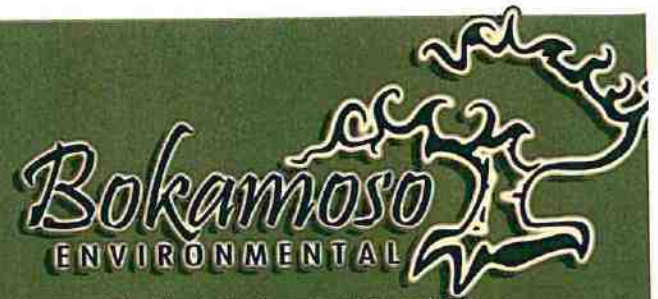


LEBOMBO GARDENS BUILDING
36 LEBOMBO ROAD
ASHLEA GARDENS
0081

P.O. BOX 11375
MAROELANA
0161

Tel: (012) 346 3810
Fax: 086 570 5659
E-mail: lizelleg@mweb.co.za
Website: www.Bokamoso.biz



Landscape Architects, Environmental Consultants,
Environmental Auditing, Water License Applications

ADDENDUM TO FINAL BASIC ASSESSMENT REPORT

Gauteng Department of Agriculture and Rural Development
SUE Admin
Ground floor
Diamond Building
11 Diagonal Street
Johannesburg
2000

ATTENTION: Phuti Matlamela
Tel: 011-240 3420

9 March 2016

RE:THE SUBMISSION OF THE ADDENDUM OF THE FINAL BASIC ASSESSMENT
REPORT FOR THE PROPOSED RASLOUW X 15 SEWER PIPELINE, GAUTENG
PROVINCE
(GAUT: 002/13-14/E0287)

Your comments on the Final Basic Assessment Report for the above mentioned project has reference.

Bokamoso received comments from your Department on 26 June 2015 on the Final Basic Assessment Report for the above mentioned project which was submitted to your Department on 25 May 2015. **Refer to Annexure A for the letter from your Department.** Please also note that Bokamoso submitted a request for extension of time to your Department in order to obtain all necessary information for the above mentioned project. Thereafter your Department granted the extension of time on 3 February 2016. **Please refer to Annexure A for the proof of the extension granted.**

In your letter dated 25 May 2015 the Department provided Bokamoso with the following comments;

1. In terms of a transport and inclusive public participation process, interested and affected parties (I&APs) and the relevant authorities and other stakeholders must be given an opportunity to comment on the amended report and their comments must be submitted to this Department for review. City of Tshwane Metropolitan Municipality Open Space Management Section as well as Department of Water and Sanitation and other stakeholders who have interest on the proposed activity must be provided an opportunity to comment on the proposed sewer pipeline and those comments adhered to and submitted to this department for consideration.

***Response:** Noted. This addendum to the Final Basic Assessment Report was submitted simultaneously to your Department, Stakeholders and all I&AP's for review. The review period for 21 days commence on 9 March 2016 until 1 April 2016.*

2. The sewer line will transverse the R55 and the Department of Roads and Transport comments or approval must be obtained.

Response:** The approval was in Appendix K of the Final BAR that was submitted to I&AP's, Stakeholders and GDARD. **The approval is also attached as Annexure C to this Addendum.

3. It was noted that the sewer pipeline will traverses a number of private properties and servitudes therefore proof of notice of landowners whose properties will be transversed should be sought in writing and must be submitted to this Department together with the amended report.

***Response:** Refer to Annexure B of this Addendum for proof of notification.*

4. The area is underlain by a dolomite, precautionary measures to be implemented on all dolomitic sites were noted however the Geotechnical Study that accommodates sewer pipeline and that is site specific must be undertaken and submitted to council for Geosciences for review and comments must form part of the amended report submitted to this Department.

Response: Please refer to Annexure D of this Addendum for the Geotechnical Study.

5. The proposed activity might contribute to traffic impact on the surrounding road networks including the R55 Road and Poole Avenue during construction phase. Measures to reduce traffic impact during construction phase must be submitted to this Department.

Response: Additional mitigation measures for the traffic impact have been included in the Amended Final EMP and are attached as annexure E of this Addendum.

6. EMPr must be amended to include the findings of the study to be undertaken and must be practical and easily enforceable and attached in the amended BAR.

Response: Additional mitigation measures for the traffic impact have been included in the Amended Final EMP and are attached as annexure E of this Addendum.

Trust that you find the above in order. Please do not hesitate to contact our office should you have any other questions in this regard.

Kind regards,

P.P. 
Anè Agenbacht

**Bokamoso Landscape Architects
and Environmental Consultants CC**

ANNEXURE A

Letter from the Department



GAUTENG PROVINCE

AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Diamond Building, 11 Diagonal Street, Newtown, Johannesburg
P O Box 8769, Johannesburg, 2000

Telephone: (011) 240-2500

Fax: (011) 240-2700

Website: <http://www.gdard.gpg.gov.za>

FAX COVER SHEET

Receiver's Details		Sender's Details	
To:	Lizelle Gregory	From:	Phuti Matlamela
Company:	Bokamoso landscape Architects & Environmental Consultants CC	Section:	EPIA
Fax no.:	086 570 5659	Floor:	3 rd Floor, 11 Diagonal.
Tel no.:	012 346 3810	Tel:	011 240 3420
Date:		Pages:	03 including fax cover sheet
Subject:	GAUT :002/13-14/E0287 BAR AMENDMENT: PROPOSED INSTALLATION OF EXTERNAL SEWER PIPELINE RASLOUW EXTENSION 15, CITY OF TSHWANE METROPOLITAN MUNICIPALITY		

CC

CTMM

Purple Roof Developers Pty (Ltd)

Attn: Rudzani Mukheli
Tel: 012 358 8731
Fax: 012 358 8934

Attn: Peet Joubert
Tel: 082 934 2294
Fax: 012 687 1483



GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Diamond Building, 11 Diagonal Street, Newtown
PO Box 8769, Johannesburg, 2000
Tel: 011 240 2500
Fax: 011 240 2700

Reference: Gaut 002/13-14/E0287
Enquiries: Phuti Matlamela
Telephone: 011 240 3420
Email: Phuti.Matlamela@gauteng.gov.za

Bokamoso Landscape Architects & Environmental Consultants
P. O. Box 11375
MAROELANA
0161

Attention: Lizelle Gregory
Fax: 086 570 5659
Tel no.: 012 346 3810

PER FACSIMILE / REGISTERED MAIL

Dear Madam

BAR AMENDMENT: PROPOSED INSTALLATION OF EXTERNAL SEWER PIPELINE FOR RASLOUW EXTENSION 15, CITY OF TSHWANE METROPOLITAN MUNICIPALITY

With reference to the Basic Assessment Report dated May 2015 which was submitted by you in respect of the above-mentioned application and received by the Department on 25 May 2015, the Department requires that the following amendments are made and submitted before a decision can be taken on the application:

1. In terms of a transparent and inclusive public participation process, interested and affected parties (I&APs) and the relevant authorities and other stakeholders must be given an opportunity to comment on the amended report and their comments must be submitted to this Department for review. City of Tshwane Metropolitan Municipality Open Space Management Section as well as Department of Water and Sanitation and other stakeholders who have interest on the proposed activity must be provided an opportunity to comment on the proposed sewer pipeline and those comments adhered to and submitted to this department for consideration.
2. The sewer line will transverse the R55 and the Department of Roads and Transport comments or approval must be obtained.
3. It was noted that the sewer pipeline will traverses a number of private properties and servitudes therefore proof of notice of landowners whose properties will be transversed should be sought in writing and must be submitted to this Department together with the amended report.
4. The area is underlain by a dolomite, precautionary measures to be implemented on all dolomitic sites were noted however the Geotechnical Study that accommodates sewer pipeline and that is site specific must be undertaken and submitted to council for Geosciences for review and comments must form part of the amended report submitted to this Department.
5. The proposed activity might contribute to traffic impact on the surrounding road networks including the R55 Road and Poole Avenue during construction phase. Measures to reduce traffic impact during construction phase must be submitted to this Department.

6. EMPr must be amended to include the findings of the study to be undertaken and must be practical and easily enforceable and attached in the amended BAR.

In terms of Regulation 24(4), you are entitled to resubmit the Basic Assessment Report after making the necessary amendments. Should you wish to resubmit the report, please note that in order to give effect to the requirements of administrative justice; you must make the amended report which is to be submitted to the Department available to registered interested and affected parties for comment. Any comments received from registered interested and affected parties on the amended report must be included in the amended report.

In terms of Regulation 67(1) (2) of the NEMA EIA Regulations 2010, this application will lapse should you fail to submit the requested information within 6 months of the date of signature of this letter, except in the case where the Department has received and accepted written explanation for failure to submit such information.

Yours faithfully



Mr. L. Mkwana
Chief Director: Sustainable Use of Environment
Date: 26/06/2015



agriculture and rural development

Department: Agriculture and Rural Development
GAUTENG PROVINCE

11 Diagonal Street, Diamond Building, Newtown, Johannesburg
P O Box 8769, Johannesburg, 2000

Telephone: (011) 240-2500

Fax: (011) 240-2700

Website: <http://www.gdard.gpg.gov.za>

Reference:	Gaut: 002/13-14/E0287
Enquiries:	Malesela Sehona
Telephone:	011 240-3048
Email:	malesela.sehona2@gauteng.gov.za

Bokamoso Landscape Architects and Environmental Consultants

Email/Fax: lizelleg@mweb.co.za

Dear Sir/ Madam

Request for extension of time to submit Amended Final BAR: Raslow Extension 15 (External Sewer Line)

The Department acknowledges having received your request for extension of time to submit Amended Final BAR for the abovementioned project on 19/01/2016.

Your request for extension of time to submit Amended Final BAR has been granted. Thus, you have until 09/03/2016 to submit the Amended Final BAR.

Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorisation being granted by the Department.

