 | R 6,374,656 | R 8,631,440 | R 2,256,784 | R 5,374,656 |       |
| 10i  | Res 1 Give Away/RDP (<450m <sup>2</sup> ) | dwelling                                     | 0.6               | 0.5               | R 1,516       | R 3,440       | # dwellings =  | size = | m <sup>2</sup>          |             |             |             |             |             |       |
| 10j  | 2 <sup>nd</sup> dwelling / granny flat    | dwelling                                     | 0.8               | 0.7               | R 2,024       | R 4,816       | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 11   | Res 2 Duplexes & Simplexes                | dwelling                                     | 0.8               | 0.65              | R 2,024       | R 4,472       | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 12   | Res 3 & 4 Flats                           | dwelling                                     | 0.6               | 0.5               | R 1,516       | R 3,440       | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 13   | Retirement Village                        | dwelling                                     | 0.6               | 0.65              | R 1,516       | R 4,472       | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 15   | Holiday home                              | dwelling                                     | 0.8               | 0.65              | R 2,024       | R 4,472       | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 18   | Mobile home or park                       | dwelling                                     | 0.6               | 0.5               | R 1,516       | R 3,440       | # dwellings =  | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 20   | Accommodation                             |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 21   | Hotel                                     | room                                         | 0.6               | 0.5               | R 1,516       | R 3,440       | # rooms =      | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 22   | Guest house                               | room                                         | 0.6               | 0.5               | R 1,516       | R 3,440       | # rooms =      | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 23   | Boarding house                            | room                                         | 0.6               | 0.5               | R 1,516       | R 3,440       | # rooms =      | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 24   | Economy hotel                             | room                                         | 0.6               | 0.5               | R 1,516       | R 3,440       | # rooms =      | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 25   | Hotel or Lodge                            | room                                         | 0.6               | 0.5               | R 1,516       | R 3,440       | # rooms =      | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 26   | Motel                                     | room                                         | 0.6               | 0.5               | R 1,516       | R 3,440       | # rooms =      | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 30   | Community facilities                      |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 31   | Public Library                            | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 40   | Educational                               |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 41   | Crèche or Nursery School                  | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | 4,500.0 m <sup>2</sup>  | R 34,155    | R 77,400    | R 111,555   | R 34,155    | R 77,400    |       |
| 42   | Preparatory School                        | pupil                                        | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =     | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 43   | Primary school                            | pupil                                        | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =     | size = | 43,560.0 m <sup>2</sup> | R 0         | R 0         | R 0         |             |             |       |
| 44   | Secondary school                          | pupil                                        | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =     | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 45   | Day-care / After-school centre            | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 46   | Private school                            | pupil                                        | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =     | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 47   | Technical College                         | student                                      | 0.2               | 0.15              | R 506         | R 1,032       | # students =   | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 48   | University                                | student                                      | 0.2               | 0.15              | R 506         | R 1,032       | # students =   | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 50   | Places of Public Worship                  |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 51   | Church (peak on Sunday)                   | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | 4,500.0 m <sup>2</sup>  | R 34,155    | R 77,400    | R 111,555   | R 34,155    | R 77,400    |       |
| 52   | Synagogue (Friday PM peak)                | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 60   | Places of Refreshment                     |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 61   | Restaurants                               | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 62   | Drive-in Restaurant                       | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 63   | Take-away / Fast Food                     | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 70   | Recreation & Entertainment                |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 71   | Cinema                                    | seat                                         | 0.02              | 0.02              | R 51          | R 136         | # seats =      | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 80   | Sport                                     |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 81   | Fitness centre / Gym                      | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 82   | Golf course                               | ha                                           | 0                 | 0                 | R 0           | R 0           | ha =           | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 83   | Sport stadiums                            | seat                                         | 0.2               | 0.18              | R 506         | R 1,238       | # seats =      | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 84   | Tennis Courts                             | court                                        | 0.05              | 0.04              | R 127         | R 275         | # courts =     | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 90   | Medical                                   |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 91   | Private hospital                          | bed                                          | 0.2               | 0.16              | R 506         | R 1,101       | # beds =       | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 92   | Public hospital                           | bed                                          | 0.2               | 0.16              | R 506         | R 1,101       | # beds =       | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 93   | Nursing home                              | bed                                          | 0.2               | 0.16              | R 506         | R 1,101       | # beds =       | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 94   | Medical Centres                           | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 95   | CBO medical office                        | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 96   | Suburban medical office                   | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 97   | Clinic                                    | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 98   | Dentist                                   | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 100  | Offices                                   |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 101  | CBO offices                               | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 102  | Sub-urban offices                         | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 103  | Research & Development Centres            | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 110  | Businesses                                |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 111  | Conference Centres                        | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 112  | Financial (Banks etc)                     | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | 13,500.0 m <sup>2</sup> | R 102,465   | R 232,200   | R 334,665   | R 568,665   | R 901,530   |       |
| 113  | Building materials                        | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 114  | Bakery / Dairy                            | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 115  | Hardware/Paint Shop                       | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 116  | Nursery                                   | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 120  | Shopping Centres                          |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 121a | Local < 1 000m <sup>2</sup>               | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 121b | Local < 2 500m <sup>2</sup>               | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 122a | Neighbourhood < 5 000m <sup>2</sup>       | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 122b | Neighbourhood < 10 000m <sup>2</sup>      | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 122c | Neighbourhood < 15 000m <sup>2</sup>      | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 123a | Community < 20 000m <sup>2</sup>          | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 123b | Community < 30 000m <sup>2</sup>          | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 124a | Regional < 50 000m <sup>2</sup>           | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 124b | Regional < 75 000m <sup>2</sup>           | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 124c | Regional < 100 000m <sup>2</sup>          | 100m <sup>2</sup> GLA                        | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size = | m <sup>2</sup>          | R 0         | R 0         | R 0         |             |             |       |
| 130  | Motor related                             |                                              |                   |                   |               |               |                |        |                         |             |             |             |             |             |       |
| 131  | Filling Station                           | Station                                      | 0.3               | 0.25              | R 759         | R 1,720       | # Stations =   | size = | m <sup>2</sup>          | R 0         | R 0         |             |             |             |       |

