



REFERENCE: 16/3/3/1/B4/45/1044/17
ENQUIRIES: BERNADETTE OSBORNE
DATE OF ISSUE: 2018 -09- 05

The Municipal Manager
Stellenbosch Municipality
PO Box 17
STELLENBOSCH
7600

Attention: Dries van Taak

Tel: (021) 808 8218
E-mail: dries.vantaak@stellenbosch.gov.za

Dear Sir

APPLICATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) THE ENVIRONMENTAL IMPACT ASSESSMENT ("EIA") REGULATIONS, 2014 (AS AMENDED): THE JAMESTOWN BULK SEWERAGE INFRASTRUCTURE PROJECT, STELLENBOSCH.

1. With reference to the above application, the Department hereby notifies you of its decision to **grant** Environmental Authorisation and **adopt** the Maintenance Management Plan, attached herewith, together with the reasons for the decision.
2. In terms of Regulation 4 of the EIA Regulations, 2014 (as amended), you are instructed to ensure, within 14 days of the date of the Environmental Authorisation, that all registered interested and affected parties ("I&APs") are provided with access to and reasons for the decision, and that all registered I&APs are notified of their right to appeal.
3. Your attention is drawn to Chapter 2 of the Appeal Regulations, 2014 (as amended), which prescribes the appeal procedure to be followed. This procedure is summarised in the attached Environmental Authorisation.

Yours faithfully

**DIRECTOR, DEVELOPMENT MANAGEMENT (REGION 1)
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING**

Cc: (1) Larry Eichstadt (Resource Management Services)
(2) Schalk van der Merwe (Stellenbosch Municipality)

Fax: (021) 975 1373
Fax: (021) 886 6899



REFERENCE: 16/3/3/1/B4/45/1044/17
NEAS REFERENCE: WCP/EIA/0000347/2017
ENQUIRIES: Bernadette Osborne
DATE OF ISSUE: 2018 -09- 05

ENVIRONMENTAL AUTHORISATION

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED): THE JAMESTOWN BULK SEWERAGE INFRASTRUCTURE UPGRADE PROJECT, STELLENBOSCH.

With reference to your application for the abovementioned, find below the outcome with respect to this application.

DECISION

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") and the Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended), the Competent Authority herewith **grants Environmental Authorisation** to the applicant to undertake the listed activities specified in section B below with respect to the preferred alternatives described in the Basic Assessment Report ("BAR"), dated May 2018.

In terms of the NEMA, viz, the EIA Regulations, 2014 (as amended) and Listing Notices 1, 2 and 3 (published in Government Gazette No. 40772 of 7 April 2017) the Competent Authority hereby adopts the Maintenance Management Plan for the Jamestown Bulk Sewerage Infrastructure Upgrade Project, Stellenbosch.

The applicant for this Environmental Authorisation is required to comply with the conditions set out in section E below.

A. DETAILS OF THE APPLICANT FOR THIS ENVIRONMENTAL AUTHORISATION

Stellenbosch Municipality
c/o Mr Dries van Taak
PO Box 17

STELLENBOSCH

7600

Tel: (021) 808 8218

E-mail: dries.vantaak@stellenbosch.gov.za

The abovementioned applicant is the holder of this Environmental Authorisation and is hereinafter referred to as "the holder".

B. LIST OF ACTIVITIES AUTHORISED

Listed Activities	Project Description
<p>Listing Notice 1 – Activity Number: 10 The development and related operation infrastructure exceeding 1000 metres in length for the bulk transport of sewage, effluent, process water, waste water, return water, industrial discharge or slimes –</p> <p>(I) With an internal diameter of 0.36 meters or more; or (II) With a peak throughput of 120 liters per second or more;</p> <p>Excluding where –</p> <p>(a) Such infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slime inside a road reserve or railway line reserve; or (b) Where such development will occur</p>	<p>The sewer rising main will exceed 1000m in length (approximately 4.5km long) and will have a throughput of more than 120 litres per second (approximately 85 – 130 litres per second). The site is located outside the urban area of Stellenbosch.</p>
<p>Listing Notice 1 – Activity Number: 12 The development of—</p> <p>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or (ii) infrastructure or structures with a physical footprint of 100 square metres or more;</p> <p>where such development occurs—</p> <p>(a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; —</p> <p>excluding—</p> <p>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</p>	<p>The sewer line will traverse the Eerste and Blaauwklippen Rivers, requiring construction activities within, and within 32m of such watercourses. The sewer line and associated infrastructure will exceed 100m² in size.</p>