Yours faithfully

Boniswa Belot

Deputy Director: Strategic Administration Support

Date: 03/02/2016

CC: Purple Roof Developers (Pty) Ltd

Att: P Joubert

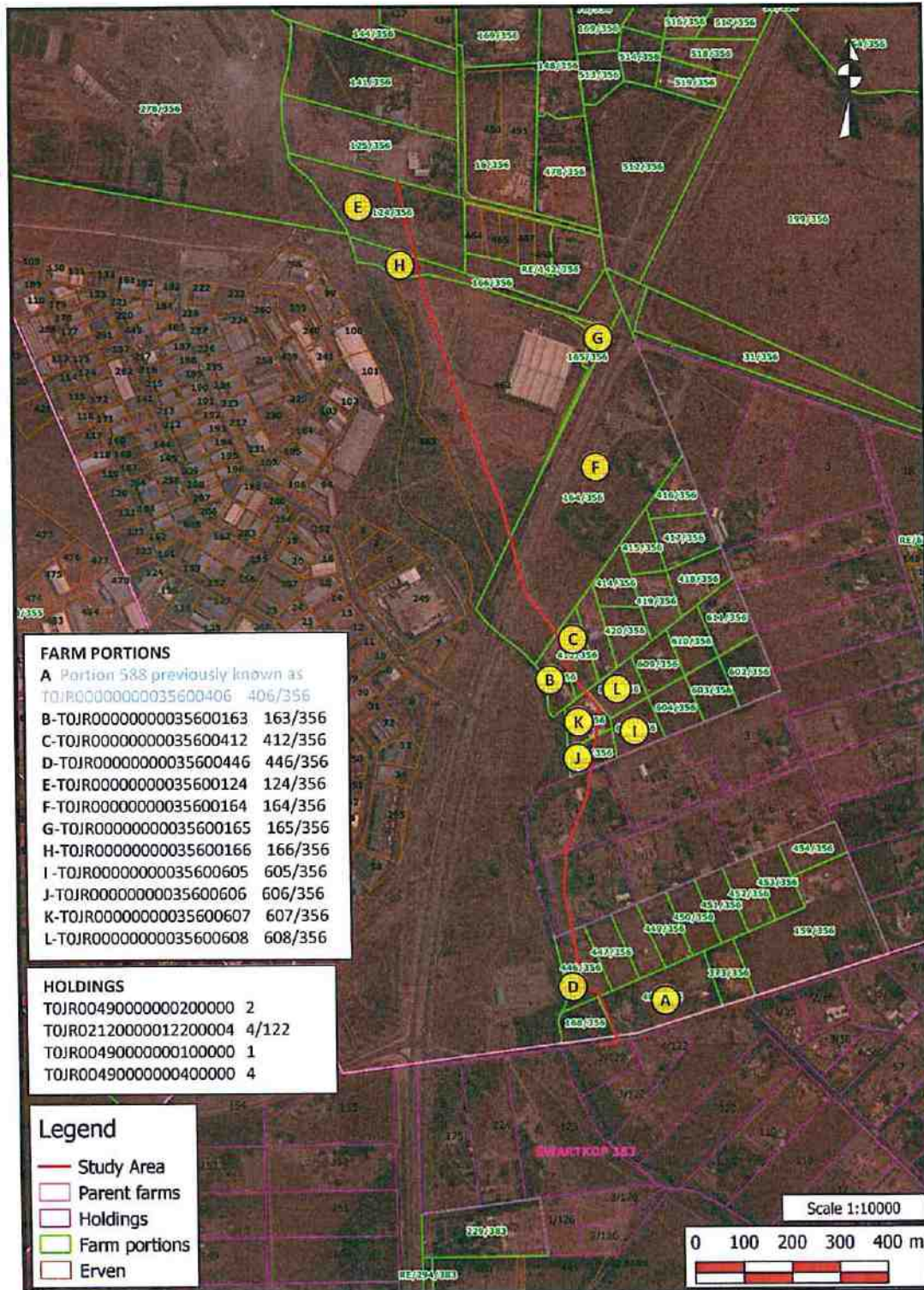
Email/Fax: peet@midfix.co.za

ANNEXURE B

Proof of notifying all landowners

RASLOUW X15

Affected Properties



Portion 1 of Holding 1 of Deltoidia Agricultural Holdings

Raubenheimer
PO BOX 297, Wierdapark, 0149

Portion 2 of Holding 1 of Deltoidia Agricultural Holdings

VDH Ontwikkeling
PO BOX 297, Wierdapark, 0149

Remainder of Holding 1 of Deltoidia Agricultural Holdings

Coetzee, M
PO BOX 913026, Thaba Tshwane, 0143

Portion 1 of Holding 4 of Deltoidia Agricultural Holdings

Hattingh, J
PO BOX 155, Wierdapark, 0149

Remainder of Holding 4 of Deltoidia Agricultural Holdings

Hattingh, J
PO BOX 155, Wierdapark, 0149

Portion 2 of Holding 122 Raslouw Agricultural Holdings

Purple Roof Developers (Pty) Ltd
Postnet Suite 514, Private Bag x1007, Lyttleton, 0140

Portion 588 of the farm Zwartkops 356 JR

Mavhunga Tshitereke
P O Box 52942, Wierdapark, 0149

Portion 446 of the farm Zwartkops 356 JR

Nieuwmeijer Familie Trust
PO BOX 810, Wierdapark, 0149

Portion 606 of the Farm Zwartkop 356 JR

Nomusa Twala
PO Box 89206, Heuweloord, Heuweloord Ext 3, 0173

Portion 607 of the Farm Zwartkop 356 JR

Makschinski, Amelia
PO BOX 56216, Wierdapark, 0149

Portion 608 of the farm Zwartkops 356 JR

Manyathela, Makoro Frans
332 Section B, Mamelodi West, 0122

Portion 412 of the Farm Zwartkop 356 JR

Anna Christina Janse Van Rensburg
P O Box 13646, Clubview, 0014

Remainder of Portion 163 of the farm Zwartkop 356 JR

Underwear City
P O Box 13718, Laudium 0037

Portion 164 of the Farm Zwartkop 356 JR

Amka Products
P O Box 3504, Pretoria, 0001

Portion 165 of the Farm Zwartkop 356 JR

Amka Products
P O Box 3504, Pretoria, 0001

Portion 166 of the Farm Zwartkop 356 JR

Atlantis Logistics (Pty) Ltd
PO BOX 3504, Pretoria, 0001

Portion 124 of the Farm Zwartkop 356 JR

Signature Property 4
PO Box 2194, Zwavelpoort, 0036

List of REGISTERED LETTERS

Lys van GEREGISTREERDE BRIEWE

(With an insurance option/met 'n versekeringsopsie)



Full tracking and tracing/Volledige volg en spoor

Name and address of sender: Bobamoso PO Box 11375,
 Naam en adres van afsender: Marcelana 0161

Rasidawu X15 -

Enquiries/Navrae
 Toll-free number
 Tolvry nommer
0800 111 502

No	Name and address of addressee Naam en adres van geadresseerde	Insured amount Versekerde bedrag	Insurance fee Versekeringsgeld	Postage Posgeld	Service fee Diensgeld	Affix Track and Trace customer copy Plak Volg-en-Spoor-klëntafskrif
1	AMKA Products P.O. Box 3504, Pretoria, 0001					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RD 799 625 437 ZA CUSTOMER COPY 301028R
2	Raubenheimer P.O. Box 297, Wierdapark, 0149					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RD 799 625 454 ZA CUSTOMER COPY 301028R
3	VDH Ontwikkeling P.O. Box 297, Wierdapark, 0149					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RD 799 625 468 ZA CUSTOMER COPY 301028R
4	Coetzee, M P.O. Box 913026, Thabang Tshwane, 0143					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RD 799 625 445 ZA CUSTOMER COPY 301028R
5	Hattin, J P.O. Box 155, Wierdapark, 0149					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RD 799 625 352 ZA CUSTOMER COPY 301028R
6	Purpie Roof Developers (Pty) Ltd Pastnet Suite 514, Private Bag x1007, Lyttleton, 0140					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RD 799 625 397 ZA CUSTOMER COPY 301028R
7	Makhungu Tshitereke P.O. Box 52942, Wierdapark, 0149					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RD 799 625 406 ZA CUSTOMER COPY 301028R
8	Nieurmeijer Familie Trust P.O. Box 810, Wierdapark, 0149					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RD 799 625 370 ZA CUSTOMER COPY 301028R
9	Makschinski, Amelia P.O. Box 56216, Wierdapark, 0149					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RD 799 625 383 ZA CUSTOMER COPY 301028R
10	Manya theld, Makara Ads 332 Section B, Mamelodi west, 0122					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RD 799 625 366 ZA CUSTOMER COPY 301028R
		Total Totaal	R	R	R	R

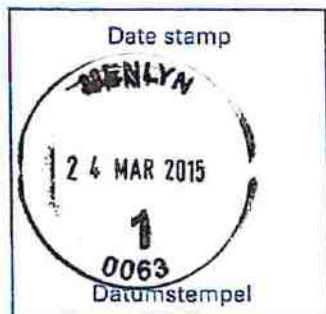
Number of letters posted
 Getal briewe gepos

Signature of client
 Handtekening van klënt

Signature of accepting officer
 Handtekening van aanneembeampte

The value of the contents of these letters is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100,00. No compensation is payable without documentary proof. Optional insurance of up to R2 000,00 is available and applies to domestic registered letters only.

Die waarde van die inhoud van hierdie briewe is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontvang word nie. Vergoeding is beperk tot R100,00. Geen vergoeding is sonder dokumentêre bewys betaalbaar nie. Opsionele versekering van tot R2 000,00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.



List of REGISTERED LETTERS

Lys van GEREGISTREERDE BRIEWE

(With an insurance option/met 'n versekeringsopsie)



Full tracking and tracing/Volledige volg en spoor

Name and address of sender
 Naam en adres van afsender: Bobamase PO Box 11375,
Marcelona 0161
Roskuw X15

Enquiries/Navrae
 Toll-free number
 Tolvry nommer
0800 111 502

No	Name and address of addressee Naam en adres van geadresseerde	Insured amount Versekerde bedrag	Insurance fee Versekeringsgeld	Postage Posgeld	Service fee Diensgeld	Affix Track and Trace customer copy Plak Volg-en-Spoor-klëntafskrif
1	Atlantis Logistics (Pty) Ltd P.O. Box 3504, Pretoria, 0001					<small>REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.aspo.co.za</small> RD 799 625 471 ZA CUSTOMER COPY 301028R
2						
3						
4						
5						
6						
7						
8						
9						
10						

Number of letters posted
 Getal briewe gepos

Total Totaal	R	R	R	R
-----------------	---	---	---	---

Signature of client
 Handtekening van kliënt.....

Signature of accepting officer
 Handtekening van aanneembeampte.....

The value of the contents of these letters is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100,00. No compensation is payable without documentary proof. Optional insurance of up to R2 000,00 is available and applies to domestic registered letters only.