# Phase II

## Bulk Service Contribution: Sub-division, Land-use Changes & Consent use

| Code                       | Land Use                                  | Sub-division, Land-use Changes & Consent use |                   |                 |          | Land use after |         |        |                          | Total Sewer  |
|----------------------------|-------------------------------------------|----------------------------------------------|-------------------|-----------------|----------|----------------|---------|--------|--------------------------|--------------|
|                            |                                           | Unit                                         | WATER             | SEWER           |          |                |         |        |                          |              |
|                            |                                           | Demand KJ per day                            | Runoff KJ per day | B sewer R 6,880 |          |                |         |        |                          |              |
| 0                          | Vacant/Open Space                         |                                              |                   |                 |          |                |         |        |                          |              |
| 01                         | POS / AH / Road Reserve                   | ha                                           | 0                 | 0               | R 0      | ha             |         | size = | m <sup>3</sup>           |              |
| 10                         | Residential                               |                                              |                   |                 |          |                |         |        |                          |              |
| 10a                        | Res 1 (p = 4 001m <sup>2</sup> )          | dwellg                                       | 3.2               | 2               | R 13,760 | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 10b                        | Res 1 (2 001 - 4 000m <sup>2</sup> )      | dwellg                                       | 3.2               | 2               | R 13,760 | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 10c                        | Res 1 (1 751 - 2 000m <sup>2</sup> )      | dwellg                                       | 2.8               | 1.8             | R 12,384 | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 10d                        | Res 1 (1 501 - 1 750m <sup>2</sup> )      | dwellg                                       | 2.3               | 1.6             | R 11,008 | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 10e                        | Res 1 (1 001 - 1 500m <sup>2</sup> )      | dwellg                                       | 1.8               | 1.35            | R 9,288  | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 10f                        | Res 1 (751 - 1 000m <sup>2</sup> )        | dwellg                                       | 1.2               | 1               | R 6,880  | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 10g                        | Res 1 (551 - 750m <sup>2</sup> )          | dwellg                                       | 1                 | 0.85            | R 5,848  | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 10h                        | Res 1 (450 - 550m <sup>2</sup> )          | dwellg                                       | 0.8               | 0.7             | R 4,816  | # dwellings =  | 2,372.0 | size = | m <sup>3</sup>           | R 11,423,552 |
| 10i                        | Res 1 Give Away/ROP (<450m <sup>2</sup> ) | dwellg                                       | 0.6               | 0.5             | R 3,440  | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 10j                        | 2 <sup>nd</sup> dwelling / granny flat    | dwellg                                       | 0.8               | 0.7             | R 4,816  | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 11                         | Res 2 Duplexes & Semidetached             | dwellg                                       | 0.8               | 0.65            | R 4,472  | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 12                         | Res 3 & 4 Plots                           | dwellg                                       | 0.6               | 0.5             | R 3,440  | # dwellings =  | 1,300.0 | size = | m <sup>3</sup>           | R 4,472,000  |
| 13                         | Retirement Village                        | dwellg                                       | 0.6               | 0.65            | R 4,472  | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 15                         | Holiday home                              | dwellg                                       | 0.8               | 0.65            | R 4,472  | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 16                         | Mobile home or park                       | dwellg                                       | 0.6               | 0.5             | R 3,440  | # dwellings =  |         | size = | m <sup>3</sup>           | R 0          |
| 20                         | Accommodation                             |                                              |                   |                 |          |                |         |        |                          |              |
| 21                         | Hotel                                     | room                                         | 0.6               | 0.5             | R 3,440  | # rooms =      |         | size = | m <sup>3</sup>           | R 0          |
| 22                         | Guest house                               | room                                         | 0.6               | 0.5             | R 3,440  | # rooms =      |         | size = | m <sup>3</sup>           | R 0          |
| 23                         | Boarding house                            | room                                         | 0.6               | 0.5             | R 3,440  | # rooms =      |         | size = | m <sup>3</sup>           | R 0          |
| 24                         | Economy hotel                             | room                                         | 0.6               | 0.5             | R 3,440  | # rooms =      |         | size = | m <sup>3</sup>           | R 0          |
| 25                         | Hotel or Lodge                            | room                                         | 0.6               | 0.5             | R 3,440  | # rooms =      |         | size = | m <sup>3</sup>           | R 0          |
| 26                         | Motel                                     | room                                         | 0.6               | 0.5             | R 3,440  | # rooms =      |         | size = | m <sup>3</sup>           | R 0          |
| 30                         | Community facilities                      |                                              |                   |                 |          |                |         |        |                          |              |
| 31                         | Public Library                            | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 40                         | Educational                               |                                              |                   |                 |          |                |         |        |                          |              |
| 41                         | Crèche or Nursery School                  | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | 5,460.0 m <sup>3</sup>   | R 93,912     |
| 42                         | Preparatory School                        | pupl                                         | 0.2               | 0.15            | R 1,032  | # pupils =     |         | size = | m <sup>3</sup>           | R 0          |
| 43                         | Primary school                            | pupl                                         | 0.2               | 0.15            | R 1,032  | # pupils =     |         | size = | 84,060.0 m <sup>3</sup>  | R 0          |
| 44                         | Secondary school                          | pupl                                         | 0.2               | 0.15            | R 1,032  | # pupils =     |         | size = | m <sup>3</sup>           | R 0          |
| 45                         | Day-care / After-school centre            | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 46                         | Private school                            | pupl                                         | 0.2               | 0.15            | R 1,032  | # pupils =     |         | size = | m <sup>3</sup>           | R 0          |
| 47                         | Technical College                         | student                                      | 0.2               | 0.15            | R 1,032  | # students =   |         | size = | m <sup>3</sup>           | R 0          |
| 48                         | University                                | student                                      | 0.2               | 0.15            | R 1,032  | # students =   |         | size = | m <sup>3</sup>           | R 0          |
| 50                         | Places of Public Worship                  |                                              |                   |                 |          |                |         |        |                          |              |
| 51                         | Church (peak on Sunday)                   | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | 23,520.0 m <sup>3</sup>  | R 404,544    |
| 52                         | Synagogue (Friday PM peak)                | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 60                         | Places of Refreshment                     |                                              |                   |                 |          |                |         |        |                          |              |
| 61                         | Restaurants                               | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 62                         | Drive-in Restaurant                       | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 63                         | Take-away / Fast Food                     | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 70                         | Recreation & Entertainment                |                                              |                   |                 |          |                |         |        |                          |              |
| 71                         | Cinema                                    | seat                                         | 0.02              | 0.02            | R 136    | # seats =      |         | size = | m <sup>3</sup>           | R 0          |
| 80                         | Sport                                     |                                              |                   |                 |          |                |         |        |                          |              |
| 81                         | Fitness centre / Gym                      | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 82                         | Golf course                               | ha                                           | 0                 | 0               | R 0      | ha =           |         | size = | m <sup>3</sup>           | R 0          |
| 83                         | Sport stadiums                            | seat                                         | 0.2               | 0.16            | R 1,238  | # seats =      |         | size = | m <sup>3</sup>           | R 0          |
| 84                         | Tennis Courts                             | court                                        | 0.05              | 0.04            | R 275    | # courts =     |         | size = | m <sup>3</sup>           | R 0          |
| 90                         | Medical                                   |                                              |                   |                 |          |                |         |        |                          |              |
| 91                         | Private hospital                          | bed                                          | 0.2               | 0.16            | R 1,101  | # beds =       |         | size = | m <sup>3</sup>           | R 0          |
| 92                         | Public hospital                           | bed                                          | 0.2               | 0.16            | R 1,101  | # beds =       |         | size = | m <sup>3</sup>           | R 0          |
| 93                         | Nursing home                              | bed                                          | 0.2               | 0.16            | R 1,101  | # beds =       |         | size = | m <sup>3</sup>           | R 0          |
| 94                         | Medical Centre                            | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 95                         | CBD medical office                        | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 96                         | Suburban medical office                   | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 97                         | Clinic                                    | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 98                         | Dentist                                   | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 100                        | Offices                                   |                                              |                   |                 |          |                |         |        |                          |              |
| 101                        | CBD offices                               | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 102                        | Sub-urban offices                         | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 103                        | Research & Development Centres            | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 110                        | Businesses                                |                                              |                   |                 |          |                |         |        |                          |              |
| 111                        | Conference Centres                        | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 112                        | Financial (Banks etc)                     | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | 194,820.0 m <sup>3</sup> | R 13,010,080 |
| 113                        | Building materials                        | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 114                        | Bakery / Dairy                            | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 115                        | Hardware/Paint Shop                       | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 116                        | Nursery                                   | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 120                        | Shoppings Centres                         |                                              |                   |                 |          |                |         |        |                          |              |
| 121a                       | Local < 1 000m <sup>2</sup>               | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 121b                       | Local < 2 500m <sup>2</sup>               | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 122a                       | Neighbourhood < 5 000m <sup>2</sup>       | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 122b                       | Neighbourhood < 10 000m <sup>2</sup>      | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 122c                       | Neighbourhood < 15 000m <sup>2</sup>      | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 123a                       | Community < 20 000m <sup>2</sup>          | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 123b                       | Community < 30 000m <sup>2</sup>          | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 124a                       | Regional < 50 000m <sup>2</sup>           | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 124b                       | Regional < 75 000m <sup>2</sup>           | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 124c                       | Regional < 100 000m <sup>2</sup>          | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 130                        | Motor related                             |                                              |                   |                 |          |                |         |        |                          |              |
| 131                        | Filling Station                           | Station                                      | 0.3               | 0.25            | R 1,720  | # Stations =   |         | size = | m <sup>3</sup>           | R 0          |
| 132                        | Garage                                    | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 133                        | New & Used car sales                      | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 134                        | Vehicle spares / tyres                    | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 140                        | Commercial                                |                                              |                   |                 |          |                |         |        |                          |              |
| 141                        | Warehousing                               | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 142                        | Wholesale                                 | 100m <sup>2</sup> GLA                        | 0.3               | 0.25            | R 1,720  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 150                        | Industrial                                |                                              |                   |                 |          |                |         |        |                          |              |
| 151                        | Light Industries                          | 100m <sup>2</sup> GLA                        | 0.83              | 0.66            | R 4,541  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 152                        | Factory                                   | 100m <sup>2</sup> GLA                        | 0.83              | 0.66            | R 4,541  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 153                        | Transport undertaking                     | 100m <sup>2</sup> GLA                        | 0.83              | 0.66            | R 4,541  | ha =           |         | size = | m <sup>3</sup>           | R 0          |
| 154                        | Industrial Park                           | 100m <sup>2</sup> GLA                        | 0.83              | 0.66            | R 4,541  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 155                        | Small Industries < 10 000m <sup>2</sup>   | 100m <sup>2</sup> GLA                        | 0.83              | 0.66            | R 4,541  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| 156                        | Medium Industries < 35 000m <sup>2</sup>  | 100m <sup>2</sup> GLA                        | 0.83              | 0.66            | R 4,541  | GLA =          |         | size = | m <sup>3</sup>           | R 0          |
| Total project size after = |                                           |                                              |                   |                 |          |                |         |        |                          | R 19,744,912 |

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# Phase III

## Bulk Service Contribution: Sub-division, Land-use Changes & Consent use

|      |                                        | Sub-division, Land-use Changes & Consent use |                   |                   |               |               | Land use after |         |        |             |             |             |              |       |       |       |             |             |
|------|----------------------------------------|----------------------------------------------|-------------------|-------------------|---------------|---------------|----------------|---------|--------|-------------|-------------|-------------|--------------|-------|-------|-------|-------------|-------------|
|      |                                        | Unit                                         | WATER             | SEWER             | CONTRIBUTION  |               |                |         |        |             |             |             |              |       |       |       |             |             |
| Code | Land Use                               |                                              | Demand KJ per day | Runoff KJ per day | Water R 2,530 | Sewer R 8,880 |                |         |        |             |             |             |              | Water | Sewer | Total | Total Water | Total Sewer |
| 0    | Vacant/Open Space                      |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 01   | POS / A.H. / Road Reserve              | ha                                           | 0                 | 0                 | R 0           | R 0           | ha             |         | size = | m²          |             |             |              |       |       |       |             |             |
| 10   | Residential                            |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 10a  | Res 1 (>= 4 000m²)                     | dwelling                                     | 3.2               | 2                 | R 8,098       | R 13,760      | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 10b  | Res 1 (2 001 - 4 000m²)                | dwelling                                     | 3.2               | 2                 | R 8,098       | R 13,760      | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 10c  | Res 1 (1751 - 2 000m²)                 | dwelling                                     | 2.6               | 1.6               | R 7,084       | R 12,384      | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 10d  | Res 1 (1 501 - 1 750m²)                | dwelling                                     | 2.3               | 1.6               | R 5,819       | R 11,008      | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 10e  | Res 1 (1 001 - 1 500m²)                | dwelling                                     | 1.8               | 1.35              | R 4,554       | R 9,288       | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 10f  | Res 1 (751 - 1 000m²)                  | dwelling                                     | 1.2               | 1                 | R 3,036       | R 6,880       | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 10g  | Res 1 (551 - 750m²)                    | dwelling                                     | 1                 | 0.85              | R 2,530       | R 5,848       | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 10h  | Res 1 (450 - 550m²)                    | dwelling                                     | 0.8               | 0.7               | R 2,024       | R 4,816       | # dwellings =  | 1,834.0 | size = | m²          | R 3,307,218 | R 7,869,344 | R 11,178,560 |       |       |       | R 3,307,218 | R 7,869,344 |
| 10i  | Res 1 Give Away/RDP (<450m²)           | dwelling                                     | 0.6               | 0.5               | R 1,518       | R 3,440       | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 10j  | 2 <sup>nd</sup> dwelling / granny flat | dwelling                                     | 0.8               | 0.7               | R 2,024       | R 4,816       | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 11   | Res 2 Duplexes & Simplexes             | dwelling                                     | 0.8               | 0.85              | R 2,024       | R 4,472       | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 12   | Res 3 & 4 Flats                        | dwelling                                     | 0.6               | 0.5               | R 1,518       | R 3,440       | # dwellings =  | 533.0   | size = | m²          | R 809,094   | R 1,833,520 | R 2,642,614  |       |       |       | R 809,094   | R 1,833,520 |
| 13   | Retirement Village                     | dwelling                                     | 0.6               | 0.85              | R 1,518       | R 4,472       | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 15   | Holiday home                           | dwelling                                     | 0.8               | 0.85              | R 2,024       | R 4,472       | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 18   | Mobile home or park                    | dwelling                                     | 0.6               | 0.5               | R 1,518       | R 3,440       | # dwellings =  |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 20   | Accommodation                          |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 21   | Hostel                                 | room                                         | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =      |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 22   | Guest house                            | room                                         | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =      |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 23   | Boarding house                         | room                                         | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =      |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 24   | Economy hotel                          | room                                         | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =      |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 25   | Hotel or Lodge                         | room                                         | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =      |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 26   | Motel                                  | room                                         | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =      |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 30   | Community facilities                   |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 31   | Public Library                         | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 40   | Educational                            |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 41   | Crèche or Nursery School               | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | 5,160.0 m²  | R 39,184    | R 88,752    | R 127,936    |       |       |       | R 39,184    | R 88,752    |
| 42   | Preparatory School                     | pupil                                        | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =     |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 43   | Primary school                         | pupil                                        | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =     |         | size = | 42,420.0 m² | R 214,645   | R 437,774   | R 652,420    |       |       |       | R 214,645   | R 437,774   |
| 44   | Secondary school                       | pupil                                        | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =     |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 45   | Day-care / After-school centre         | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 46   | Private school                         | pupil                                        | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =     |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 47   | Technical College                      | student                                      | 0.2               | 0.15              | R 506         | R 1,032       | # students =   |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 48   | University                             | student                                      | 0.2               | 0.15              | R 506         | R 1,032       | # students =   |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 50   | Places of Public Worship               |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 51   | Church (peak on Sunday)                | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 52   | Synagogue (Friday PM peak)             | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 60   | Places of Refreshment                  |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 81   | Restaurants                            | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 82   | Drive-in Restaurant                    | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 83   | Take-away / Fast Food                  | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 70   | Recreation & Entertainment             |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 71   | Cinema                                 | seat                                         | 0.02              | 0.02              | R 51          | R 138         | # seats =      |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 80   | Sport                                  |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 81   | Fitness centre / Gym                   | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 82   | Golf course                            | ha                                           | 0                 | 0                 | R 0           | R 0           | ha =           |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 83   | Sport stadiums                         | seat                                         | 0.2               | 0.18              | R 506         | R 1,238       | # seats =      |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 84   | Tennis Courts                          | court                                        | 0.05              | 0.04              | R 127         | R 275         | # courts =     |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 90   | Medical                                |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 91   | Private hospital                       | bed                                          | 0.2               | 0.16              | R 506         | R 1,101       | # beds =       |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 92   | Public hospital                        | bed                                          | 0.2               | 0.16              | R 506         | R 1,101       | # beds =       |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 93   | Nursing home                           | bed                                          | 0.2               | 0.16              | R 506         | R 1,101       | # beds =       |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 94   | Medical Centre                         | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 95   | CBO medical office                     | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 96   | Suburban medical office                | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 97   | Clinic                                 | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 98   | Dentist                                | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 100  | Offices                                |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 101  | CBO offices                            | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 102  | Sub-urban offices                      | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 103  | Research & Development Centres         | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 110  | Businesses                             |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 111  | Conference Centres                     | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 112  | Financial (Banks etc)                  | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 113  | Building materials                     | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 114  | Bakery / Dairy                         | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 115  | Hardware/Paint Shop                    | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 118  | Nursery                                | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 120  | Shopping Centres                       |                                              |                   |                   |               |               |                |         |        |             |             |             |              |       |       |       |             |             |
| 121a | Local < 1 000m²                        | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 121b | Local < 2 500m²                        | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 122a | Neighbourhood < 5 000m²                | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 122b | Neighbourhood < 10 000m²               | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 122c | Neighbourhood < 15 000m²               | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = | m²          | R 0         | R 0         | R 0          |       |       |       | R 0         | R 0         |
| 123a | Community < 20 000m²                   | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          |         | size = |             |             |             |              |       |       |       |             |             |