<p>(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</p> <p>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;</p> <p>(dd) where such development occurs within an urban area;</p> <p>(ee) where such development occurs within existing roads, road reserves or railway lines; or</p> <p>(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.</p>	
<p>Listing Notice 1 – Activity Number: 19 The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 10 cubic metres from a watercourse;</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving-</p> <p>(a) Will occur behind a development setback;</p> <p>(b) Is for maintenance purposes undertaken in accordance with a maintenance management plan;</p> <p>(c) Falls within the ambit of activity 21 in this Notice, in which case that activity applies.</p> <p>(d) Occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>(e) Where such development is related to the development of a port or harbor, in which case activity 26 in Listing Notice 2 of 2014 applies.</p>	<p>The sewer line will traverse the Eerste and Blaauwklippen Rivers, requiring construction activities within such watercourses. More than 10 cubic metres of material will be deposited into and/or removed from a watercourse.</p>
<p>Listing Notice 1 – Activity Number: 31 The decommissioning of existing facilities or infrastructure for –</p> <p>(i) Any development and related operation activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014;</p> <p>(ii) Any expansion and related activity or activities in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014;</p> <p>(iii) Any phased activity or activities for development and related operation activity</p>	<p>Four Pump Stations will be decommissioned, namely Techno park, Jamestown and De Zalze No. 1 and 2 Pump Stations.</p>

<p>or expansion or related operation activities in this Listing Notice or Listing Notice 3 of 2014; or</p> <p>(iv) Any activity regardless the time the activity was commenced with, where such activity</p> <p>(a) is similarly listed to an activity in (i) or (ii) above; and</p> <p>(b) is still in operation or development is still in progress.</p> <p>Excluding where –</p> <p>(aa) activity 22 of this notice applies; or</p> <p>(bb) the decommissioning is covered by part 8 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies.</p>	
<p>Listing Notice 1 –</p> <p>Activity Number: 46</p> <p>The expansion and related operation of infrastructure for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes where the existing infrastructure –</p> <p>(i) has an internal diameter of 0.36 metres or more; or</p> <p>(ii) has a peak throughput of 120 liters per second or more; and</p> <p>(iii) where the facility or infrastructure is expanded by more than 1000 metres in length; or</p> <p>(iv) where the throughput capacity of the facility or infrastructure will be increased by 10% or more;</p> <p>excluding where such expansion –</p> <p>(aa) related to the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes within a road reserve or railway line reserve; or</p> <p>(bb) will occur within an urban area.</p>	<p>Certain portions of the existing sewer line will need to be upgraded and expanded as part of this development.</p>
<p>Listing Notice 3 –</p> <p>Activity Number: 12</p> <p>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>(i) Western Cape:</p>	<p>The clearance of patches of Swartland Shale Renosterveld vegetation which may occur along the Eerste, Blaauwklippen and Veldwagters Rivers.</p>

<p>i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</p> <p>ii. Within critical biodiversity areas identified in bioregional plans;</p> <p>iii. Within the littoral active zone or 100 metres inland from the high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;</p> <p>iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or</p> <p>v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.</p>	
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The abovementioned list is hereinafter referred to as “**the listed activities**”.