Die waarde van die inhoud van hierdie briewe is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontyang word nie. Vergoeding is beperk tot R100,00. Geen vergoeding is sonder dokumentêre bewys betaalbaar nie. Opsionele versekering van tot R2 000,00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.



List of REGISTERED LETTERS
Lys van GEREgistreerde Briewe
 (With an insurance option/met 'n versekeringsopsie)



Full tracking and tracing/Volledige volg en spoor

Name and address of sender
 Naam en adres van afsender: Bobamase PO Box 11375,
Marcelona 0161
Roslouw X 15

Enquiries/Navrae
 Toll-free number
 Tolvry nommer
0800 111 502

No	Name and address of addressee Naam en adres van geadresseerde	Insured amount Versekerde bedrag	Insurance fee Versekeringsgeld	Postage Posgeld	Service fee Diensgeld	Affix Track and Trace customer copy Plak Volg-en-Spoor-klëntafskrif
1	Gouwinds P.O. Box 52276, Wierda Park, 0149					<small>REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za</small> RD 885 057 075 ZA CUSTOMER COPY 301028R
2	Signature Property 4 P.O. Box 2194, Zwavel poort, 0036					<small>REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za</small> RD 885 058 990 ZA CUSTOMER COPY 301028R
3	Underwear City P.O. Box 13718, Laudium, 0037					<small>REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za</small> RD 885 059 006 ZA CUSTOMER COPY 301028R
4	Pyramid Investments (eight) P.O. Box 14218, Laudium, 0037					<small>REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za</small> RD 885 059 010 ZA CUSTOMER COPY 301028R
5	François Le Roux Fourie P.O. Box 21266, Valhalla, 0137					<small>REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za</small> RD 885 059 023 ZA CUSTOMER COPY 301028R
6	Annd Christind Janse van Rensburg P.O. Box 13646, Clubview, 0014					<small>REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za</small> RD 885 059 037 ZA CUSTOMER COPY 301028R
7	Nomusa Twala P.O. Box 89206, Heuweloord, Heuweloord Ext 3, 0173					<small>REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za</small> RD 885 059 045 ZA CUSTOMER COPY 301028R
8						
9						
10						

Number of letters posted
 Getal briewe gepos: 7

Total
 Totaal: R R R R

Signature of client
 Handtekening van kliënt: _____

Signature of accepting officer
 Handtekening van aanneembeampte: [Signature]

The value of the contents of these letters is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100,00. No compensation is payable without documentary proof. Optional insurance of up to R2 000,00 is available and applies to domestic registered letters only.

Die waarde van die inhoud van hierdie briewe is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontvang word nie. Vergoeding is beperk tot R100,00. Geen vergoeding is sonder dokumentêre bewys betaalbaar nie. Opsionele versekering van tot R2 000,00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.



ANNEXURE C

Department of Roads and Transport's approval letter



GAUTENG PROVINCE

Department: Roads and Transport
REPUBLIC OF SOUTH AFRICA

Infrastructure Protection, Koedoespoort 1215 Nico Smit Street, Private Bag X1, TOTIUSDAL, 0134
Tel No: (012) 310 2405

Enq: / Navr: Ms. D. Dahlberg / Ms. E. Iding
Ref: / Verw: 2/2/4/P66-1/SEW/202
2D-2/2/4/1-P66-1 (K71)



Messrs. Innovisi Consulting (Pty) Ltd.
1 Marais St Bailey's
MUCKLENEUK
0181

Tel: (012) 346 6542

Sir/Madam

Attention: C. Joubert

WAYLEAVE APPROVAL: 2D-2015/7132

UNDERGROUND WAYLEAVE:

<u>ROAD NO:</u>	Road P66-1 (K71)
<u>KILOMETRE SIGNPOST/S:</u>	km 5.8
<u>SERVICE DESCRIPTION:</u>	Bulk Sewer Road Crossing.
<u>PROPERTY DESCRIPTION:</u>	Pretoria
<u>DISTRICT:</u>	Sunderland Ridge AH
<u>APPROVED PLAN/S:</u>	8292-300-01-R55 Rev A

With reference to your application 903312 dated 19 March 2015 in connection with the above mentioned, you are hereby informed that your application has been approved, as set out below subject to the following conditions:

NB: This wayleave is granted in favour of **Tshwane Municipality** and their successor(s) in title.

1. **The District Manager, Mr. J. Mabelane**, Private Bag X1 Totiusdal, 0134, telephone (012)808 0333 cell, 082 906 0821, must be informed at least seven days before commencement of any work and shortly before completion thereof in order to make the necessary arrangements for inspection.

The Inspection and Completion certificate must be completed during the inspection and handed to the District Manager, Mr. J. Mabelane. (The certificate is attached as Addendum A).

2. The necessary and prescribed road traffic signs (road signs and markings) for the proposed work must conform to the S A Manual for Road Traffic Signs. You must provide the signs and erect them to the satisfaction of the **District Manager, Mr. J. Mabelane, Cell: 082 906 0821** before commencing with the work. The minimum lay-out of the road signs is shown on the sketches included in the attached Addendum.

9. You will be responsible for all liaison and co-ordination work including any and all correspondence between your commission/department and any private property owners. The Department of Roads and Transport will not be involved with any individual property owners with regard to the service, as this is then still your responsibility. See also clauses 4 and 5 of this wayleave.
10. You indemnify the Premier of Gauteng Province and exempt him from any claim or damage which may be instituted or suffered by any person, including legal costs, as a result of the laying or erection of any service or any other works caused or erected by you, or as a result of negligence on your part to protect or maintain the service or other works caused by any other person unless you can prove negligence on the part of the Department of Roads and Transport or its officials.
11. The Department of Roads and Transport will not be liable for any damage suffered by the applicant as a result of operations carried out on road construction or road maintenance or any other operations whatsoever, unless negligence on the part of the Department of Roads and Transport or its officials can be proved.
12. The work must be carried out to the entire satisfaction of the abovementioned District Manager. No trees, shrubs, cultivated grass or fencing must be removed or damaged. If such plants or fences were removed or damaged you will have to replace it to the entire satisfaction of the said District Manager involved.
13. Permission must be obtained from the District Manager before any trees or shrubs can be pruned or removed for erection/installation or maintenance purposes. All branches and tree trunks or other waste must be removed and the road reserve must be cleaned up before the final inspection takes place. The service(s) must be erected in such a manner that no trees are affected or will fall within the safe area of the service(s).
14. Drainage systems (surface and sub-surface) must not be interfered with or damaged in any way. The road reserve must be left clean and all waste be removed.
15. No permanent access to and from the road to the service will be allowed. Temporary access points must be approved by the District Manager.
16. The work must be done within **twelve months** from the date of this letter. If for any reason at all, the work is delayed for a longer period, extension of time must be requested in writing or a new application will have to be submitted.
17. The official in charge of the construction or maintenance work on the site must, at all times, be in possession of a complete copy of the letter of approval, including the general conditions, special conditions and specific conditions where applicable to the service concerned, as well as all plans that are required and are referred to in the correspondence, so that during an inspection the official can submit it to the official(s) of the controlling authority when requested to do so. If no approval can be submitted the official of the controlling authority then can order that the road be secured and the work immediately ceased. Any cost incurred by the Department of Roads and Transport to secure the road, will be for your account.
18. The conditions of this wayleave are applicable to you as well as your successor-in-title (where applicable). If property rights of your service be transferred to any other person or institution, it will be your responsibility to bring the contents of this wayleave to the attention of your successor-in-title as the conditions of this wayleave together with your property rights will be transferred to your successor-in-title and will still be applicable.

25. The material that is used must be of such quality that during the expected life of the road it will not be necessary to disturb the road surface to do repairs to the service.
26. If the open trench method is used the sleeve pipe must be laid in two sections across the roadway to obviate interruption to the flow of traffic; only one lane may be closed to the public at a time. A deviation to make the crossing of the road easier, can be considered but it must be shown on a fully detailed plan and approved by the District Manager before commencement of the work.
27. **Care must be taken that existing stormwater drains or subsurface drainage systems or survey beacons/pegs are not damaged or interfered with by excavations. Excavation within the road reserve must be fenced and secured.**
28.
 - a) Any survey pegs/beacons that are damaged as a result of your activities must be replaced at your own cost by a surveyor who is on an approved panel of surveyors appointed by the Department of Roads and Transport.
 - b) Cadastral beacons, however, must be replaced by a registered Surveyor.
 - c) After the beacons have been replaced a Completion Certificate, marked for the specific attention of the Principal Industrial Technician: Survey, must be handed in at the office of the Director: Design for approval.
 - d) All arrangements for the implementation of the abovementioned procedures will be arranged by the service owner/applicant and will they accept full responsibility thereof.
29. Treatment of the layers for service excavations must conform to the Standard Specifications for Road and Bridge Works as well as the Material and Pavement Design Manual (L1/78, as amended) issued by the Head: Department of Roads and Transport, Gauteng Provincial Administration, Johannesburg. Should these specifications in any instance be less stringent and/or a lesser standard than the general specifications as given below, these will apply:

Backfilling alongside and over all sleeve pipes must be placed and compacted in layers of at most 100 mm after compaction to a density required for the material in adjacent fill, subgrade or subbase layer. The density of the backfill in excavations in natural ground must be at least 90% of modified AASHTO density.

You will be held responsible for any subsidence in the backfill or accidents due to such subsidence.
30. You agree to maintain at all times underground services and appurtenant items including repair work to the surface of the road if requested and to take the necessary precautions to safeguard the travelling public.
31. No excavation in the roadway may be left open overnight.
32. **Service markers** as specified on attached plan W93 indicating the nature, position and depth of the service will have to be erected on both sides at crossings, by the service owner. For parallel services within the road reserve the markers must be erected at least at every 100 metres alongside the underground service. The markers must be at least 200 mm high and also be clearly visible.

8. The method of drilling beneath road must be used without disturbing the traffic, the road surface or road pavement. The openings, after completion of the work must be sealed and backfilled to the satisfaction of our District Manager.

Access pits and work areas for this method (on both sides of the road) may not be closer than 3 metres to the "edge of tar" provided that no excavations be left open overnight otherwise a distance of 10 metres will apply.

You may not use the open trench method, crossing the road, and clause 26 will not be applicable.

If the above-mentioned method is unsuccessful a **new application** for an alternative method/position must be submitted.