# Phase IV

## Bulk Service Contribution: Sub-division, Land-use Changes & Consent use

| Sub-Division, Land-use Changes & Consent use |                                           |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
|----------------------------------------------|-------------------------------------------|-----------------------|-------------------|-------------------|---------------|---------------|---------------|----------------|--------------------------|--------|--|-------------|--------------|--------------|--|-------------|--------------|--|--|--|
|                                              |                                           | WATER                 |                   | SEWER             |               | CONTRIBUTION  |               | Land use after |                          |        |  |             |              |              |  |             |              |  |  |  |
|                                              |                                           |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| Code                                         | Land Use                                  |                       | Demand KI per day | Runoff KI per day | Water R 2,530 | Sewer R 6,880 |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 0                                            | Vacant/Open Space                         |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 01                                           | POS / A.H. / Road Reserve                 | ha                    | 0                 | 0                 | R 0           | R 0           | ha            |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 10                                           | Residential                               |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 10a                                          | Res 1 (>= 4 000m <sup>2</sup> )           | dwelling              | 3.2               | 2                 | R 8,096       | R 13,760      | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 10b                                          | Res 1 (2 001 - 4 000m <sup>2</sup> )      | dwelling              | 3.2               | 2                 | R 8,096       | R 13,760      | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 10c                                          | Res 1 (1 751 - 2 000m <sup>2</sup> )      | dwelling              | 2.8               | 1.8               | R 7,084       | R 12,384      | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 10d                                          | Res 1 (1 501 - 1 750m <sup>2</sup> )      | dwelling              | 2.3               | 1.8               | R 5,818       | R 11,008      | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 10e                                          | Res 1 (1 001 - 1 500m <sup>2</sup> )      | dwelling              | 1.8               | 1.35              | R 4,554       | R 8,288       | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 10f                                          | Res 1 (751 - 1 000m <sup>2</sup> )        | dwelling              | 1.2               | 1                 | R 3,036       | R 5,880       | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 10g                                          | Res 1 (551 - 750m <sup>2</sup> )          | dwelling              | 1                 | 0.85              | R 2,530       | R 5,848       | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 10i                                          | Res 1 (450 - 550m <sup>2</sup> )          | dwelling              | 0.8               | 0.7               | R 2,024       | R 4,816       | # dwellings = | size =         | m <sup>2</sup>           | 3,04.0 |  | R 6,161,059 | R 14,658,924 | R 20,820,960 |  | R 6,161,059 | R 14,659,904 |  |  |  |
| 10j                                          | Res 1 Give Away/RDP (<450m <sup>2</sup> ) | dwelling              | 0.6               | 0.5               | R 1,518       | R 3,440       | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 10k                                          | 2 <sup>nd</sup> dwelling / granny flat    | dwelling              | 0.8               | 0.7               | R 2,024       | R 4,816       | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 11                                           | Res 2 Duplexes & Simplexes                | dwelling              | 0.8               | 0.65              | R 2,024       | R 4,472       | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 12                                           | Res 3 & 4 Flats                           | dwelling              | 0.6               | 0.5               | R 1,518       | R 3,440       | # dwellings = | size =         | m <sup>2</sup>           | 613.0  |  | R 930,534   | R 2,108,720  | R 3,039,254  |  | R 930,534   | R 2,108,720  |  |  |  |
| 13                                           | Retirement Village                        | dwelling              | 0.6               | 0.65              | R 1,518       | R 4,472       | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 15                                           | Holiday home                              | dwelling              | 0.8               | 0.65              | R 2,024       | R 4,472       | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 16                                           | Mobile home or park                       | dwelling              | 0.6               | 0.5               | R 1,518       | R 3,440       | # dwellings = | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 20                                           | Accommodation                             |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 21                                           | Hotel                                     | room                  | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =     | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 22                                           | Guest house                               | room                  | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =     | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 23                                           | Boarding house                            | room                  | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =     | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 24                                           | Economy hotel                             | room                  | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =     | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 25                                           | Hotel or Lodge                            | room                  | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =     | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 26                                           | Motel                                     | room                  | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =     | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 30                                           | Community facilities                      |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 31                                           | Public Library                            | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 40                                           | Educational                               |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 41                                           | Crèche or Nursery School                  | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | 11,100.0 m <sup>2</sup>  |        |  | R 84,249    | R 190,920    | R 275,169    |  | R 84,249    | R 190,920    |  |  |  |
| 42                                           | Preparatory School                        | pupil                 | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =    | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 43                                           | Primary school                            | pupil                 | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =    | size =         | 119,480.0 m <sup>2</sup> |        |  | R 804,468   | R 1,232,827  | R 1,837,295  |  | R 804,468   | R 1,232,827  |  |  |  |
| 44                                           | Secondary school                          | pupil                 | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =    | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 45                                           | Day-care / After-school centre            | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 46                                           | Private school                            | pupil                 | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =    | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 47                                           | Technical College                         | student               | 0.2               | 0.15              | R 506         | R 1,032       | # students =  | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 48                                           | University                                | student               | 0.2               | 0.15              | R 506         | R 1,032       | # students =  | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 50                                           | Places of Public Worship                  |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 51                                           | Church (week on Sunday)                   | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | 8,450.0 m <sup>2</sup>   |        |  | R 84,211    | R 145,512    | R 209,723    |  | R 84,211    | R 145,512    |  |  |  |
| 52                                           | Synagogue (Friday PM peak)                | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 60                                           | Places of Refreshment                     |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 61                                           | Restaurants                               | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 62                                           | Drive-in Restaurant                       | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 63                                           | Take-away / Fast Food                     | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 70                                           | Recreation & Entertainment                |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 71                                           | Cinema                                    | seat                  | 0.02              | 0.02              | R 51          | R 138         | # seats =     | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 80                                           | Sport                                     |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 81                                           | Fitness centre / Gym                      | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 82                                           | Golf course                               | ha                    | 0                 | 0                 | R 0           | R 0           | ha =          | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 83                                           | Sport stadiums                            | seat                  | 0.2               | 0.18              | R 506         | R 1,238       | # seats =     | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 84                                           | Tennis Courts                             | court                 | 0.05              | 0.04              | R 127         | R 276         | # courts =    | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 90                                           | Medical                                   |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 91                                           | Private hospital                          | bed                   | 0.2               | 0.16              | R 506         | R 1,101       | # beds =      | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 92                                           | Public hospital                           | bed                   | 0.2               | 0.16              | R 506         | R 1,101       | # beds =      | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 93                                           | Nursing home                              | bed                   | 0.2               | 0.16              | R 506         | R 1,101       | # beds =      | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 94                                           | Medical Centre                            | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 95                                           | CBD medical office                        | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 96                                           | Suburban medical office                   | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 97                                           | Clinic                                    | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 98                                           | Dentist                                   | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 100                                          | Offices                                   |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 101                                          | CBD offices                               | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 102                                          | Sub-urban offices                         | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 110                                          | Research & Development Centres            | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 110                                          | Businesses                                |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 111                                          | Conference Centres                        | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 112                                          | Financial (Banks etc)                     | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 113                                          | Building materials                        | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 114                                          | Bakery / Dairy                            | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 115                                          | Hardware/Paint Shop                       | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 116                                          | Nursery                                   | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 120                                          | Shopping Centres                          |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |
| 121a                                         | Local < 1 000m <sup>2</sup>               | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 121b                                         | Local < 2 500m <sup>2</sup>               | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 122a                                         | Neighbourhood < 5 000m <sup>2</sup>       | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 122b                                         | Neighbourhood < 10 000m <sup>2</sup>      | 100m <sup>2</sup> GLA | 0.3               | 0.25              | R 759         | R 1,720       | GLA =         | size =         | m <sup>2</sup>           |        |  | R 0         | R 0          | R 0          |  | R 0         | R 0          |  |  |  |
| 122c                                         | Neighbourhood < 15 1                      |                       |                   |                   |               |               |               |                |                          |        |  |             |              |              |  |             |              |  |  |  |