The holder is herein authorised to undertake the listed activities as it relates to the development, which will be constructed in the following phases:

- Phase 1 – De Zalze and Techno Park (for immediate implementation)
 - Construction of a new 355mm diameter rising main from De Zalze Pump Station No. 2 to Fleurbaix;
 - Construction of a new 400mm diameter rising main from Fleurbaix to the Stellenbosch Waste Water Treatment Works (“WWTW”);
 - Construction of a new 52kW Blaauwklippen Pump Station;
 - Construction of a new 355mm diameter De Zalze gravity sewer from De Zalze Pump Station No. 2 to the new Blaauwklippen Pump Station;
 - Decommissioning of the De Zalze Pump Station No. 2;
 - Construction of a new 355mm diameter bypass around the De Zalze Pump Station No. 1;
 - Decommissioning of the De Zalze Pump Station No. 1; and
 - Converting the existing 200mm De Zalze to Techno Park Rising main to gravity outfall.

- Phase 2 – Jamestown (for immediate implementation)
 - Construction of a new 315mm diameter gravity outfall pipe and R44 crossing, from the Jamestown reticulation, connecting to the existing De Zalze sewer reticulation;
 - Decommissioning of the existing Jamestown Pump Station; and
 - Decommissioning of the existing Techno Park Pump Station.

- Phase 3 – Fleurbaix and Vlottenburg (for future implementation)
 - Construction of a new 250mm diameter gravity sewer from Vlottenburg to the new Blaauwklippen Pump Station; and
 - Construction of a new Fleurbaix Pump Station that links into the previously constructed rising main.

C. SITE DESCRIPTION AND LOCATION

The listed activities will be undertaken in Stellenbosch, along the following co-ordinates:

	Latitude (S)	Longitude (E)
Starting point	33° 58' 22.05" South	18° 50' 36.54" East
Middle point	33° 58' 00.83" South	33° 48' 21.06" East
End point	33° 58' 21.98" South	33° 50' 36.33" East

The SG digit codes:

Preferred Route Alternative 1, Option 1(b):

Erf No. 2 - C06700380000000200000
Erf No. 24 - C06700320000002400000
Erf No. 25 - C06700320000002500000
Erf No. 31 - C06700320000003100000
Erf No. 33 - C06700380000003300000
Erf No. 42 - C06700320000004200000
Erf No. 85 - C06700320000008500000

Preferred Route Alternative A1:

Erf No. 377- C06700320000037700000
Erf No. 577- C06700320000057700000
Erf No. 579- C06700320000057900000

Preferred Route Alternative B1:

Erf No. 284- C06700320000028400000
Erf No. 284/2- C06700320000028400002

Refer to Annexure 1: Locality Plan and Annexure 2: Site Plan.

The above is hereinafter referred to as "**the site**".

D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Resource Management Services
c/o Mr Larry Eichstadt
PO Box 4296
DURBANVILLE
7551

Tel: (021) 975 7396
Fax: (021) 975 1373

E. CONDITIONS OF AUTHORISATION

Scope of authorisation

1. The holder is authorised to undertake the listed activities specified in Section B above in accordance with and restricted to the preferred alternatives, described in the BAR dated May 2018 on the site as described in Section C above.
2. The Environmental Authorisation is valid for a period of **five years** from the date of issue within which commencement must occur.
3. The development must be concluded within **ten years** from the date of commencement of the first listed activity.
4. The holder shall be responsible for ensuring compliance with the conditions by any person acting on his/her behalf, including an agent, sub-contractor, employee or any person rendering a service to the holder.
5. Any changes to, or deviations from the scope of the alternative described in section B above must be accepted or approved, in writing, by the Competent Authority before such changes or deviations may be implemented. In assessing whether to grant such acceptance/approval or not, the Competent Authority may request information in order to evaluate the significance and impacts of such changes or deviations, and it may be necessary for the holder to apply for further authorisation in terms of the applicable legislation.

Written notice to the Competent Authority

6. Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of construction activities.
 - 6.1 The notice must make clear reference to the site details and EIA Reference number given above.
 - 6.2 The notice must also include proof of compliance with the following conditions described herein:

Conditions: 6, 7 and 12.