9. Your service shall be installed in a sleeve pipe over the full width of the existing road reserve with a minimum cover of **1, 5 metres** at the lowest point in the road reserve.
10. Manholes must not protrude above the natural ground level.
11. No manholes will be allowed inside the road reserve boundary.

NOTE/S:

1. **Future Road K71** may be affected by your service. If it becomes necessary to remove or relocate your service during the construction of this road, it will be at your cost without any compensation from this Department.
2. The road reserve boundaries shall be set out by a professional land surveyor with information (co-ordinates) obtainable from this Department.

Commencement of any work in respect of which this wayleave is granted will be regarded as acceptance of the above-mentioned GENERAL, SPECIFIC AND SPECIAL CONDITIONS.

If you fail to comply with any of the general, specific and special conditions of this wayleave during work activities within the road reserve, the Head of the Department reserves the right to withdraw this wayleave and you will be obliged to rectify the situation or in failure of the latter you can be ordered (Act No. 8 of 2001), to cease all work immediately.

This wayleave is granted in terms of the Gauteng Transport Infrastructure Act 2001 (Act No. 8 of 2001) and the Regulations to the Act and does not exempt you from the provisions of any other law.

Yours faithfully

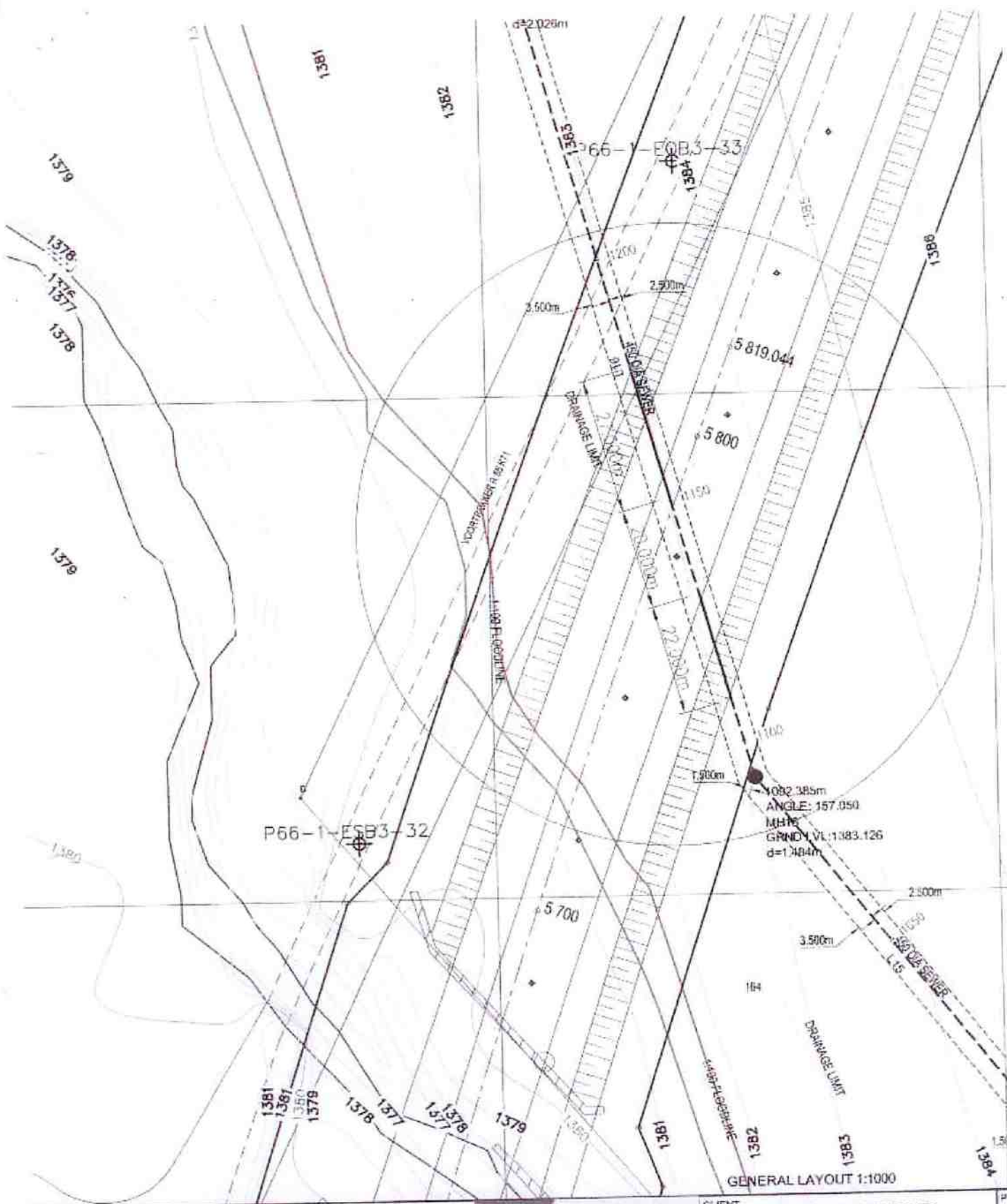

HEAD OF DEPARTMENT

DATE:

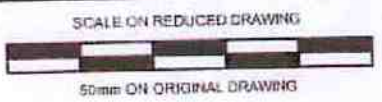
DD/Innovisi P66-1-SEW-202

2D-2015-7132

ATTACHED: (a) Addendum A (b) Layout plan of road signs for work within the road reserve
(c) Approved plan/s



GENERAL LAYOUT 1:1000



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CLIENT	TSHWANE MUNICIPALITY		
DRAWN	CWJ	DATE	2015-03-19
CHECKED	CWJ	DATE	2015-03-19
SCALE	1:1000		

ANNEXURE D
Geotechnical Report

ANNEXURE E

Amended Final EMP

March 2016

Amended Final Environmental Management Plan for the proposed Raslouw X15 Sewer pipeline, Gauteng Province

Ref nr: Gaut: 002/13-14/E0287

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1. Project Outline

1.1 Background

Bokamoso Landscape Architects and Environmental Consultants CC was appointed by **Purple Roof Developers (Pty) Ltd** to compile a Basic Assessment Report for the installation of the Raslouw X15 sewer pipeline. The EMP had been prepared to comply with Section 32 of the National Environmental Management Act (NEMA), 1998 (Act 107 of 1998).

The EMP will be a binding document for purposes of compliance.

1.2 Project description

The involved section of Raslouw X15 is approximately 2 km in length and falls within the area of jurisdiction of the City of Tshwane Metropolitan Municipality. **Refer to figure 1, Locality Map**



Figure 1 – LocalityMap

Timeframe for construction:

This will be provided when/ if the application for the proposed development is approved.

1.3 Receiving Environment

Refer to Figure 2, *Sensitive issues Map*

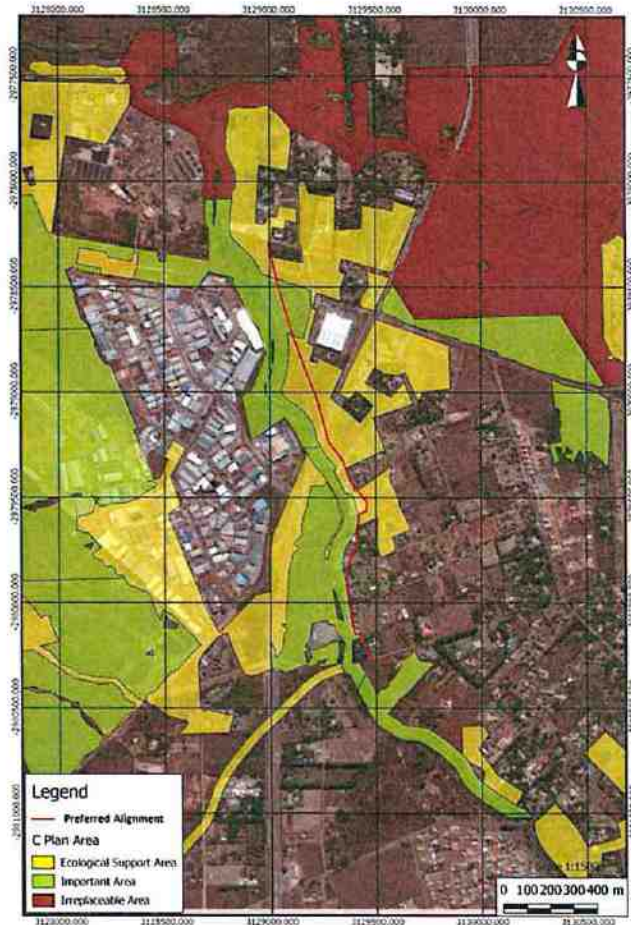


Figure 2 – Sensitive Issues Maps

Geology:

- The proposed sewer line is situated in an area comprising mainly of dolomite. Chert with shale and quartzite also occurs in the general area.

Fauna and flora:

- No red data flora species was found. Although a small section of the proposed sewer pipeline might possibly have some Orange Listed Plant species present

according to C-Plan data, but this will only be confirmed when a specialist study has been conducted. No fauna (both vertebrate and invertebrate) species was found on site, with no connectivity to any functional habitats. The proposed sewer pipeline traverses Natural grassland areas which were deemed sensitive; however it does not traverse any irreplaceable sites.

Hydrology:

- The proposed sewer pipeline is planned to mainly be aligned along the contours that is 5m or more above the **water** level of the Rietspruit and the sewer line will be between 15 and 130m away from the channel. It is also planned to run just outside the 1:100 year floodline, thus it will be less than 500 meters away from the river. However, the proposed sewer line does not transect the wetland or riparian zone at any point. The construction and operational phase of the proposed sewer pipeline could cause erosion, siltation and pollution of these water bodies if mitigation measures are not implemented. The wetlands and riparian vegetation are regarded as sensitive.

The proposed sewer line runs outside of the wetland/riparian zone for its entire length.

Impact on agricultural land and agricultural holdings:

- The pipeline alignment cut through agricultural land and urban area. But the general agricultural potential of the soils traversed by the alignments of sewer pipeline are moderate to low and the study areas does not fall within a GDARD Agricultural Hub.

Noise Impact:

- Pro-active planning in the area should be considered around the sewer pipeline area especially for during construction. During the operational phase, there will be no noise impacts.

Blasting:

- Some blasting may be required during the construction of the sewer pipeline.