# Phase V

## Bulk Service Contribution: Sub-division, Land-use Changes & Consent use

| Code                       | Land Use                       | Sub-division, Land-use Changes & Consent use |                   |                   |               |               | Land use after |                |             | Water       | Sewer        | Total        | Total Water | Total Sewer  |
|----------------------------|--------------------------------|----------------------------------------------|-------------------|-------------------|---------------|---------------|----------------|----------------|-------------|-------------|--------------|--------------|-------------|--------------|
|                            |                                | Unit                                         | WATER             | SEWER             | CONTRIBUTION  |               | Water          | Sewer          |             |             |              |              |             |              |
|                            |                                |                                              | Demand KI per day | Runoff KI per day | Water R 2,530 | Sewer R 8,880 |                |                |             |             |              |              |             |              |
| 0                          | Vacant/Open Space              |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 01                         | POS / A.H. / Road Reserve      | ha                                           | 0                 | 0                 | R 0           | R 0           | ha             | size           | m²          |             |              |              |             |              |
| 10                         | Residential                    |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 10a                        | Res 1 (>= 4 000m²)             | dwelling                                     | 3.2               | 2                 | R 6,096       | R 13,760      | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 10b                        | Res 1 (2 001 - 4 000m²)        | dwelling                                     | 3.2               | 2                 | R 6,096       | R 13,760      | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 10c                        | Res 1 (1 751 - 2 000m²)        | dwelling                                     | 2.8               | 1.8               | R 7,084       | R 12,384      | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 10d                        | Res 1 (1 501 - 1 750m²)        | dwelling                                     | 2.3               | 1.6               | R 5,818       | R 11,008      | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 10e                        | Res 1 (1 001 - 1 500m²)        | dwelling                                     | 1.8               | 1.35              | R 4,554       | R 9,288       | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 10f                        | Res 1 (751 - 1 000m²)          | dwelling                                     | 1.2               | 1                 | R 3,036       | R 6,880       | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 10g                        | Res 1 (501 - 750m²)            | dwelling                                     | 1                 | 0.85              | R 2,530       | R 5,848       | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 10h                        | Res 1 (450 - 550m²)            | dwelling                                     | 0.8               | 0.7               | R 2,024       | R 4,616       | # dwellings =  | 2,081.0 size = | m²          | R 4,211,844 | R 10,022,098 | R 14,234,040 | R 4,211,844 | R 10,022,098 |
| 10i                        | Res 1 Give Away/RDP (<450m²)   | dwelling                                     | 0.6               | 0.5               | R 1,518       | R 3,440       | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 10j                        | 2nd dwelling / granny flat     | dwelling                                     | 0.8               | 0.7               | R 2,024       | R 4,616       | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 11                         | Res 2 Duplexes & Simplexes     | dwelling                                     | 0.8               | 0.65              | R 2,024       | R 4,472       | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 12                         | Res 3 & 4 Flats                | dwelling                                     | 0.6               | 0.5               | R 1,518       | R 3,440       | # dwellings =  | 197.0 size =   | m²          | R 299,048   | R 677,680    | R 976,728    | R 299,048   | R 677,680    |
| 13                         | Retirement Village             | dwelling                                     | 0.6               | 0.85              | R 1,518       | R 4,472       | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 15                         | Holiday home                   | dwelling                                     | 0.6               | 0.85              | R 2,024       | R 4,472       | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 16                         | Mobile home or park            | dwelling                                     | 0.6               | 0.5               | R 1,518       | R 3,440       | # dwellings =  | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 20                         | Accommodation                  |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 21                         | Hostel                         | room                                         | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =      | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 22                         | Guest house                    | room                                         | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =      | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 23                         | Boarding house                 | room                                         | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =      | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 24                         | Economy hotel                  | room                                         | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =      | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 25                         | Hotel or Lodge                 | room                                         | 0.8               | 0.5               | R 1,518       | R 3,440       | # rooms =      | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 26                         | Motel                          | room                                         | 0.6               | 0.5               | R 1,518       | R 3,440       | # rooms =      | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 30                         | Community facilities           |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 31                         | Public Library                 | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 40                         | Educational                    |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 41                         | Crèche or Nursery School       | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | 1,260.0 m²  | R 9,563     | R 21,872     | R 31,235     | R 9,563     | R 21,872     |
| 42                         | Preparatory School             | pupil                                        | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =     | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 43                         | Primary school                 | pupil                                        | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =     | size =         | 81,780.0 m² | R 413,807   | R 843,970    | R 1,257,778  | R 413,807   | R 843,970    |
| 44                         | Secondary school               | pupil                                        | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =     | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 45                         | Day-care / After-school centre | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 46                         | Private school                 | pupil                                        | 0.2               | 0.15              | R 506         | R 1,032       | # pupils =     | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 47                         | Technical College              | student                                      | 0.2               | 0.15              | R 506         | R 1,032       | # students =   | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 48                         | University                     | student                                      | 0.2               | 0.15              | R 506         | R 1,032       | # students =   | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 50                         | Places of Public Worship       |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 51                         | Church (peak on Sunday)        | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | 17,280.0 m² | R 131,155   | R 297,216    | R 428,371    | R 131,155   | R 297,216    |
| 52                         | Synagogue (Friday PM peak)     | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 60                         | Places of Refreshment          |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 61                         | Restaurants                    | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 62                         | Drive-in Restaurant            | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 63                         | Take-away / Fast Food          | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 70                         | Recreation & Entertainment     |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 71                         | Cinema                         | seat                                         | 0.02              | 0.02              | R 51          | R 138         | # seats =      | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 80                         | Sport                          |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 81                         | Fitness centre / Gym           | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 82                         | Golf course                    | ha                                           | 0                 | 0                 | R 0           | R 0           | ha =           | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 83                         | Sport stadiums                 | seat                                         | 0.2               | 0.18              | R 506         | R 1,238       | # seats =      | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 84                         | Tennis Courts                  | court                                        | 0.05              | 0.04              | R 127         | R 275         | # courts =     | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 90                         | Medical                        |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 91                         | Private hospital               | bed                                          | 0.2               | 0.16              | R 506         | R 1,101       | # beds =       | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 92                         | Public hospital                | bed                                          | 0.2               | 0.16              | R 506         | R 1,101       | # beds =       | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 93                         | Nursing home                   | bed                                          | 0.2               | 0.16              | R 506         | R 1,101       | # beds =       | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 94                         | Medical Centre                 | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 95                         | CBD medical office             | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 96                         | Suburban medical office        | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 97                         | Clinic                         | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 98                         | Dental                         | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 100                        | Offices                        |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 101                        | CBD offices                    | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 102                        | Sub-urban offices              | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 103                        | Research & Development Centres | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 110                        | Businesses                     |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 111                        | Conference Centres             | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 112                        | Financial (Banks etc)          | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | 12,900.0 m² | R 97,911    | R 221,880    | R 319,791    | R 97,911    | R 221,880    |
| 113                        | Building materials             | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 114                        | Bakery / Dairy                 | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 115                        | Hardware/Paint Shop            | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 116                        | Nursery                        | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 120                        | Shopping Centres               |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 121a                       | Local < 1 000m²                | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 121b                       | Local < 2 500m²                | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 122a                       | Neighbourhood < 5 000m²        | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 122b                       | Neighbourhood < 10 000m²       | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 122c                       | Neighbourhood < 15 000m²       | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 123a                       | Community < 20 000m²           | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 123b                       | Community < 30 000m²           | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 124a                       | Regional < 50 000m²            | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 124b                       | Regional < 75 000m²            | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 124c                       | Regional < 100 000m²           | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 130                        | Motor related                  |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 131                        | Filling Station                | Station                                      | 0.3               | 0.25              | R 759         | R 1,720       | # Stations =   | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 132                        | Garage                         | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 133                        | New & Used car sales           | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 134                        | Vehicle spares / tyres         | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 140                        | Commercial                     |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 141                        | Warehousing                    | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 142                        | Wholesale                      | 100m² GLA                                    | 0.3               | 0.25              | R 759         | R 1,720       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 150                        | Industrial                     |                                              |                   |                   |               |               |                |                |             |             |              |              |             |              |
| 151                        | Light Industries               | 100m² GLA                                    | 0.83              | 0.68              | R 2,100       | R 4,541       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 152                        | Factory                        | 100m² GLA                                    | 0.83              | 0.68              | R 2,100       | R 4,541       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 153                        | Transport undertaking          | 100m² GLA                                    | 0.83              | 0.68              | R 2,100       | R 4,541       | ha =           | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 154                        | Industrial Park                | 100m² GLA                                    | 0.83              | 0.68              | R 2,100       | R 4,541       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 155                        | Small Industries < 10 000m²    | 100m² GLA                                    | 0.83              | 0.68              | R 2,100       | R 4,541       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| 156                        | Medium Industries < 35 000m²   | 100m² GLA                                    | 0.83              | 0.68              | R 2,100       | R 4,541       | GLA =          | size =         | m²          | R 0         | R 0          | R 0          | R 0         | R 0          |
| Total project size after = |                                |                                              |                   |                   |               |               |                |                |             | R 5,163,426 | R 12,084,514 | R 17,247,940 | R 5,163,426 | R 12,084,514 |

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# ANNEXURE B



## POLICY ON ENGINEERING SERVICES CONTRIBUTION CHARGES

Version 2 November 2010

### TABLE OF CONTENT

1. Introduction
2. Definitions
3. Purpose of Policy
4. Authority to Levy Contributions
5. Defining Engineering services
6. Policy Principles

26

## 1. INTRODUCTION

**Municipalities have the primary responsibility to provide for the availability of engineering services such as water, sanitation, electricity, roads and storm-water, for development. This responsibility is embodied in legislation as well as policy statements.**

When a new township development or the development of erven occurs, engineering services have to be available for the development in order to meet the demand generated by such a development. This could involve the installation of new and upgrade of existing water, sanitation, electricity, roads and stormwater infrastructure. Normally these services would be available as they have been installed in accordance with the engineering departments' planning for future developments. Given the fact that the existing ratepayers have borne the cost of providing the existing services, the municipality will recover the cost of providing new services in the future from developers on a pro rata basis, based on the zoning. The funds recovered in this way will be used to develop and extend services or to create capacity on the capital budget to fund these and future developments.

The funds recovered in this way will be used to develop and extend services or to create capacity on the capital budget to fund these and future developments. Council should therefore ring-fence these contributions into a bulk services fund so it can only be used for this purpose.

This document sets out the formulation of a detailed policy for the levying of contributions for the provision of engineering services. The policy is based on the "Guidelines for the Provision of Engineering Services in Residential Townships" published by the (then) Department of Community Development in 1983; but as amended for the local circumstances within the Emfuleni Local Municipality.