Notification and administration of appeal

7. The holder must in writing, within 14 (fourteen) calendar days of the date of this decision–
 - 7.1 notify all registered Interested and Affected Parties ("I&APs") of –
 - 7.1.1 the outcome of the application;
 - 7.1.2 the reasons for the decision as included in Annexure 3;
 - 7.1.3 the date of the decision; and
 - 7.1.4 the date when the decision was issued.
 - 7.2 draw the attention of all registered I&APs to the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulations, 2014 detailed in Section F below;

- 7.3 draw the attention of all registered I&APs to the manner in which they may access the decision;
- 7.4 provide the registered I&APs with:
 - 7.4.1 the name of the holder (entity) of this Environmental Authorisation,
 - 7.4.2 name of the responsible person for this Environmental Authorisation,
 - 7.4.3 postal address of the holder,
 - 7.4.4 telephonic and fax details of the holder,
 - 7.4.5 e-mail address, if any, of the holder,
 - 7.4.6 the contact details (postal and/or physical address, contact number, facsimile and e-mail address) of the decision-maker and all registered I&APs in the event that an appeal is lodged in terms of the 2014 National Appeals Regulations.
8. The listed activities, including site preparation, may not commence within 20 (twenty) calendar days from the date of issue of this Environmental Authorisation. In the event that an appeal is lodged with the Appeal Authority, the effect of this Environmental Authorisation is suspended until the appeal is decided.

Management of activity

9. The draft or Environmental Management Programme ("EMPr") submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.
10. The Maintenance Management Plan ("MMP") adopted as part of this Environmental Authorisation must be implemented.
11. The EMPr and MMP must be included in all contract documentation for all phases of implementation.

Monitoring

12. The holder must appoint a suitably experienced Environmental Control Officer ("ECO"), or site agent where appropriate, before commencement of any land clearing or construction activities to ensure compliance with the provisions of the EMPr, MMP and the conditions contained herein.
13. A copy of the Environmental Authorisation, EMPr, MMP, audit reports and compliance monitoring reports must be kept at the site of the authorised activities, and must be made available to anyone on request, including a publicly accessible website.
14. Access to the site referred to in Section C above must be granted, and the environmental reports mentioned above must be produced, to any authorised official representing the Competent Authority who requests to see it for the purposes of assessing and/or monitoring compliance with the conditions contained herein.

Auditing

15. In terms of Regulation 34 of the NEMA EIA Regulations, 2014 (as amended), the holder must conduct environmental audits to determine compliance with the conditions of the Environmental Authorisation, the EMPr, MMP and submit Environmental Audit Reports to the Competent Authority. The Environmental Audit Report must be prepared by an independent person and must contain all the information required in Appendix 7 of the NEMA EIA Regulations, 2014 (as amended).

The holder must undertake an environmental audit quarterly for the duration of the construction phase and submit Environmental Audit Reports to the Competent Authority once every six months during the construction phase. The final Environmental Audit Report must be submitted to the Competent Authority six months after operation commenced.

The holder must, within 7 days of the submission of each of the above-mentioned reports to the Competent Authority, notify all potential and registered I&APs of the submission and make the report available to anyone on request and on a publicly accessible website (if applicable).

Specific Conditions

16. Should any heritage remains be exposed during excavations or any other actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape. Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from Heritage Western Cape.

Heritage remains include: meteorites, archaeological and/or palaeontological remains (including fossil shells and trace fossils); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artifacts and bone remains; structures and other built features with heritage significance; rock art and rock engravings; and/or graves or unmarked human burials including grave goods and/or associated burial material.

17. A qualified archaeologist and/or palaeontologist must be contracted where necessary (at the expense of the holder) to remove any heritage remains. Heritage remains can only be disturbed by a suitably qualified heritage specialist working under a directive from the relevant heritage resources authority.
18. The development footprint and no-go areas must be clearly demarcated prior to each phase of implementation.
19. Construction activities within the affected sections of watercourses should take place during the low flow periods, where possible.
20. The riparian areas disturbed during construction must be planted with suitable local indigenous vegetation following construction in order to stabilise the riverbanks and prevent the establishment of invasive alien vegetation.