2. EMP Objectives and context

Objectives

The objectives of this plan are to:

- Identify the possible environmental impacts of the proposed activity;
- Develop measures to minimise, mitigate and manage these impacts;
- Meet the requirements of the Environmental Authorisation of GDARD and other of other Authorities; and
- Monitor the project.

EMP context

This EMP fits into the overall planning process of the project by carrying out the conditions of consent set out by the GDARD. In addition, all mitigation measures recommended in the EIA report are included in the EMP.

This EMP addresses the following phase of the development:

- Planning and Design phase.

3. Monitoring

In order for the EMP to be successfully implemented all the role players involved must have a clear understanding of their roles and responsibilities in the project.

These role players may include the Authorities (A), other Authorities (OA), Developer/proponent(D), Environmental Control Officer (ECO), Project Manager (PM), Contractors (C), Environmental Assessment Practitioner (EAP) and Environmental Site Officer (ESO). Landowners interested and affected parties and the relevant environmental and project specialists are also important role players.

3.8 Acts

3.8.1. The National Water Act, 1998 (Act No: 36 of 1998)

The purpose of this Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways that take into account, amongst other factors, the following:

- Meeting the basic human needs of present and future generations;
- Promoting equitable access to water;
- Promoting the efficient, sustainable and beneficial use of water in the public interest;
- Reducing and preventing pollution and degradation of water resources;
- Facilitating social and economic development; and
- Providing for the growing demand for water use.

Impact on proposed pipeline:

The Raslouw X 15 sewer pipeline will require a water license application in terms of section 21 (c) and (i) of the National Water Act (Act 36 of 1998).

3.8.2 National Environmental Management Act (Act 107 of 1998)

The NEMA is primarily an enabling Act in that it provides for the development of environmental implementation plans and environmental management plans. The principles listed in the act serve as a general framework within which environmental management and implementation plans must be formulated.

The principles in essence state that environmental management must place people and their needs at the forefront of its concern and that development must be socially, environmentally and economically sustainable.

In terms of Section 24G of the National Environment Management Act, 1998 (Act No. 107 of 1998) an Environments Impact Assessment (EIA) as part of the application for rectification (Section 24G) must be submitted to the delegated authority for consideration. Section 24G (1) (b) (vii) lists all the items that must be included and discussed in the EIA Report to be compiled and submitted.

Impact on proposed pipeline:

The proposed section of the pipeline is listed under the activities as regulated under NEMA and therefore a Basic Assessment Process is being conducted.

3.8.3 The National Environmental Management: Waste Act (Act 59 of 2008)

This Act came into effect on 11 June 2009. It aims to consolidate waste management in South Africa, and contains a number of commendable provisions, including:

- The establishment of a national waste management strategy, and national and provincial norms and standards for, amongst others, the classification of waste, waste service delivery, and tariffs for such waste services;
- Addressing reduction, reuse, recycling and recovery of waste;
- The requirement for industry and local government to prepare integrated waste management plans;
- The establishment of control over contaminated land;
- Identifying waste management activities that requires a licence, which currently include facilities for the storage, transfer, recycling, recovery, treatment and disposal of waste on land;
- Co-operative governance in issuing licenses for waste management facilities, by means of which a licensing authority can issue an integrated or consolidated license jointly with other organs of state that has legislative control over the activity; and
- The establishment of a national waste information system.

On 29 November 2013 the Minister of Environmental Affairs and Tourism amended the list of waste management activities that might have a detrimental effect on the environment.

Impact on proposed pipeline:

No Waste Management License will be required during the construction phase of the proposed pipeline.

3.8.4 National Heritage Resources Act, 1999 (Act No. 25 of 1999)

The National Heritage Resources Act legislates the necessity and heritage impact assessment in areas earmarked for development, which exceed 0.5ha. The Act makes provision for the potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA).

Impact on proposed pipeline:

No cultural/historical significant areas were identified within the application site and thus no areas of historical or cultural value will be affected. It is although important that if any such features are discovered during construction activities and clearing of the application site, the correct "procedures for an Environmental incident" (at the end of this EMP) must be followed.

3.8.5 The Municipal Systems Act (Act 32 of 2000)

This Act was introduced to provide for the core principles, mechanisms and processes that are necessary to enable municipalities to move progressively towards the social and economic upliftment of local communities, and ensure universal access to essential services that are affordable to all.

The proposed development will support the local authority in complying with the principles of the Municipal Systems Act, by assisting in providing the community with essential services, such as sewage infrastructure.

Impact on proposed pipeline:

The proposed section of the pipeline will contribute to the Municipal system.

3.8.6 Conservation of Agricultural Resources Act (Act No. 43 of 1983)

This Act provides for control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith.

Impact on proposed pipeline:

According to the Gauteng Agricultural Potential Atlas (GAPA 3), the Raslouw X 15 sewer pipeline is located on land with high and low agricultural potential. However, it should be noted that the surrounding areas is in the process of being developed or already developed for industrial, residential or other land uses. Construction of the proposed section of the pipeline will possibly cause erosion and pollution of water sources if these impacts are not mitigated.

3.8.7 National Environmental Management Act: Biodiversity Act (Act No. 10 of 2004)

The purpose of the Biodiversity Act is to provide for the management of South Africa's biodiversity within the Framework of the NEMA and the protection of species and ecosystems that warrant National protection. As part of the implementation strategy, the National Spatial Biodiversity Assessment was developed.

Impact on proposed pipeline:

No red data species were found on site.

3.8.8 National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003)

The purpose of this Act is to provide for the protection, conservation and management of ecologically viable areas representative of South Africa's biological biodiversity and its natural landscapes.

Impact on proposed pipeline:

The pipeline does not affect any protected areas.

3.8.9 GDARD Draft Ridges Policy

The main purpose of the draft Red Data Policy is to protect red data plant species in Gauteng Province. This policy requires that red data species remain in situ and it gives priority ratings (based on where they occur) to the different Red Data species. If Red Data species are discovered on the study area this policy will have relevance and it should be described in detail as to how it is applicable to this application.

According to the GDARD C-Plan, the study area is not affected by ridges and the Draft Ridges Policy is therefore not applicable.

Impact on proposed pipeline:

The study area is not affected by any ridges.

3.8.10 GDARD Red List Plant Species Guidelines

The purpose of these guidelines is to promote the conservation of Red List Plant Species in Gauteng, which are species of flora that face risk of extinction in the wild. By protecting Red List Plant Species, conservation of diverse landscapes is promoted which forms part of the overall environmental preservation of diverse ecosystems, habitats, communities, populations, species and genes in Gauteng.

These Guidelines are intended to provide a decision-making support tool to any person or organization that is responsible for managing, or whose actions affect, areas in Gauteng where populations of Red List Plant Species grow, whether such person or organization be an organ of state or private entity or individual; thereby enabling the conservation of the Red List Plant Species that occur in Gauteng.

Impact on proposed pipeline:

No red data species were observed by specialist on the study area.

3.8.11 National Veld and Forest Fire Act, 1998 (Act No. 101, 1998)

The purpose of this Act is to prevent and combat veld, forest and mountain fires throughout the Republic. Furthermore the Act provides for a variety of institutions, methods and practices for achieving the prevention of fires.

Impact on proposed pipeline:

No open fires will be allowed. It is important that a site development camp be located on a part of the application site that is already disturbed. The camp should not be located in close proximity of natural veld grass areas, areas that can be easily susceptible for fires, and the floodline zone area.

3.8.12 Environmental Conservation Act: Noise Regulations, 1989 (Act no.73 of 1989)

The purpose of this Act is to provide measures and management relating Noise levels. This Act enables Noise levels to be acceptable to standards within a specific area and community.

Impact on proposed pipeline:

The proposed development will include some noisy activities with the construction of the proposed section of the external sewer pipeline and but there will be no noise during the operational phase.

4. Project activities

4.1 Pre-Construction Phase

TYPE	Environmental risk or issue	Objective or requirement	Mitigation measure	Performance indicator	Responsibility
General	Project contract	To make the EMP enforceable under the general conditions of the contract.	The EMP document must be included as part of the tender documentation.	The EMP is included as part of the tender documentation.	Developer
Design and planning	Stability of structures	To ensure stability of structures and embankments.	<p>Geotechnical constraints that must be taken into consideration during the planning and designing of the pipeline, i.e. collapsible sands, expansive clays, excavatability etc.</p> <ol style="list-style-type: none"> 1) The dolomite stability along the pipeline should be investigated in detail by conducting a gravity survey and percussion boreholes. 2) More detailed foundation investigations should be conducted for structures such as bridges and culverts. 3) The granite is covered by collapsible material and will have to be pre-collapsed, possibly by impact rolling if the collapse potential is too high. 4) The low-density material encountered within the Oaktree Formation must be compacted with a vibrating or impact roller. In extremely poor conditions the material must be excavated and backfilled with granular material. 5) Embankments will only be required where structures such as bridges and culverts are constructed. 6) The NHBRC precautionary measures for development in dolomitic areas must be implemented. 	<p>Geotechnical constraints had been taken into consideration during the planning and designing of the pipeline.</p> <p>More detailed foundation investigations done.</p>	Engineer
					Engineer Individual Developer

TYPE	Environmental risk or issue	Objective or requirement	Mitigation measure	Performance indicator	Responsibility
			<p>7) Stormwater management is extremely important and must be designed to prevent the concentrated ingress and ponding of water.</p> <p>8) Wet surfaces such as water supply lines must preferably not run close to (within 10m) along the pipeline. Where such a service crosses the pipeline alignment, all due care should be taken to ensure that the pipe does not leak.</p>		
			<p>1) Special drainage designs will be required in areas with shallow ground water, especially for areas underlain by granite and syenite.</p> <p>2) Precautionary measures to prevent seepage of groundwater into excavations should be implemented.</p>	<p>Special drainage designs and precautionary measures are implemented.</p>	<p>Engineer Contractor</p>
<p>Storm water design</p>	<p>To prevent and restrict erosion, siltation and groundwater pollution.</p>		<p>1) A storm water management plan must be compiled for the construction and operational phases of the proposed pipeline.</p> <p>2) The storm water design for the proposed development must be designed to:</p> <ul style="list-style-type: none"> - Reduce and / or prevent siltation, erosion and water pollution - Improve the surface and ground water quality of the study area and the lower lying areas within the catchment area. and - Ensure that no ponding of water and concentrated ingress of water take place. <p>3) No storm water must be allowed to enter the natural drainage systems directly. The stormwater should be diverted through forms of storm water retention facilities for containing and releasing flood water in a way that simulate natural flow into the natural drainage systems to assuage associated erosion and siltation problems that may arise.</p> <p>4) Due to the fact that most of the study area is</p>	<p>Compilation and approval of storm water management plan.</p>	<p>Engineer Individual Developer</p>