## 2. DEFINITIONS

**"ELM"** means Emfuleni Local Municipality;

**"Design Standards"** means the standards for the provision of a specific engineering service as approved by the applicable Manager of Engineering Services according to his delegated powers and as revised by him from time to time ;

**"Development"** means any new townships, subdivision, division, rezoning, consent uses granted on any erf or portion of land;

**"Development Area"** means an area defined or adopted by the ELM in terms of the IDP, which is ripe for development;

**"Engineering Services"** means all essential services and includes the provision and construction of streets, roads and storm-water drainage systems;

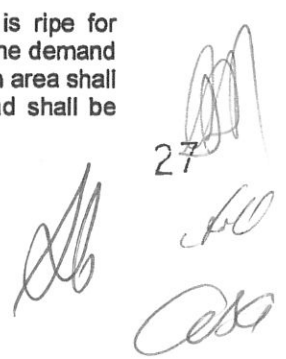
**"Essential services"** means the provision of water, electricity and sanitation (waste water/sewerage);

**"GPES"** means the "Guidelines for the Provision of Engineering Services in Residential Townships" published by the Department of Community Development in 1983 as amended from time to time;

**"IDP"** means the Integrated Development Plan of the ELM;

**"Ordinance"** means the Town-Planning and Townships Ordinance, 1986 (Ordinance 15 of 1986) and the regulations thereto;

**"Priority Area"** means an area defined or adopted by the ELM, which is ripe for development, where main services have already been installed and, where the demand justifies the services to be upgraded to keep pace with development. Such an area shall be large enough to cater for the needs of the estimated development and shall be revised regularly;

27  


**"Roads"** means Class 3 and higher order roads as defined in the GPES;

**"Streets"** means Class 4 and 5 streets as defined in the GPES;

**"Link Engineering Service/s"** means those services which fall outside the boundary of the land for which application is made and which are required to connect the internal services to the external engineering services;

**"External Engineering Service"** means those services which form part of the over-all reticulation system of the municipality or service provider and which also serve any other development for which application is made. Provided that where a service within the boundaries of any land under application will serve it and any other land, the provisions and cost thereof shall be considered and internal service to the extent to which it serve the land under application and an external service to the extent that it serve the other land.

**"Unit Contribution Cost Rate"** means a unit monetary amount determined by the Council in accordance to a study to redeem a capital amount used to provide Engineering Services as determined by this policy.

### 3. OBJECTIVES AND PURPOSE OF THE POLICY

3.1 The objectives of levying Engineering Services Contribution are to:

- Ensure that an equitable portion of the funding cost to upgrade the existing Engineering Services infrastructure or provide future bulk infrastructure is recovered from the relevant property developers.
- Build up reasonable levels of capital to contribute to the construction of new infrastructure when usage of existing infrastructure approaches design capacity.
- It is accepted that existing property owners already contributed (to a certain extent) towards the capital cost of Engineering Services infrastructure at the time of their respective developments in the past.

3.2 The purpose of a policy on the provision of engineering services is primarily to align the growth and development of the municipality with the long term goals and objectives set out in the Integrated development Plan (IDP).

The main aims of the Policy are thus summarized as :

- To stimulate and enhance economic growth and development in accordance with the IDP and the vision of the ELM; to ensure the upliftment of the living standards of all its people.
- To enable the provisioning of engineering services required by new developments in an integrated and sustainable manner, without imposing an additional burden on the existing ratepayers; and
- To stimulate development within ELM in accordance with the vision of the IDP specifically in predetermined areas by introducing incentives which will stimulate the local economy, and attract investment in such areas.

**The purpose of a policy on the provision of engineering services is primarily to align the growth and development of the city with the long term goals and objectives set out in the Integrated Development Plan (IDP).**

The main aims of the Policy can therefore be summarized as follows:

- To stimulate and enhance economic growth and development in accordance with the IDP and the vision of the ELM, to ensure the enlistment of the living standards of all its people

- To enable the provisioning of engineering services required by new developments in an integrated and sustainable manner, without imposing an additional burden on the existing ratepayers; and
- To stimulate development in the ELM in accordance with the vision of the IDP specifically in predetermined areas by introducing incentives which will stimulate the local economy and attract investment

#### **4. AUTHORITY TO LEVY CONTRIBUTIONS**

Municipalities are empowered to levy contributions for engineering services by virtue of the following:

- Gauteng Transport Infrastructure Act No 8 of 2001
- The Town-planning and Townships Ordinance No 25 of 1965
- The Town-planning and Townships Ordinance No 15 of 1986
- The Division of Land Ordinance No 20 of 1986
- Gauteng Removal of Restrictions Act, 1996
- Development Facilitation Act

#### **5. DEFINITION OF ENGINEERING SERVICES**

Engineering services comprise internal and external services. Engineering services include the following:

Electricity, Sanitation, Water, Storm-water drainage systems, Streets and Roads

In accordance with Section 117 of the Ordinance, classification of an engineering service as external or internal shall be by agreement between the municipality and the developer. In the event that an agreement cannot be reached, the parties may refer such matter to the Services Appeal Board (Section 116 to 124).

Engineering services thus comprise :

- Internal services
- External services

##### **5.1 Internal Services**

Internal services comprise the design, provision, installation and commissioning of all service networks and associated installations and accessories, including street lighting systems and storm water drainage systems within the boundaries of the township, as determined by the Local Authority, and include any connecting/link service which may be necessary, where such connecting point is situated outside the boundaries of the township, as well as a pro-rata proportion of boundary services which are necessary to provide sufficient capacity or access to each erf in the township, subject to design standards. Networks must be designed and constructed that they can link up with existing or proposed supply, receiving or street systems if so required. Elements of a system, such as water towers or pump stations which in consequence of topographical or other reasons, have to be erected outside the boundaries of the township but which provide solely for the needs of the township concerned, are deemed to be an internal service.

##### **5.2 External Services**

###### **5.2.1 General**

External services comprise the design, installation and commissioning of main services, including roads and streets, normally outside the boundaries of the development with adequate capacity in terms of the design standards to serve and

provide access to the township and to which the internal services connect at points determined by the Local Authority.

External services also include inter alia the following:

- (i) All traffic signs;
- (ii) Class 3 roads within the township to which the Local Authority will not permit erven in the township to have access;
- (iii) Widening of street reserves/carriageways inside the development to serve the needs outside the township but only to the extent that such reserve/carriageway is widened;
- (iv) Main services to which the Local Authority will not permit erf connections;
- (v) Internal services which have to be enlarged to serve more than one township but to which erf connections are still permitted, but only to the extent that the service is enlarged and adapted to serve the needs outside the township.
- (vi) Class 1, Class 2 and Class 3 roads as defined in the GPES. For these roads the applicant need only make provision in his township layout and the Local Authority (or other Authority) must compensate him for the land and is also responsible for the cost associated with the construction of such road. Access roads or streets which provide or will provide access to more than one township or proposed township, are an external service and must be provided by the Local Authority.
- (vii) Stormwater pipes having a diameter larger than 450mm, also used to convey stormwater from other external areas, are deemed to be an external service, but only to the extent that the service is enlarged or adapted to serve the needs of other areas.

### **5.3 Boundary Services**

A boundary service is an engineering service on or in close proximity to a boundary of a township or development which serves, or will also serve, a development on the other side of the boundary. The cost whereof shall be borne pro-rata by the relevant developments.

**5.3.1** For a boundary street, whether within, partially within or outside the boundary of the township or other development, constructed by the applicant and which also can provide direct access to erven/development in an adjoining area, pro-rata of the cost of constructing such street and associated storm water drainage and street lighting systems are for the cost of the development.

**5.3.2** The Local Authority may recover the pro-rata share, the cost of any existing, already constructed Engineering Services.

The Local Authority will as a measure for determining the cost of a boundary service, use the cost of a similar Service Engineering system which has been constructed or installed by the developer or has recently been constructed or installed by another developer or Emfuleni Local Municipality.

## **6. POLICY PRINCIPLES**

**6.1 THE PRINCIPLE OF EQUAL RIGHTS AND FAIRNESS MUST BE ADHERED TO WHEN DETERMINING CONTRIBUTIONS FOR ENGINEERING SERVICES PAYABLE BY THE DEVELOPER AND/OR THE LOCAL AUTHORITY.**

In practice, this means that providing engineering services or strengthening (upgrading) existing services as a result of a specific development should not impose an additional financial burden on existing ratepayers and conversely the developer should not be expected to subsidise the existing ratepayers by paying excessive contributions and / or strengthening the engineering services network unfairly.

**6.2 THE DEVELOPER OF A SPECIFIC DEVELOPMENT MUST CONTRIBUTE TOWARDS THE PROVISION OF ENGINEERING SERVICES REQUIRED FOR THAT DEVELOPMENT, EXCEPT AS MAY BE PROVIDED FOR ELSEWHERE IN THIS DOCUMENT**

The contributions of developers towards the provision of engineering services are an important way to fund the provision of such services in a sustainable and equitable manner.

Contributions will be payable without exception in respect of developments outside of the jurisdiction area of the ELM but inside its supply area. This is, however, subject to the special arrangements in respect of cross-boundary services for neighbouring municipalities.

**6.3 THE CONTRIBUTIONS OF A DEVELOPER TOWARDS THE PROVISION OF ENGINEERING SERVICES SHOULD BE MADE IN ACCORDANCE WITH A TRANSPARENT SCIENTIFIC METHOD OF CALCULATION IN RESPECT OF EACH SERVICE**

The method of calculation must be fair, available in advance to assist developers in determining the financial implications and must be revised on a regular basis.

The levying of contributions for the provision of engineering services excludes the cost of maintenance and other operational costs.

The guidelines for determining the method of calculation should comply with the following:

- Units of measurement shall be standardized
- Standards shall be set for determining the impact of a development on the existing capacity of the engineering service
- Fair and equitable to both parties
- Must be justifiable
- Easy to apply
- Must be consistent for all similar areas

**6.4 INCENTIVES IN RESPECT OF CONTRIBUTIONS TO ENGINEERING SERVICES SHALL BE AVAILABLE FOR THE ACHIEVEMENT OF SPECIFIC DEVELOPMENT OBJECTIVES**

**A development objective area/project means an area/project approved by the ELM as a priority for purposes of development**

The principle of incentives in respect of contributions to engineering services is important to stimulate and encourage growth and development of specific types, and/or in specific areas, of the municipality.

Although incentives will result in the loss of income, the importance and benefits of achieving specific development objectives should outweigh this loss in the longer term. Development objective areas/projects should be identified, prioritized and demarcated as part of the integrated planning process, and must be funded from special developmental/social funding provided by a specific department of the ELM or external developer(s) or any other funding source.

**6.5 THE DEVELOPER OF A SPECIFIC DEVELOPMENT IS RESPONSIBLE FOR THE COST OF INSTALLATION OF INTERNAL ENGINEERING SERVICES FOR EACH DEVELOPMENT. HOWEVER, IN A CASE WHERE A DEVELOPMENT TAKES PLACE WHERE CERTAIN EXISTING SERVICES HAVE ALREADY BEEN BUILT BY OTHERS, WITH SUFFICIENT ADDITIONAL CAPACITY FOR THE NEW DEVELOPMENT, THEN THE DEVELOPER WILL BE REQUIRED TO CONTRIBUTE TOWARDS THAT SPECIFIC SERVICE ELEMENT PRO RATA, BASED ON THE ZONING.**

31  
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The developer is responsible for the installation of all internal engineering services required for the particular development, provided that the Municipality may require the developer to install internal services with larger capacities than those required for the development in question.

Normally the Municipality will endeavour to repay the full balance of the cost of the enlargement to the developer during the Municipality's financial year following the financial year in which the enlargement was completed to the satisfaction of the Municipality, provided the township has been proclaimed and that the necessary funds therefore are provided by the Municipality in the financial year concerned.