F. GENERAL MATTERS

1. Notwithstanding this Environmental Authorisation, the holder must comply with any other statutory requirements that may be applicable when undertaking the listed activities.
2. Non-compliance with a condition of this Environmental Authorisation or EMPr may render the holder liable to criminal prosecution.
3. If the holder does not commence with a listed activity within the period referred to in Condition 2, this Environmental Authorisation shall lapse for that activity, and a new application for Environmental Authorisation must be submitted to the Competent Authority. If the holder wishes to extend the validity period of the Environmental Authorisation, an application for amendment in this regard must be made to the Competent Authority prior to the expiry date of the Environmental Authorisation.
4. The holder must submit an application for amendment of the Environmental Authorisation to the Competent Authority where any detail with respect to the Environmental Authorisation must be amended, added, substituted, corrected, removed or updated. If a new holder is proposed, an application for Amendment in terms of Part 1 of the EIA Regulations, 2014 (as amended) must be submitted.

Please note that an amendment is not required if there is a change in the contact details of the holder. In this case, the Competent Authority must only be notified of such changes.

5. The manner and frequency for updating the EMPr is as follows:
Amendments to the EMPr, must be done in accordance with Regulations 35 to 37 of the EIA Regulations 2014 (as amended) or any relevant legislation that may be applicable at the time.

G. APPEALS

Appeals must comply with the provisions contained in the National Appeal Regulations 2014 (as amended).

1. An appellant (if the holder of the decision) must, within 20 (twenty) calendar days from the date the notification of the decision was sent to the holder by the Competent Authority –
 - 1.1. Submit an appeal in accordance with Regulation 4 of the National Appeal Regulations 2014 (as amended) to the Appeal Administrator; and
 - 1.2. Submit a copy of the appeal to any registered I&APs, any Organ of State with interest in the matter and the decision-maker i.e. the Competent Authority that issued the decision. -
2. An appellant (if NOT the holder of the decision) must, within 20 (twenty) calendar days from the date the holder of the decision sent notification of the decision to the registered I&APs–
 - 2.1. Submit an appeal in accordance with Regulation 4 of the National Appeal Regulations 2014 (as amended) to the Appeal Administrator; and
 - 2.2. Submit a copy of the appeal to the holder of the decision, any registered I&AP, any Organ of State with interest in the matter and the decision-maker i.e. the Competent Authority that issued the decision.

3. The holder of the decision (if not the appellant), the decision-maker that issued the decision, the registered I&AP and the Organ of State must submit their responding statements, if any, to the appeal authority and the appellant within 20 (twenty) calendar days from the date of receipt of the appeal submission.

4. The appeal and the responding statement must be submitted to the address listed below:

By post: Western Cape Ministry of Local Government, Environmental Affairs and
Development Planning
Private Bag X9186
CAPE TOWN
8000

By facsimile: (021) 483 4174; or

By hand: Attention: Mr Jaap de Villiers (Tel: 021 483 3721)
Room 809
8th Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001

Note: For purposes of electronic database management, you are also requested to submit electronic copies (Microsoft Word format) of the appeal, responding statement and any supporting documents to the Appeal Authority to the address listed above and/ or via e-mail to Jaap.DeVilliers@westerncape.gov.za.

5. A prescribed appeal form as well as assistance regarding the appeal processes is obtainable from Appeal Authority at: Tel. (021) 483 3721, E-mail Jaap.DeVilliers@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

H. DISCLAIMER

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this Environmental Authorisation shall not be responsible for any damages or losses suffered by the holder, developer or his/her successor in any instance where construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance with the conditions as set out herein or any other subsequent document or legal action emanating from this decision.

Your interest in the future of our environment is appreciated.