TYPE	Environmental risk or issue	Objective or requirement	Mitigation measure	Performance indicator	Responsibility
			underlain by dolomite no natural channels will be allowed. All open channels and attenuation ponds must be lined with concrete. No grass lined channels will be permitted due to the geotechnical conditions. Concentrated surface drainage is also not permitted. 5) Temporary storm water management measures should be in place on the site to avoid downstream siltation or any erosion due to the construction of the pipeline.		
Climate	Damage to the environment during the rainy season	To minimize damage to the environment and structures	It is recommended that the construction of pipeline next to stream crossings be scheduled for the dry season.	Construction of bridge structures scheduled for rainy season.	Engineers
Geology and soils	Risk of sinkholes	To prevent the reaction of a sinkhole after the construction of the pipeline.	1) Special precautionary measures for construction on dolomite must be implemented. 2) A dolomite risk management plan must be compiled to manage the pipeline.	Precautionary measures implemented.	Geotechnical Engineer Dolomite Risk manager
Fauna and flora	Floral biodiversity and ecological health	To ensure that the species introduced to the area, are compatible with the current and future quality of the ecological processes.	1) As many as possible of the mature indigenous trees that occur naturally in the vicinity of the proposed pipeline should be retained. These vegetation communities should be connected to natural vegetation on neighbouring properties to facilitate connectivity. This area should be properly managed throughout the lifespan of the project in terms of fire, eradication of exotics to ensure biodiversity. 2) No plants which are not indigenous to the area or exotic plant species, especially lawn grasses and other ground-covering plants should be used as soil-binding agents along new pipeline verges as they will drastically interfere with the nature of the area. 3) All category 1 declared weeds and other alien species must be removed from the vicinity of the	As many as possible of the mature trees are retained and exotics are eradicated	Landscape Architect Contractor

TYPE	Environmental risk or issue	Objective or requirement	Mitigation measure	Performance indicator	Responsibility
		To ensure protection of wetland system and river/drainage line	<p>proposed pipeline.</p> <p>1) A fence/ safety netting should be erected between the Riparian vegetation and the areas which may be affected for the planned pipeline reserve. This will prevent entry into the drainage line by construction material and other waste in the drainage line.</p> <p>2) Care must be taken to ensure that construction activities remain within the boundary of the planned pipeline.</p> <p>3) Limited access to the water of the Rietspruit should be given to construction vehicles by fencing of all access points to the water, except at the predetermined water-intake point.</p> <p>The edge of the wetland must be clearly demarcated in the field with poles, sticks, or any solid structure that will last for the duration of the development, colour-coded as follows:</p> <ul style="list-style-type: none"> o Red – Indicating the edge of the wetlands, or parts thereof; and no vehicles or building materials are allowed in this zone. (These should be put along the entire length of the property / site). o Orange – Indicating the edge of the buffer zone (50m outside the urban edge). However, allowance must be made for sensitive species that require larger areas, e.g. Grass Owl, Giant Bullfrog, etc. o Green – Indicating where the first structures will be built (e.g. stands / plots building, paving, wall fencing, etc). 	Fence erected	Contractor
Preparing Site Access	Environmental Integrity	To avoid erosion and Disturbance to indigenous vegetation.		Access to site is erosion free. Minimum disturbance to surrounding vegetation.	Contractor

TYPE	Environmental risk or issue	Objective or requirement	Mitigation measure	Performance indicator	Responsibility
			pedestrians. Provide an access map to all contractors whom in turn must provide copies to the construction workers. Instruct all drivers to use access point and determined routes.	Vehicles make use of established routes.	
	Waste storage	To control the temporary storage of waste.	Temporary waste points on site shall be determined. These storage points shall be accessible by waste removal trucks and these points should not be located in sensitive areas / areas highly visible from the properties of the surrounding land-owners / tenants / in areas where the wind direction will carry bad odours across the properties of adjacent tenants or landowners. Build a bund around waste storage area to stop overflow into storm water.		Contractor ESO
		Ensure waste storage area does not generate pollution.			Contractor
	Cultural Resources	To ensure protection of cultural resources.	1) In terms of the South African Resources Act (Act 25 of 1999) Section 35 (4) no person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or Palaeontological site or material. 2) Section 34 (1) of this act states that no person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit, issued by the relevant provincial resources authority Servitudes must be indicated on engineering drawings.	No cultural resources destroyed or removed.	
	Servitudes		Servitudes must be indicated on engineering drawings.	Servitudes indicated on engineering drawings.	Engineer
	Expropriation of properties		The expropriation of properties must be finalized prior to the construction of the pipeline.		
	Impact on	To minimize	1) The construction of the section of the pipeline		Contractor

TYPE	Environmental risk or issue surrounding properties	Objective or requirement	Mitigation measure	Performance indicator	Responsibility
		Impact on possible mining activities	that affects the nearby neighbors should be planned properly. 2) Should there be mined areas on the site, then they must be rehabilitated according to an EMP prior to construction of the pipeline.		
		To access to surrounding properties.	1) The properties affected by the proposed sewer pipeline must be taken into consideration during the planning phases. 2) The design of the pipeline must make provision for access to local routes and properties as well as future routes.	Access provided to affected properties.	Engineer
	Impact on Waste Water Works	To prevent impact on sewage facility.	The design of the pipeline must take other existing pipeline facility into consideration. No pipes or outlet structures of the sewage facility may be affected by the new proposed sewer pipeline.	No pipes or outlet structures affected by the sewer pipeline.	Engineer

4.2 Construction Phase

Contractor's camp	Vegetation and topsoil	To minimize damage to and loss of vegetation and retain quality of topsoil.	1) Site offices, parking areas for construction vehicles, etc. should be confined to non-sensitive areas. 2) Site to be established under supervision of ECO. 3) Clearing and relocation of plants to be undertaken in accordance with site specific requirements.	Site erected in an area that is not sensitive. Minimal vegetation removed / damaged during site activities.	Contractor
	Surface and ground water pollution	To minimize pollution of surface and ground water resources.	1) Sufficient and temporary facilities including ablution facilities must be provided for construction workers operating on the site. 2) A minimum of one chemical toilet shall be provided per 10 persons. The contractor shall keep the toilets in a clean, neat and hygienic condition. Toilets provided by the contractor must	Effluents managed effectively. No water pollution of water resources from site. Workforce use toilets	Contractor ESO

		<p>be easily accessible and a maximum of 50m from the works area to ensure they are utilized. The contractor (who must use reputable toilet-servicing company) shall be responsible for the cleaning, maintenance and servicing of the toilets. The contractor (using reputable toilet-servicing company) shall ensure that all toilets are cleaned and emptied before the builders' or other public holidays.</p> <ol style="list-style-type: none"> 3) No person is allowed to use any other area than chemical toilets. 4) No French drain systems may be installed. 5) No chemical or waste water must be allowed to contaminate the run-off on site. 6) Avoid the clearing of the site camp (of specific phase) or paved surfaces with soap. 	<p>provided.</p>
	<p>To minimize pollution of surface and groundwater resources due to spilling of materials.</p>	<ol style="list-style-type: none"> 1) Drip trays and / or lined earth bunds must be provided under vehicles and equipment, to contain spills of hazardous materials such as fuel, oil and cement. 2) Repair and storage of vehicles only within the demarcated site area. 3) Spill kits must be available on site. 4) Oils and chemicals must be confined to specific secured areas within the site camp. These areas must be banded with adequate containment (at least 1.5 times the volume of the fuel) for potential spills or leaks. 5) All spilled hazardous substances must be contained in impermeable containers for removal to a licensed hazardous waste site. 6) No leaking vehicle shall be allowed on site. The mechanic / the mechanic of the appointed contractor must supply the environmental officer with a letter of confirmation that the vehicles and equipment are leak proof. 7) No bins containing organic solvents such as paints and thinners shall be cleaned on site, unless containers for liquid waste disposal are 	<p>No pollution of the environment.</p>

Contractor
ESO

			placed for this purpose on site. The mixing of concrete shall only be done at specifically selected sites, as close as possible to entrance, on mortar boards or similar structures to prevent run-off into drainage lines, streams and natural vegetation.	No evidence of contaminated soil on the construction site.	Contractor ESO
		To minimize pollution of surface and groundwater resources by cement. To minimise pollution of surface and groundwater resources due to effluent.	No effluent including effluent from any storage areas) may be discharged into any water surface or ground water resource.	No evidence of contaminated water resources.	Contractor ESO
	Pollution of the environment	To prevent unhygienic usage on the site and pollution of the natural assets.	<p>1) Weather proof waste bins must be provided and emptied regularly.</p> <p>2) The contractor shall provide laborers to clean up the contractor's camp and construction site on a daily basis.</p> <p>3) Temporary waste storage points on the site areas should be determined. THESE AREAS SHALL BE PREDETERMINED AND LOCATED IN AREAS THAT IS ALREADY DISTURBED. These storage points should be accessible by waste removal trucks and these points should be located in already disturbed areas / areas not highly visible from properties of the surrounding land-owners / in areas where the wind direction will not carry bad odours across the properties of adjacent landowners. This site should comply with the following:</p> <ul style="list-style-type: none"> ◆ Skips for containment and disposal of waste that could cause soil and water pollution, i.e. paint, lubricants, etc. ◆ Small lightweight waste items should be contained in skips with lids to prevent wind littering. ◆ Bunded areas for containment and holding of dry building waste. 		