The cost of the enlargement can also be calculated to the initial developer's credit when determining the contributions of the initial developer.

A contribution will be made by a developer to the Municipality in respect of an existing internal engineering service in his development which has been provided by the Municipality or by a previous other developer. The cost of the original enlargement will then be repaid to the first developer by the Municipality if he has not been refunded previously.

Refer also to principle 6.9.

**6.6 CONTRIBUTIONS TOWARDS THE PROVISION OF ENGINEERING SERVICES SHOULD BE UTILIZED FOR THE PROVISION AND/OR UPGRADING OF THE SERVICE FOR WHICH SUCH CONTRIBUTION HAS BEEN MADE**

It is of utmost importance that the income of the ELM out of contributions by developers for engineering services, be utilized to provide/upgrade the specific services.

In an effort to ensure the availability of funds for the provision and upgrading of infrastructure in a sustainable manner, the cost and upgrading of engineering services will be categorized as contractually bound capital work (Contractually bound projects) and should be taken into account in the IDP process when projects, to develop and extend the specific services, are evaluated on the Capital Budget of the ELM. The evaluation criteria in the IDP process should bear higher priority for engineering services where the Department Service Delivery can motivate the necessity of the engineering service which originates from the Municipality's contractual obligation.

**6.7 THE MANNER AND TIME BY WHICH A DEVELOPER MUST MAKE CONTRIBUTIONS TOWARDS THE PROVISION OF SERVICES MUST BE INCORPORATED IN THE SERVICES AGREEMENT FOR THAT DEVELOPMENT WHERE APPLICABLE.**

The payment method and all associated costs should be incorporated in the Services Agreement for each development other than those minor ones such as subdivisions etc. The payment should in all cases be made before:

- Proclamation / promulgation of land use rights approved; or
- Approval of building plans in terms of the National Building Regulations and Building Standards Act; or
- Application for a Clearance Certificate in terms of Section 118 of the Municipal Systems Act ( Act 32/2000 ) is approved;
- Registration of subdivisions/ consolidations, whichever is first.

The manner in which payments are made for each service must be flexible but should be agreed upon at the time of the signature of the Services Agreement.

Acceptable alternatives are:

- The provision of a bank guarantee provided that it makes provision for escalation to the planned date of construction and is otherwise acceptable to the Chief Financial Officer.
- Cash payment before proclamation of the development
- The physical provision of infrastructure to the value not less than the calculated contribution required for that service
- To alleviate developers cash flow problems the Council should consider that payment of bulk services contributions for township applications be made on transfer registration of erven.
- Other methods as approved from time to time by the Municipality

**6.8 THE MUNICIPALITY SHOULD CO-ORDINATE THE BUDGET ALLOCATION FOR EACH SERVICE IN ACCORDANCE WITH THE INTEGRATED DEVELOPMENT PLAN.**

The planning of Development Areas should take the existence and capacity of engineering services into account. Should a new area be designated as a Development Area it may only be done simultaneous with a Municipality commitment that funding for infrastructure will be provided to serve the area for each service.

Should any developer insist on developing outside a service/s priority area, he/she will be liable for all costs associated with outstanding infrastructure, until such time as other developers can contribute towards the services.

**6.9 IN THE CASE OF A LEAPFROG DEVELOPMENT OUTSIDE OF A SERVICE/S PRIORITY AREA, THE DEVELOPER IS, IN ADDITION TO ITS NORMAL CONTRIBUTION, ALSO RESPONSIBLE FOR THE ACTUAL COST OF PROVIDING ALL THE OUTSTANDING SERVICES AND THE CONNECTING SERVICES TO THE EXISTING ENGINEERING SERVICE NETWORKS**

Leapfrog developments are developments that are isolated from the existing available Engineering Services (outside the specific Service's Priority area of the Municipality) and beyond any short-term expansions of the services.

In addition to the normal Engineering Service contributions, the developer must in such a case also provide for all the necessary outstanding services and the link services to the existing infrastructure.

The developer is responsible to provide the connecting services according to the full standard as required by the Municipality.

The cost of the additional service must:

- Be calculated to the initial developer's credit when determining the contributions of the initial developer.
- The balance of the cost of the additional service, if any, will be repaid by the Municipality over a period as per agreement between the Municipality and the initial developer.

If another property in the vicinity develops and makes use of such a service, the Municipality shall be entitled to recover a pro rata share of the above costs, over and above the standard contributions, of such a developer.

Refer also to principle 6.5.

**6.10 THE METHOD OF CALCULATION OF A CONTRIBUTION TOWARDS THE PROVISION OF AN ENGINEERING SERVICE CAN BE BASED ON THE AVERAGE COST OF PROVIDING THAT PARTICULAR SERVICE**

The average cost is the most appropriate and practical way to calculate the contribution of a Developer towards the provision of engineering services. The costs can be the average estimated cost of all outstanding services or the average replacement costs of

33

all the existing services or the average rehabilitation costs of the existing services or in some cases a combination thereof.

Exceptions to the relevant principle are as follows:

- When a development is of such a nature or extent that the Municipality may decide that another method of calculation should be used.

#### **6.11 THE PLANNING FOR AND PROVISION OF ENGINEERING SERVICES BY THE ELM MUST BE DONE IN ACCORDANCE WITH THE INTEGRATED DEVELOPMENT PLANS (IDPS) AND ALL THE RELEVANT ENVIRONMENTAL REQUIREMENTS**

The involvement of all applicable disciplines into master plans is a requirement. There is a specific need for an integrated approach to the planning of all engineering services on a national, provincial and metropolitan level. If for instance an area is demarcated as a Development Objective Area in the ELM, it will be necessary that all the Engineering Services must be provided for this area to "open" it up for development. However when deciding on such a Development Objective Area, it must be ascertained if Engineering Services capacity is available nearby and can be provided economically by the ELM. This can also be done in phased-, nodal- or modular type development.

All engineering services installed and/or constructed must at all relevant times comply with the provisions of the Environmental Conservation Act, 1989, the National Environmental Management Act, 1998 and where applicable, the provisions of Regulation 21 of the Environmental Conservation Act.

#### **6.12 DEVELOPMENTS BY DENSIFYING SMALL HOLDINGS AND AGRICULTURAL HOLDINGS**

Services in these areas are generally substandard and cannot accommodate additional higher densities. To enable the densification, the Council must pro-actively install additional services, which would normally be classified as internal services. This will amongst others include the purchasing of land for additional road reserves etc. The Council should therefore have a third set of service contributions, specifically calculated for each such approved densification area.

#### **6.13 EXCEPTIONS**

The policy is applicable to the majority of cases. However, it is expected that as for most policies, there may be some exceptions. In such instances, finalization will be through Council approval (submission of a formal report to Council).

### **7. CALCULATION OF CONTRIBUTIONS FOR PROVISION OF ENGINEERING SERVICES**

#### **7.1 GENERAL**

The ordinance distinguishes between:

- New Township Developments;
- Sub-divisions, consolidation, land-use changes and consent uses.

It also defines the following issues:

- The Engineering Services to be provided;
- The classification of these services as an external- or internal Engineering Service;
- The responsibilities of both ELM and the applicant/developer for the provision of each specific service;
- The mutual contribution from ELM and the applicant/developer towards Engineering Services, respectively.

The Basic principles on which the method of calculation is based, can be summarised as follows:

- Fair and equitable to both parties;
- Must be justifiable;
- Easy to apply;
- Consistent for similar areas.

## **7.2 NEW TOWNSHIP ESTABLISHMENT**

In accordance with the Ordinance Section 117, classification of a service as external or internal, shall be by agreement between the Municipality and the Developer. In the event that an agreement cannot be reached, the parties may refer such matter to the Services Appeal Board.

The Ordinance determines that :

- The Developer (or applicant) is responsible for the provision of Internal Engineering Services.
- The Municipality is responsible for the provision of External Engineering Services. The Developer (applicant), however, shall pay the Municipality a contribution towards these costs.

## **7.3 SUB-DIVISIONS, LAND-USE CHANGES AND CONSENT USES**

The Ordinance makes provision that the same principles as prescribed for township establishment shall apply for sub-divisions, rezonings and consent use applications. Cognisance should however be taken that these applications are normally related to properties within promulgated townships with existing services already maintained by the Municipality. New applications therefore create an additional load on the existing network, which would require upgrading immediately or in the future. Any upgrading of an existing service is the responsibility of the Municipality, and the applicant therefore needs to contribute towards both External and Internal Engineering Services.

- Contributions towards External Engineering Services are calculated according to the same methods as for new township establishment.
- The applicant, however, only pays for the additional units consumed or utilised over and above that required for the existing rights.
- Contributions toward Internal Engineering Services are required to provide for future network upgrading/renewal, caused by the applications. The same methods of calculations for the contributions for External Engineering Services, are therefore applicable.

## **7.4 METHOD OF CALCULATION OF CONTRIBUTIONS TOWARDS THE PROVISION OF ENGINEERING SERVICES**

Methods of calculation will be based on a specific cost basis in accordance with policy principle 6.10.

It is important to provide a uniform policy with regard to the timing of the calculation of the unit cost rate of a service for a specific year. Cost values for the determination of contributions shall be determined each year based on the information obtained during the previous year. It is also proposed the contribution cost rates be calculated and implemented for a 12-month period with effect from 1 July of each year. If contributions are not paid within the period of validity, the contribution will be re-calculated at the contribution cost rate applicable on the date of payment.

It is also important to note that the model only considers initial or capital costs, excluding financial, running and maintenance costs.

## **7.5 DETERMINATION OF THE ENGINEERING SERVICES DEMAND AND UNIT COST RATES**

### **7.5.1 WATER**

Water consumption differs for every type (zoning) and size of development (also erf size), and formulae are available to calculate the water demand.

The current Emfuleni Local Municipality contributions policy only refers to either a residential-or a business erf. It is near impossible to calculate an accurate water contribution based on an erf.

It is therefore recommended that contributions be determined per the estimated *kilolitre of water consumed per day* (AADD) for every type of development (taking into account the zoning rights and erf size) *times the unit contribution cost rate (R/kl)* determined from time to time.

Refer to table 10 for a quick guide to specific daily water demand factors (kl/day) for a variety of specific land uses and erf sizes.

#### **7.5.1.1 RECOMMENDED UNIT WATER CONTRIBUTION COST RATES**

These will differ from year to year as adjusted annually per policy. (See attached Table 20)

### **7.5.2 SANITATION (WASTE WATER / SEWERAGE)**

Sewage runoff differs for every type (zoning) and size of development (also erf size), and formulae are available to calculate the sewage run-off. Studies and practical experience have indicated that sewage runoff is closely related to water consumption.

The current Emfuleni Local Municipality contribution policy only refers to either a residential-or a business erf. It is near impossible to calculate an accurate sewage run-off based on an erf.

It is therefore recommended that contributions be determined per the specific *kilolitre of waste water flow anticipated per day* for every specific land use development (taking into account the zoning rights and erf size) times the unit contribution cost rate (R/kl) determined from time to time.

Refer to table 10 for a quick guide to specific daily sewage run-off factors (kl/day) for a variety specific land uses and erf sized.

#### **7.5.2.1 RECOMMENDED UNIT SANITATION CONTRIBUTION COST RATES**

These will differ from year to year as adjusted annually per policy. (See attached Table 20)

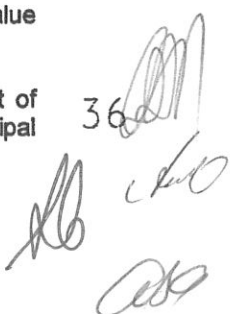
### **7.5.3 ROADS & STREETS**

The principle whereby a bulk services contribution for roads and streets is calculated is based on the increase in vehicle trip generation on the road network, and takes into account the total peak hour traffic volume to determine the road capacity.

The current Emfuleni Local Municipality contributions policy for roads and streets appears to take cognisance of the above principle, however some of the values appears to be unnecessarily adjusted/skewed or even inconsistent. The current average value of roads contributions is in the order of R2 600/trip.

It must be noted that a variety of authorities (including the Gauteng Department of Public Works & Roads) have over the past few years proposed policies on Municipal

36



Roads Infrastructure. Some of these proposed policies have elaborate and sometimes complex methods of calculating and including additional factors e.g. trip lengths, pavement strength components, boundary roads and others. However, in keeping with the basic principles of an easy to apply, justifiable and standardised units of measurement, it is recommended that contributions simply be determined per the specify **peak hour vehicle trip generation** for every specific type of land use development (taking into account the zoning rights and erf size) **times the unit contribution cost rate (R/trip)** determined from time to time.

Refer to table 10 for a quick guide to typical Peak Hour Vehicle Trip Generation Rates fro a variety of typical land uses and erf sizes. Most of these values have been extracted from the above Gautrans reports, with additions and fine-tuning for local circumstances.

#### **7.5.4.1 RECOMMENDED UNIT ROADS & STREETS CONTRIBUTION COST RATES**

These will differ from year to year as adjusted annually per policy. (See attached Table 20)

#### **7.5.3.2 CAPITAL SURCHARGE FOR SMALL HOLDINGS & AGRICULTURAL HOLDINGS**

Each property will contribute to the actual service abutting the road on a 50% basis, were the opposite/adjacent property will contribute the other 50%. See clause 6.12.

Portion poperty abutting road (m) times Rate times 0.5

#### **7.5.4 STORMWATER**

The principle whereby a bulk services contribution for stormwater is calculated is based on the increase in stormwater run-off caused by development, and its effect on impervious areas. The unit of "consumption or utilisation" is the product of the run-off coefficient "C", which increased as more development and permissible land coverage rights are approved, and the area of the erf "A". Where the land use changes, "C" and therefore "C x A" changes, thus resulting in a consulting in a contribution to be calculated according to the change in "consumption or utilisation".

The current Emfuleni Local Municipality contributions policy for Stormwater is in line with the above principle, and only the Stormwater contribution cost rates need adjustment.

It is therefore recommended that contributions be determined per the estimated **additional 100m<sup>2</sup> of impermeable land area** for every type of development (taking into account the zoning rights and erf size) **times the unit contribution cost rate (R/100m<sup>2</sup> impermeable area)** determined from time to time.

Refer to table 10 for a quick guide to typical Stormwater run-off factors for a variety of typical land uses.

#### **7.5.4.1 RECOMMENDED UNIT ROADS & STREETS CONTRIBUTION COST RATES**

These will differ from year to year as adjusted annually per policy. (See attached Table 20)

#### **7.5.4.2 CAPITAL SURCHARGE FOR SMALL HOLDINGS & AGRICULTURAL HOLDINGS**

Each property will contribute to the actual service abutting the road on a 50% basis, were the opposite/adjacent property will contribute the other 50%. See clause 6.12.

Portion poperty abutting road (m) times Rate times 0.5.

### 7.5.5 Electricity

*"Electricity to be added"!*

#### 7.5.5.1 RECOMMENDED UNIT ROADS & STREETS CONTRIBUTION COST RATES

*"Electricity to be added"!*

### 8. IMPORTANT CONSIDERATIONS ON THE LEVYING OF BULK SERVICES CONTRIBUTIONS

- 8.1 It is important that developers in all areas must be treated in the same manner.
- 8.2 A Municipality is required by the Municipal Systems Act to undertake developmentally orientated planning. "Development" is defined as sustainable development, and which includes integrated social, economic, spatial, infrastructural, institutional, organisational, and human resources upliftment of a community aimed at –
- Improving the quality of life of its members
  - Ensuring that development services present and future generations
- 8.3 Bulk Services Contributions are payable in addition to any other service charges, charges for consumption, availability charges and connection fees of any nature.
- 8.4 Bulk Services Contributions shall be payable by the registered owner of the property concerned at the time when such contribution is due and payable. No Occupancy Certificate shall be issued unless the Bulk Services Contribution in terms of this policy has been paid in full.
- 8.5 Experience from municipalities who have effectively implemented Bulk Services Contributions has illustrated that Engineering Services infrastructure provision leads development.
- 8.6 That Engineering Services Contribution generated be debit to the Asset Fund of Council credited to the various capital contribution funds related to each service (like water, sanitation, roads, Stormwater or electricity), and utilized for capital projects with regard to provision of services to new developments, densification and increase of existing engineering services.
- 8.7 That the funds in (8.6) above is capital by nature and are rolled over at the end of each financial year.
- 8.8 That the funds in (8.6) above can only be used in the area and service for which it was contributed for.
- 8.9 Provision will be made available on the capital budget in the next financial year and the funding transferred to the appropriate vote for Engineering Services Contribution as in (8.6) above as soon as the budget is approved.
- These projects will also take presidency in terms of the IDP and Capital Budget Provision.
- 8.10 Council can identify property development incentive zones, where Engineering Services contribution may be waived or reduced as per Council decision.
- Council must provide the Engineering Services in advance or apply Clause (8.9) above in terms of Engineering Services Contributions.
- 8.11 Where developers request extension or discount on Engineering Services Contribution outside the priority development incentive zones as contemplated in (8.10) above, cost allocations to the Engineering Services Contribution account will be as in (8.8) above.

- 8.12 The development as contemplated in (8.11) above however need to address its impact on all Bulk-, Link- and Internal Engineering Services as per appropriate studies requested by Emfuleni Local Municipality.

The cost of these studies and all upgrades to Bulk-, Link- and Internal Engineering Services required will be implemented or upgraded for the cost of the developers/owners/successor in title.

Specific Service Demand and Consumption Factors

Table 10

| Code | Land Use                                  | Streets               |                                          | Stormwater<br>Run-off<br>Factor | Water                 |                      | Sanitation            |                      |
|------|-------------------------------------------|-----------------------|------------------------------------------|---------------------------------|-----------------------|----------------------|-----------------------|----------------------|
|      |                                           | Unit                  | Trip<br>Gen<br>Veh/hr<br>In peak<br>hour |                                 | Unit                  | Demand Kl<br>per day | Unit                  | Runoff Kl<br>per day |
| 0    | Vacant/Open Space                         |                       |                                          |                                 |                       |                      |                       |                      |
| 01   | POS / A.H. / Road Reserve                 | ha                    | 0                                        | 25.0%                           | ha                    | 0                    | ha                    | 0                    |
| 10   | Residential                               |                       |                                          |                                 |                       |                      |                       |                      |
| 10a  | Res 1 (>= 4 001m <sup>2</sup> )           | dwelling              | 1.5                                      | 30.0%                           | dwelling              | 3.2                  | dwelling              | 2                    |
| 10b  | Res 1 (2 001 - 4 000m <sup>2</sup> )      | dwelling              | 1.44                                     | 32.5%                           | dwelling              | 3.2                  | dwelling              | 2                    |
| 10c  | Res 1 (1751 - 2 000m <sup>2</sup> )       | dwelling              | 1.39                                     | 35.0%                           | dwelling              | 2.8                  | dwelling              | 1.8                  |
| 10d  | Res 1 (1 501 - 1 750m <sup>2</sup> )      | dwelling              | 1.33                                     | 37.5%                           | dwelling              | 2.3                  | dwelling              | 1.6                  |
| 10e  | Res 1 (1 001 - 1 500m <sup>2</sup> )      | dwelling              | 1.27                                     | 40.0%                           | dwelling              | 1.8                  | dwelling              | 1.35                 |
| 10f  | Res 1 (751 - 1 000m <sup>2</sup> )        | dwelling              | 1.21                                     | 42.5%                           | dwelling              | 1.2                  | dwelling              | 1                    |
| 10g  | Res 1 (551 - 750m <sup>2</sup> )          | dwelling              | 1.15                                     | 45.0%                           | dwelling              | 1                    | dwelling              | 0.85                 |
| 10h  | Res 1 (450 - 550m <sup>2</sup> )          | dwelling              | 1.1                                      | 45.5%                           | dwelling              | 0.8                  | dwelling              | 0.7                  |
| 10i  | Res 1 Give Away/RDP (<450m <sup>2</sup> ) | dwelling              | 0.5                                      | 50.0%                           | dwelling              | 0.6                  | dwelling              | 0.5                  |
| 10j  | 2 <sup>nd</sup> dwelling / granny flat    | dwelling              | 1.1                                      | 45.5%                           | dwelling              | 0.8                  | dwelling              | 0.7                  |
| 11   | Res 2 Duplexes & Simplexes                | dwelling              | 1.1                                      | 80.0%                           | dwelling              | 0.8                  | dwelling              | 0.65                 |
| 12   | Res 3 & 4 Flats                           | dwelling              | 0.5                                      | 80.0%                           | dwelling              | 0.6                  | dwelling              | 0.5                  |
| 13   | Retirement Village                        | dwelling              | 0.6                                      | 50.0%                           | dwelling              | 0.6                  | dwelling              | 0.65                 |
| 14   | Old Age Home                              | Unit                  | 0.6                                      | 50.0%                           | Unit                  | 0.8                  | Unit                  | 0.65                 |
| 15   | Holiday home                              | dwelling              | 0.7                                      | 40.0%                           | dwelling              | 0.8                  | dwelling              | 0.65                 |
| 16   | Mobile home or park                       | dwelling              | 0.6                                      | 40.0%                           | dwelling              | 0.6                  | dwelling              | 0.5                  |
| 20   | Accommodation                             |                       |                                          |                                 |                       |                      |                       |                      |
| 21   | Hostel                                    | room                  | 0.6                                      | 60.0%                           | room                  | 0.6                  | room                  | 0.5                  |
| 22   | Guest house                               | room                  | 0.6                                      | 50.0%                           | room                  | 0.6                  | room                  | 0.5                  |
| 23   | Boarding house                            | room                  | 0.6                                      | 50.0%                           | room                  | 0.6                  | room                  | 0.5                  |
| 24   | Economy hotel                             | room                  | 1.3                                      | 50.0%                           | room                  | 0.6                  | room                  | 0.5                  |
| 25   | Hotel or Lodge                            | room                  | 0.7                                      | 50.0%                           | room                  | 0.6                  | room                  | 0.5                  |
| 26   | Motel                                     | room                  | 0.7                                      | 50.0%                           | room                  | 0.6                  | room                  | 0.5                  |
| 30   | Community facilities                      |                       |                                          |                                 |                       |                      |                       |                      |
| 31   | Public Library                            | 100m <sup>2</sup> GLA | 5.1                                      | 70.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 32   | Social and Community Halls                | 100m <sup>2</sup> GLA | 5.1                                      | 70.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 40   | Educational                               |                       |                                          |                                 |                       |                      |                       |                      |
| 41   | Crèche or Nursery School                  | 100m <sup>2</sup> GLA | 16.7                                     | 50.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 42   | Preparatory School                        | pupil                 | 0.9                                      | 50.0%                           | pupil                 | 0.2                  | pupil                 | 0.15                 |
| 43   | Primary school                            | pupil                 | 0.9                                      | 50.0%                           | pupil                 | 0.2                  | pupil                 | 0.15                 |
| 44   | Secondary school                          | pupil                 | 0.8                                      | 50.0%                           | pupil                 | 0.2                  | pupil                 | 0.15                 |
| 45   | Day-care / After-school centre            | 100m <sup>2</sup> GLA | 16.7                                     | 50.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 46   | Private school                            | pupil                 | 0.9                                      | 50.0%                           | pupil                 | 0.2                  | pupil                 | 0.15                 |
| 47   | Technical College                         | student               | 0.2                                      | 50.0%                           | student               | 0.2                  | student               | 0.15                 |
| 48   | University                                | student               | 0.2                                      | 50.0%                           | student               | 0.2                  | student               | 0.15                 |
| 50   | Places of Public Worship                  |                       |                                          |                                 |                       |                      |                       |                      |
| 51   | Church (peak on Sunday)                   | 100m <sup>2</sup> GLA | 0.8                                      | 80.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 52   | Synagogue (Friday PM peak)                | 100m <sup>2</sup> GLA | 3.4                                      | 80.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 60   | Places of Refreshment                     |                       |                                          |                                 |                       |                      |                       |                      |
| 61   | Restaurants                               | 100m <sup>2</sup> GLA | 15.6                                     | 80.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 62   | Drive-in Restaurant                       | 100m <sup>2</sup> GLA | 59.8                                     | 80.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 63   | Take-away / Fast Food                     | 100m <sup>2</sup> GLA | 59                                       | 80.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 70   | Recreation & Entertainment                |                       |                                          |                                 |                       |                      |                       |                      |
| 71   | Cinema                                    | seat                  | 0.3                                      | 90.0%                           | seat                  | 0.02                 | seat                  | 0.02                 |
| 80   | Sport                                     |                       |                                          |                                 |                       |                      |                       |                      |
| 81   | Fitness centre / Gym                      | 100m <sup>2</sup> GLA | 20.9                                     | 80.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 82   | Golf course                               | ha                    | 1                                        | 25.0%                           | ha                    | 0                    | ha                    | 0                    |
| 83   | Sport stadiums                            | seat                  | 0.3                                      | 25.0%                           | seat                  | 0.2                  | seat                  | 0.18                 |
| 84   | Tennis Courts                             | court                 | 2.8                                      | 90.0%                           | court                 | 0.05                 | court                 | 0.04                 |
| 90   | Medical                                   |                       |                                          |                                 |                       |                      |                       |                      |
| 91   | Private hospital                          | bed                   | 2.1                                      | 70.0%                           | bed                   | 0.2                  | bed                   | 0.16                 |
| 92   | Public hospital                           | bed                   | 2.1                                      | 70.0%                           | bed                   | 0.2                  | bed                   | 0.16                 |
| 93   | Nursing home                              | bed                   | 0.2                                      | 70.0%                           | bed                   | 0.2                  | bed                   | 0.16                 |
| 94   | Medical Centre                            | 100m <sup>2</sup> GLA | 7                                        | 70.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 95   | CBD medical office                        | 100m <sup>2</sup> GLA | 10.1                                     | 70.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 96   | Suburban medical office                   | 100m <sup>2</sup> GLA | 21.8                                     | 70.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 97   | Clinic                                    | 100m <sup>2</sup> GLA | 21.8                                     | 70.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |
| 98   | Dentist                                   | 100m <sup>2</sup> GLA | 4.4                                      | 70.0%                           | 100m <sup>2</sup> GLA | 0.3                  | 100m <sup>2</sup> GLA | 0.25                 |