			<p>4) No solid waste may be disposed of on the site. 5) No waste materials shall at any stage be disposed of in the open veld of adjacent properties. 6) The storage of solid waste on the site, until such time as it may be disposed of, must be in a manner acceptable to local authority and DWA. 7) Cover any wastes that are likely to wash away or contaminate storm water.</p> <p>1) Waste shall be separated into recyclable and non-recyclable waste, and shall be separated as follows:</p> <ul style="list-style-type: none"> • General waste: including (but not limited to) construction rubble. • Reusable construction material <p>2) Recyclable waste shall preferably be deposited in separate bins.</p> <p>3) All solid waste including excess spoil (soil, rock, rubble, etc.) must be removed to a permitted waste disposal site on a weekly basis.</p> <p>4) No bins containing organic solvents such as paints and thinners shall be cleaned on site, unless containers for liquid waste disposal are placed for this purpose on site.</p> <p>5) Keep records of waste reuse, recycling and disposal for future reference. Provide information to ECO.</p>	<p>Sufficient containers available on site</p> <p>No visible signs of pollution.</p>	<p>Contractor ESO</p>
<p>Increased fire risk to site and surrounding areas</p>	<p>To decrease fire risk</p>	<p>1) Fires shall only be permitted in specifically designated areas and under controlled circumstances. 2) Food vendors shall be allowed within specified areas. 3) Fire extinguishers to be provided in all vehicles and fire beaters must be available on site. 4) Emergency numbers / contact details must be available on site, where applicable.</p>	<p>No open fires on site that have been left unattended.</p>	<p>Contractor</p>	
<p>Construction</p>	<p>Geology and</p>	<p>1) The top layer of all areas to be excavated for</p>	<p>Excavated materials</p>	<p>Contractor</p>	

<p>site</p>	<p>soils</p>	<p>damaging of existing soils and geology.</p>	<p>the purpose of construction shall be stripped and stockpiled in areas where this material will not be damaged, removed or compacted. 2) All surfaces that are susceptible to erosion, shall be protected either by cladding with biodegradable material or with the top layer of soil being seeded with grass seed / planted with a suitable groundcover.</p>	<p>correctly stockpiled. No signs of erosion.</p>	
		<p>To prevent the loss of topsoil</p>	<ol style="list-style-type: none"> 1) Stockpiling will only be done in designated places where it will not interfere with the natural drainage paths of the environment. 2) In order to minimize erosion and siltation and disturbance to existing vegetation, it is recommended that stockpiling be done / equipment is stored in already disturbed / exposed areas. 3) Cover stockpiles and surround downhill sides with a sediment fence to stop materials washing away. 4) Remove vegetation only in areas designated during the planning stage. 5) Rehabilitation / landscaping is to be done immediately after the involved works are completed. 6) All compacted areas should be ripped prior to them being rehabilitated / landscaped by the contractor as appointed by the individual erf owner. 7) The top layer of all areas to be excavated must be stripped and stockpiled in areas where this material will not be damaged, removed or compacted. This stockpiled material should be used for the rehabilitation of the site and for landscaping purposes. 8) Strip topsoil at start of works and store in stockpiles no more than 1,5 m high in designated materials storage area. 9) During the laying of any cables, pipelines or infrastructure (on or adjacent to the site) topsoil 	<p>Excavated materials correctly stockpiled. No visible signs of erosion and sedimentation. Minimal invasive weed growth. Vegetation only removed in designated areas.</p>	<p>Contractor of individual developer</p>

	<p>Erosion and siltation</p>	<p>To prevent erosion and siltation.</p>	<p>shall be kept aside to cover the disturbed areas immediately after such activities are completed.</p> <ol style="list-style-type: none"> 1) Cut-off of drains should be excavated up- and down-hill of denuded areas to reduce run-off across these areas. 2) Large exposed areas during the construction phases should be limited. Where possible areas earmarked for construction during later phases should remain covered with vegetation coverage until the actual construction phase. This will prevent unnecessary erosion and siltation in these areas. 3) Rehabilitate exposed areas immediately after construction in these areas is completed (not at the end of the project). 4) Unnecessary clearing of flora resulting in exposed soil prone to erosive conditions should be avoided. 5) All embankments must be adequately compacted and planted with grass to stop any excessive soils erosion and scouring of the landscape. 6) Storm water diversion measures are recommended to control peak flows during thunder storms. 7) The eradication of alien vegetation should be followed up as soon as possible by replacement with indigenous vegetation to ensure quick and sufficient coverage of exposed areas. <p>The affected quarries must be filled and proper layer works undertaken to prevent damage to the pipeline structure.</p>	<p>No erosion scars. No loss of topsoil. All damaged areas successfully rehabilitated.</p>	<p>Contractor ESO</p>
<p>Stability of structures due to geology</p>	<p>To ensure stability of structures.</p>		<p>Quarries filled by layerworks undertaken to the satisfaction of the engineer.</p>	<p>Engineers / Contractor</p>	
<p>Corrosiveness of soils</p>	<p>To prevent potential damage to metallic elements placed</p>	<p>All metallic elements must be galvanized or protected by other anti-corrosive methods.</p>	<p>Metallic elements are galvanized or protected by anti-corrosive methods.</p>	<p>Engineers / Contractor</p>	

		underground due to corrosive soils in dolomitic areas.			
Hydrology		To minimise pollution of soil, surface and groundwater.	<p>1) Containment of run-off from construction areas should be implemented and the streams closed off from access by construction workers.</p> <p>2) Cut-off drains should be trenched between the streams and the construction activities and hay bales should be stacked along the trenches where possible to contain siltation.</p> <p>3) All spillages must be cleaned up and contaminated soil removed as hazardous waste.</p> <p>5) Affected soil must be treated with DRIZIT or similar product.</p>	<p>No visible signs of erosion.</p> <p>No visible signs of pollution.</p>	Contractor
		To ensure protection of wetlands and rivers	<p>The wetland crossings should take place at 90 degree angles to the drainage line to minimize the length of the crossing within the wetland areas.</p>	<p>River and wetland crossings designed accordingly</p>	Engineer
		To minimise impacts on wetland system	<p>1) Compacted earth berms should be constructed at suitable intervals to reduce the volume and speed of runoff from construction areas into the storm water and wetland systems for the duration of the construction phase of the pipeline. The following guidelines should be used:</p> <ul style="list-style-type: none"> - Where the area has a slope of less than 2%, berms every 50m should be installed. - Where the area slopes between 2% and 10% berms every 25m should be installed. - Where the area slopes between 10% - 15%, berms every 20m should be installed. - Where the area has a slope greater than 15% berms every 10m should be installed. <p>2) Reduce runoff from surface areas as far as possible. The storm water should be introduced into the system at a shallow angle to prevent erosion of the opposite bank of the system.</p> <p>3) No vehicles should be allowed to</p>	<p>Berms constructed.</p> <p>NGL with vegetation coverage (dense) Constructed accordingly.</p>	Contractor / Engineer

		<p>indiscriminately drive through the wetland areas. A fence should be erected to prevent entry into the wetland areas and drainage line by construction vehicles and prevent storing or dumping of topsoil, construction material and other waste in the wetland / drainage line.</p> <p>4) All areas affected by construction should be rehabilitated upon completion of the construction phase of the pipeline. Areas should be reseeded with indigenous grasses as required.</p> <p>5) Upon completion of the construction in the area, the area should be rehabilitated to a level that will ensure that wetland vegetation can become re-established. In this regard special mention of the following is made:</p> <ul style="list-style-type: none"> ◆ All areas of disturbed and compacted soils need to be compacted and reprofiled. ◆ Ongoing removal of alien vegetation from the area must take place after the completion of the structure to prevent the uncontrollable species. <p>6) Care must be taken to ensure that construction activities remain within the boundary of the planned sewer pipeline.</p> <p>7) Limited access to the water of the Rietspruit should be given to construction vehicles by fencing off all access points to the water, except at the predetermined water-intake point.</p>	<p>Fence erected</p> <p>Affected areas continuously rehabilitated.</p>	
	<p>To minimise impact on river and wetland system during wet periods</p>	<p>Construction workers and construction vehicles and machinery must stay out of the soggy areas during the wet periods. Barrier tape should be used to demarcate the areas that are drenched with water (especially the ecologically sensitive wetland area and the areas covered with valuable topsoil) and it should only be removed when the appointed Environmental Control Officer (ECO) / site supervisor / project manager / main contractor regard the conditions in the affected areas as favourable.</p>	<p>Areas that are drenched with water (especially the ecologically sensitive wetland area and the areas covered with valuable topsoil) are demarcated with barrier tape.</p>	<p>Contractor / ESO</p>

<p>Fauna and flora</p>	<p>To protect the existing fauna and flora.</p>	<p>1) No plants not indigenous to the area or exotic plant species, especially lawn grasses and other ground-covering plants should be used as soil-binding agents along new pipeline as they will drastically interfere with the nature of the area. 2) All Category Declared Weeds and other alien species must be removed from the vicinity of the proposed pipeline. 3) Ongoing removal of alien vegetation stands which show signs of dominance or active recruitment should take place throughout the construction and operational phase of the development. 4) All areas affected by construction should be rehabilitated upon completion of the construction phase of the pipeline. Areas should be reseeded with indigenous grasses as required. 5) Trees that are intended to be retained shall be clearly marked on site. 6) Snaring and hunting of fauna by construction workers on or adjacent to the study area are strictly prohibited and the Council shall prosecute offenders. 7) All mitigation measures for impacts on the indigenous flora of the area should be implemented in order to limit habitat loss as far as possible and maintain and improve available habitat, in order to maintain and possibly increase numbers and species of indigenous fauna. 8) Wood harvesting of any trees or shrubs on the study area or adjacent areas shall be prohibited. 9) Where possible work should be restricted to one area at a time. 10) Noise should be kept to a minimum and the developer should be done in phases to allow faunal species to temporarily migrate into the conservation areas in the vicinity. 11) The integrity of remaining wildlife should be</p>	<p>Only indigenous plants used. All Category 1 Declared Weeds and other alien species removed</p>	<p>Contractor ESO</p>
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			<p>upheld, and no trapping or hunting by construction personnel should be allowed. Caught animals should be relocated to the conservation areas in the vicinity.</p> <p>12) Conservation-orientated clauses should be built into contracts of construction personnel complete with penalty clauses for non-compliance.</p> <p>1) Site workers must comply with the Provincial noise requirements as outlined in Provincial Notice No. 5479 of 1999: Gauteng Noise Control Regulations.</p> <p>2) Noise activities shall only take place during working hours.</p>			Contractor
Social	Noise Impact	To maintain noise levels below "disturbing" as defined in the national Noise Regulations.	<p>1) Dust pollution could occur during the construction works, especially during the dry months. Regular and effective damping down of working areas (especially during the dry and windy periods) must be carried out to avoid dust pollution that will have a negative impact on the surrounding environment.</p> <p>2) When necessary, these working areas should be damped down in the mornings and afternoons.</p> <p>3) Sweeping of the construction site, clearing of builders' rubble and debris are well as the regular watering of the construction site (storage areas, pipelines etc.) must take place at least once a day.</p>	No complaints from surrounding residents and I & AP	No visible signs of dust pollution	Contractor
	Dust Impact	Minimise dust from the site	<p>1) Surrounding residents must be informed of blasting exercises at least one week in advance.</p> <p>2) Blasting operations should be carefully controlled and the necessary safety precautions must be implemented.</p>	No complaints from surrounding residents I & AP		
	Blasting	To ensure safety during blasting operations.	<p>1) Although regarded as a normal practice, it is important to erect proper signs indicating the operations of heavy vehicles in the vicinity of dangerous crossings and access routes or even in</p>	Surrounding residents informed. Safety precautions in place.		Engineer Project Manager
	Safety and security	To ensure the safety and security of the public.		No incidences reported		Contractor ESO