40

| Code | Land Use                                 | Streets               |                                          | Stormwater<br>Run-off<br>Factor | Water                    |                      | Sanitation               |                      |
|------|------------------------------------------|-----------------------|------------------------------------------|---------------------------------|--------------------------|----------------------|--------------------------|----------------------|
|      |                                          | Unit                  | Trip<br>Gen<br>Veh/hr<br>in peak<br>hour |                                 | Unit                     | Demand KI<br>per day | Unit                     | Runoff KI<br>per day |
| 100  | Offices                                  |                       |                                          |                                 |                          |                      |                          |                      |
| 101  | CBD offices                              | 100m <sup>2</sup> GLA | 4.2                                      | 90.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 102  | Sub-urban offices                        | 100m <sup>2</sup> GLA | 2.3                                      | 70.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 103  | Research & Development Centres           | 100m <sup>2</sup> GLA | 1.3                                      | 70.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 110  | Businesses                               |                       |                                          |                                 |                          |                      |                          |                      |
| 111  | Conference Centres                       | 100m <sup>2</sup> GLA | 0.8                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 112  | Financial (Banks etc)                    | 100m <sup>2</sup> GLA | 2.3                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 113  | Building materials                       | 100m <sup>2</sup> GLA | 3.5                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 114  | Bakery / Dairy                           | 100m <sup>2</sup> GLA | 5                                        | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 115  | Hardware/Paint Shop                      | 100m <sup>2</sup> GLA | 5.2                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 116  | Nursery                                  | 100m <sup>2</sup> GLA | 4                                        | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 120  | Shopping Centres                         |                       |                                          |                                 |                          |                      |                          |                      |
| 121a | Local < 1 000m <sup>2</sup>              | 100m <sup>2</sup> GLA | 21.4                                     | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 121b | Local < 2 500m <sup>2</sup>              | 100m <sup>2</sup> GLA | 15.7                                     | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 122a | Neighbourhood < 5 000m <sup>2</sup>      | 100m <sup>2</sup> GLA | 12.4                                     | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 122b | Neighbourhood < 10 000m <sup>2</sup>     | 100m <sup>2</sup> GLA | 9.8                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 122c | Neighbourhood < 15 000m <sup>2</sup>     | 100m <sup>2</sup> GLA | 8.5                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 123a | Community < 20 000m <sup>2</sup>         | 100m <sup>2</sup> GLA | 7.7                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 123b | Community < 30 000m <sup>2</sup>         | 100m <sup>2</sup> GLA | 6.8                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 124a | Regional < 50 000m <sup>2</sup>          | 100m <sup>2</sup> GLA | 6.7                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 124b | Regional < 75 000m <sup>2</sup>          | 100m <sup>2</sup> GLA | 4.9                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 124c | Regional < 100 000m <sup>2</sup>         | 100m <sup>2</sup> GLA | 4.5                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 130  | Motor related                            |                       |                                          |                                 |                          |                      |                          |                      |
| 131  | Filling Station                          | Station               | 240                                      | 80.0%                           | Station                  | 0.3                  | Station                  | 0.25                 |
| 132  | Garage                                   | 100m <sup>2</sup> GLA | 1.4                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 133  | New & Used car sales                     | 100m <sup>2</sup> GLA | 2.8                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 134  | Vehicle spares / tyres                   | 100m <sup>2</sup> GLA | 3.7                                      | 80.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 140  | Commercial                               |                       |                                          |                                 |                          |                      |                          |                      |
| 141  | Warehousing                              | 100m <sup>2</sup> GLA | 0.8                                      | 60.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 142  | Wholesale                                | 100m <sup>2</sup> GLA | 1.5                                      | 20.0%                           | 100m <sup>2</sup><br>GLA | 0.3                  | 100m <sup>2</sup><br>GLA | 0.25                 |
| 150  | Industrial                               |                       |                                          |                                 |                          |                      |                          |                      |
| 151  | Light Industries                         | 100m <sup>2</sup> GLA | 1.1                                      | 90.0%                           | 100m <sup>2</sup><br>GLA | 0.83                 | 100m <sup>2</sup><br>GLA | 0.66                 |
| 152  | Factory                                  | 100m <sup>2</sup> GLA | 0.8                                      | 90.0%                           | 100m <sup>2</sup><br>GLA | 0.83                 | 100m <sup>2</sup><br>GLA | 0.66                 |
| 153  | Transport undertaking                    | 100m <sup>2</sup> GLA | 0.9                                      | 90.0%                           | 100m <sup>2</sup><br>GLA | 0.83                 | 100m <sup>2</sup><br>GLA | 0.66                 |
| 154  | Industrial Park                          | 100m <sup>2</sup> GLA | 0.9                                      | 90.0%                           | 100m <sup>2</sup><br>GLA | 0.83                 | 100m <sup>2</sup><br>GLA | 0.66                 |
| 155  | Small industries < 10 000m <sup>2</sup>  | 100m <sup>2</sup> GLA | 0.9                                      | 90.0%                           | 100m <sup>2</sup><br>GLA | 0.83                 | 100m <sup>2</sup><br>GLA | 0.66                 |
| 156  | Medium Industries < 35 000m <sup>2</sup> | 100m <sup>2</sup> GLA | 0.6                                      | 90.0%                           | 100m <sup>2</sup><br>GLA | 0.83                 | 100m <sup>2</sup><br>GLA | 0.66                 |

# ENGINEERING CONTRIBUTION

TABLE 20 – COST RATES 2010/2011

| Engineering Services                | New Township Establishment | Sub-divisions, Land-use changes & consent uses | Unit                               |
|-------------------------------------|----------------------------|------------------------------------------------|------------------------------------|
| Water                               | R2 530-00                  | R3 500-00                                      | Kilolitre                          |
| Sanitation (Waste Water/Sewerage)   | R6 880-00                  | R8 100-00                                      | Kilolitre                          |
| Roads & Streets                     | R2 900-00                  | R5 810-00                                      | Peak hour trip                     |
| Stormwater                          | R865-00                    | R1 300-00                                      | 100m <sup>2</sup> impermeable area |
| Electricity                         |                            |                                                |                                    |
| <b>Surcharge as per clause 6.12</b> |                            |                                                |                                    |
| Water                               | NA                         | Still to be determined                         |                                    |
| Sanitation (Waste Water/Sewerage)   | NA                         | Still to be determined                         |                                    |
| Roads & Streets                     | NA                         | R5000-00                                       | Meter abutting roads servitude     |
| Stormwater                          | NA                         | R750-00                                        | Meter abutting roads servitude     |
| Electricity                         | NA                         |                                                |                                    |