		<p>the development in the development site if necessary.</p> <p>2) With the exception of the appointed security personnel, no other workers, friend or relatives will be allowed to sleep on the construction site (weekends included).</p> <p>3) Construction vehicles and activities to avoid peak hour traffic times i.e. between 7am. and 9 am. and again between 4 pm. and 6 pm. On weekdays. Sewer pipeline should be well planned to avoid construction vehicles travelling through residential areas where possible.</p> <p>4) Presence of law enforcement officials at strategic places must be ensured.</p> <p>5) Following actions would assist in management of safety along the sewer pipeline area.</p> <ul style="list-style-type: none"> • Adequate pipeline marking • Although regarded as a normal practice, it is important to erect proper signs indicating the danger of the excavation in and around the development site. Putting temporary fencing around excavations where possible. <p>6) It is important to erect warning signs on existing routes when impacted on by the construction of the pipeline (i.e. construction of intersections / bridges).</p> <p>7) Traffic on existing routes should be controlled during construction activities impacting on these routes (i.e. construction works at intersections, construction of bridges).</p>		
<p>Influx of people from other areas</p>	<p>In order to limit the influx of people from other areas.</p>	<p>It is recommended that (where possible) only people from the local communities in and around Centurion employed.</p>	<p>People from local community employed.</p>	<p>Contractor</p>
<p>Infrastructure and services</p>	<p>Installation of services</p>	<p>Determine areas where services will be upgraded and relocated well in advance. Discuss possible disruptions with affected parties to determine most convenient times for services disruptions and</p>	<p>No complaints from I & AP</p>	<p>Contractor ESO</p>

			warn affected parties well in advance of dates that service disruptions will take place		
Cultural Resources	To ensure the protection of cultural resources		<p>1) If any graves or archaeological sites are exposed during construction work it would immediately be reported to a museum. The report from the archaeologist must be provided to SAHRA if any graves are recovered.</p> <p>2) It should be noted that in terms of the South African Resources Act (Act 25 of 1999) Section 35(4) no person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or material.</p> <p>3) Also important is that Section 34(1) of this act states that no person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit, issued by the relevant provincial heritage resources authority.</p>	No destruction of or damage to graves or known archaeological sites.	Contractor ESO
Visual impact	To minimize the visual impact of the proposed development.		Establish dense vegetation at strategic points to screen-off the most visible sections of the pipeline/ construction of berms adjacent to the pipeline / a combination of berms with vegetation.	Visual impact minimized	Architect
Vegetation	Landscaping		<p>1) The proposed planting materials for the areas to be landscaped should preferably be endemic and indigenous.</p> <p>2) All new trees and shrubs to be planted on the study area shall be inspected for pests and diseases prior to them being planted.</p> <p>3) The inspection shall be carried out by the maintenance contractor at property of the supplier and not on the study area.</p> <p>4) All trees to be planted shall be in 20L containers with a height of approximately 1,8 metres and a main stem diameter of approximately 300 mm.</p>	Landscaping done according to street master plan.	Landscape architect Contractor / individual Developer
	Loss of plants		1) Aerate compacted soil and check and	Landscaping done	Landscape

			<p>correct pH for soils affected by construction activities.</p> <p>2) Make sure plant material will be matured enough and hardened of ready for planting. Water in plants immediately as planting proceeds.</p> <p>3) Apply mulch to conserve moisture plant according to the layout and planting techniques specified by the Landscape Architect in the Landscape Development plans for the site.</p> <p>Ensure that materials used for mulching and topsoil / fertilisers are certified weed free. Collect certifications where available. Control weed growth that appears during construction.</p>	according to landscape development plan.	architect Contractor / Individual Developer
	Spread of weeds		<p>1) All areas affected by construction should be rehabilitated upon completion of the construction phase of the pipeline.</p> <p>2) Compacted soils shall be ripped at least 200 mm.</p> <p>3) All clumps and rocks larger than 30 mm diameter shall be removed from the soil to be rehabilitated.</p> <p>4) The soil shall be leveled before seeding.</p> <p>5) Areas should be reseeded with indigenous grasses as required.</p> <p>6) Watering shall take place at least once per day for the first 14 days until germination of seeds have taken place.</p> <p>7) Thereafter watering should take place at least for 20 minutes every 4 days until grass have hardened off.</p>	Weed growth controlled	Landscape architect Contractor / individual developer
	To ensure rehabilitation of the site		<p>1) Upon completion of the construction in around the wetland area, the area should be rehabilitated to a level that will ensure that wetland vegetation can become re-established. In this regard special mention of the following is</p>	Grass have hardened off	Landscape architect Contractor
				Rehabilitation of wetland area	Contractor ESO

			<p>made:</p> <ul style="list-style-type: none"> ◆ All areas of disturbed and compacted soils need to be compacted and reprofiled. ◆ Ongoing removal of alien vegetation from the area must take place after the completion of the structure to prevent the uncontrollable recruitment of these species. 2) Ongoing removal of alien vegetation stands which show signs of dominance or active recruitment should take place throughout the construction and operational phase of the development. 		
<p>R55 and Poole Avenue</p>	<p>To reduce the traffic of the R55 and Poole Avenue</p>		<ol style="list-style-type: none"> 1) Construction vehicles and activities to avoid peak hour traffic times i.e. between 7am. and 9 am. and again between 4 pm. and 6 pm. On weekdays. Sewer pipeline should be well planned to avoid construction vehicles travelling through residential areas where possible.. 2) It is important to erect warning signs on existing routes when impacted on by the construction of the pipeline (i.e. construction of intersections / bridges). 3) Traffic on existing routes should be controlled during construction activities impacting on these routes (i.e. construction works at intersections, construction of bridges). 4) Heavy vehicles must be instructed to only use the main roads during off-peak hours. 5) These vehicles should use only specific roads and strictly keep within the speed limits and abide to all traffic laws. No speeding or reckless driving should be allowed. Access to the site for construction vehicles should be planned to minimize the impact on the surrounding network. 		

4.3 Operational Phase

Site clean up and prepared for use	Storm water pollution	Do not allow any materials to wash into the storm water system. Minimise waste	Remove erosion and sediment controls only if all bare soil is sealed, covered or re-vegetate.	Contractor
Establishing plants	Slow or no revegetation to stabilize soil, loss or degradation of habitat	To ensure revegetation to stabilize soil	Decontaminate and collect waste in storage area ready for off-site recycling or disposal. Arrange for final collection and removal of excess and waste materials. Agreed schedule for regular follow-up watering, weed control, mulch supplements and amenity pruning, if needed. Replace all plant failures within three month period after planting	Contractor
Drainage failure	On-site and downstream drainage or pollution or flooding	Storm water management plan	Inspect all site drainage works and repair any failures. Confer with design engineer and to correct site problems as part of the Dolomite Risk Management Plan.	Contractor / Dolomite Risk manager
Site audit	Eventual project failure	Successful project establishment	Routinely audit the works and adjust maintenance schedule accordingly.	Contractor
General			Open fires and smoking during maintenance works are strictly prohibited.	Contractor
Geology	Dolomite Risk Management		1) A Dolomite Risk Management Plan must be established and adhered to at all times. 2) A monitoring plan must form part of the general maintenance plan for the pipeline and allowance must be made for stability problems to be addressed immediately.	Dolomite Risk manager
Hydrology	Water pollution	To prevent water pollution of river and wetland systems	1) All spillages must be cleaned up and contaminated soil removed as hazardous waste. 2) Affected soil must be treated with DRIZIT or similar product.	Contractor

5. Procedures for environmental incidents

5.1 Leakages & spills

- Identify source of problem.
- Stop goods leaking, if safe to do so.
- Contain spilt material, using spills kit or sand.
- Notify Environmental Control Officer
- Remove spilt material and place in sealed container for disposal (if possible).
- Environmental Control Officer to follow Incident Management Plan.

5.2 Failure of erosion/sediment control devices

- Prevent further escape of sediment.
- Contain escaped material using silt fence, hay bales, pipes, etc.
- Notify ECO.
- Repair or replace failed device as appropriate.
- Dig/scrape up escaped material; take care not to damage vegetation.
- Remove escaped material from site.
- ECO to follow Incident Management plan.
- Monitor for effectiveness until re-establishment.

5.3 Bank/slope failure

- Stabilize toe of slope to prevent sediment escape using aggregate bags, silt fence, logs, hay bales, pipes, etc.
- Notify ECO.
- ECO to follow Incident Management plan.
- Divert water upslope from failed fence.
- Protect area from further collapse as appropriate.
- Restore as advised by ECO.
- Monitor for effectiveness until stabilized.

5.4 Discovery of rare or endangered species

- Stop work.
- Notify ECO.
- If a plant is found, mark location of plants.
- If an animal, mark location where sighted.
- ECO to identify or arrange for identification of species and or the relocation of the species if possible.
- If confirmed significant, ECO to liaise with Endangered Wildlife Trust.
- Recommence work when cleared by ECO.

5.5 Discovery of archeological or heritage items

- Stop work.
- Do not further disturb the area.
- Notify ECO.
- ECO to arrange appraisal of specimen.

- If confirmed significant, ECO to liaise with National, Cultural and History Museum.
P.O. Box 28088
SUNNYSIDE, 0132
Contact Mr. J. van Schalkwyk
or Mr. Naude
- Recommence work when cleared by ECO.

6. EMP review

1. The Site supervisor is responsible for ensuring the work crew is complying with procedures, and for informing the work crew of any changes. The site supervisor is responsible for ensuring the work crew is aware of changes that may have been implemented by GDARD before starting any works.
2. If the contractor cannot comply with any of the activities as described above, they should inform the ECO with reasons within 7 working days.