Yours faithfully



MR. ZAAHIR TOEFY

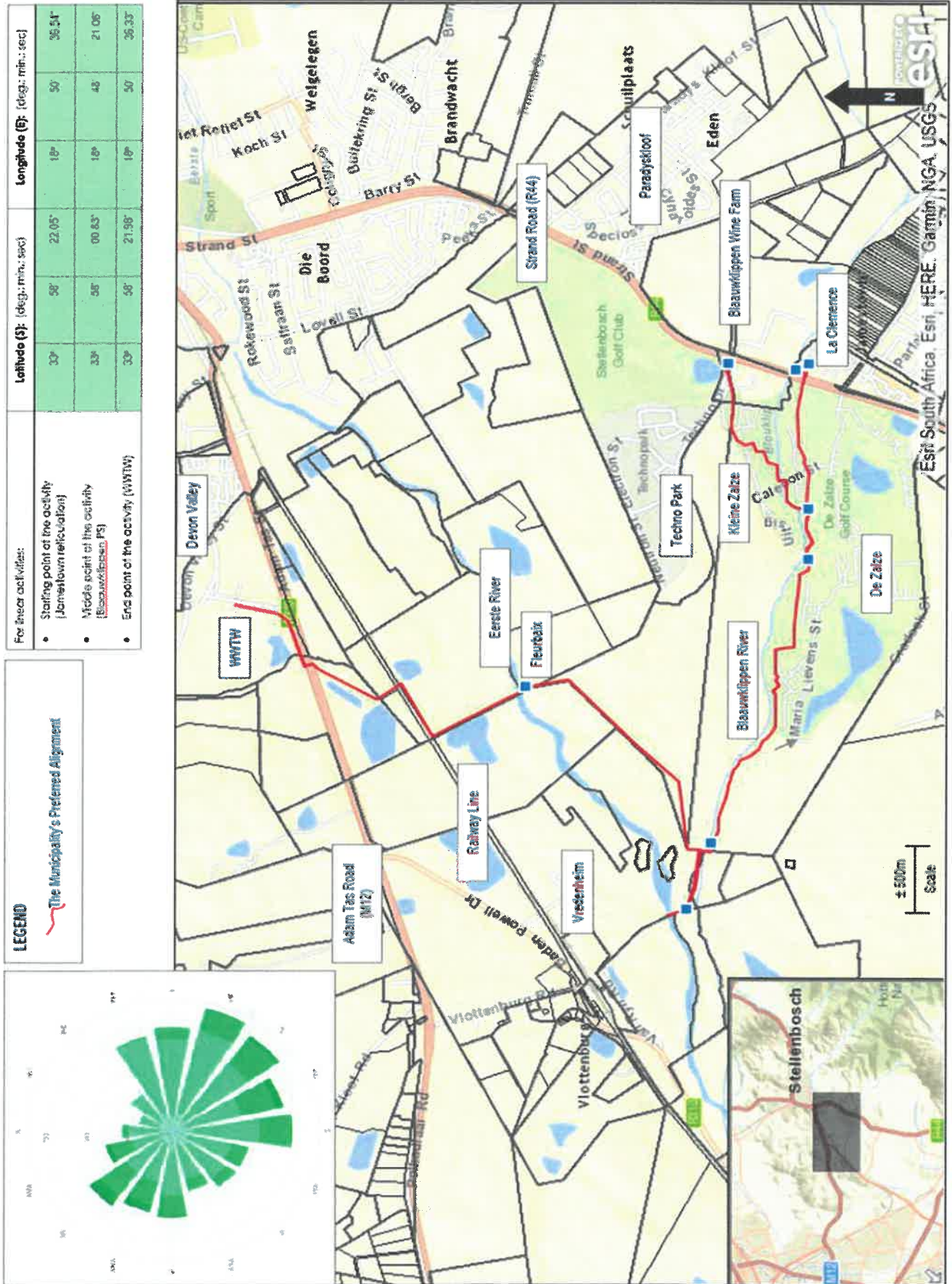
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

DATE OF DECISION: 05/09/2018

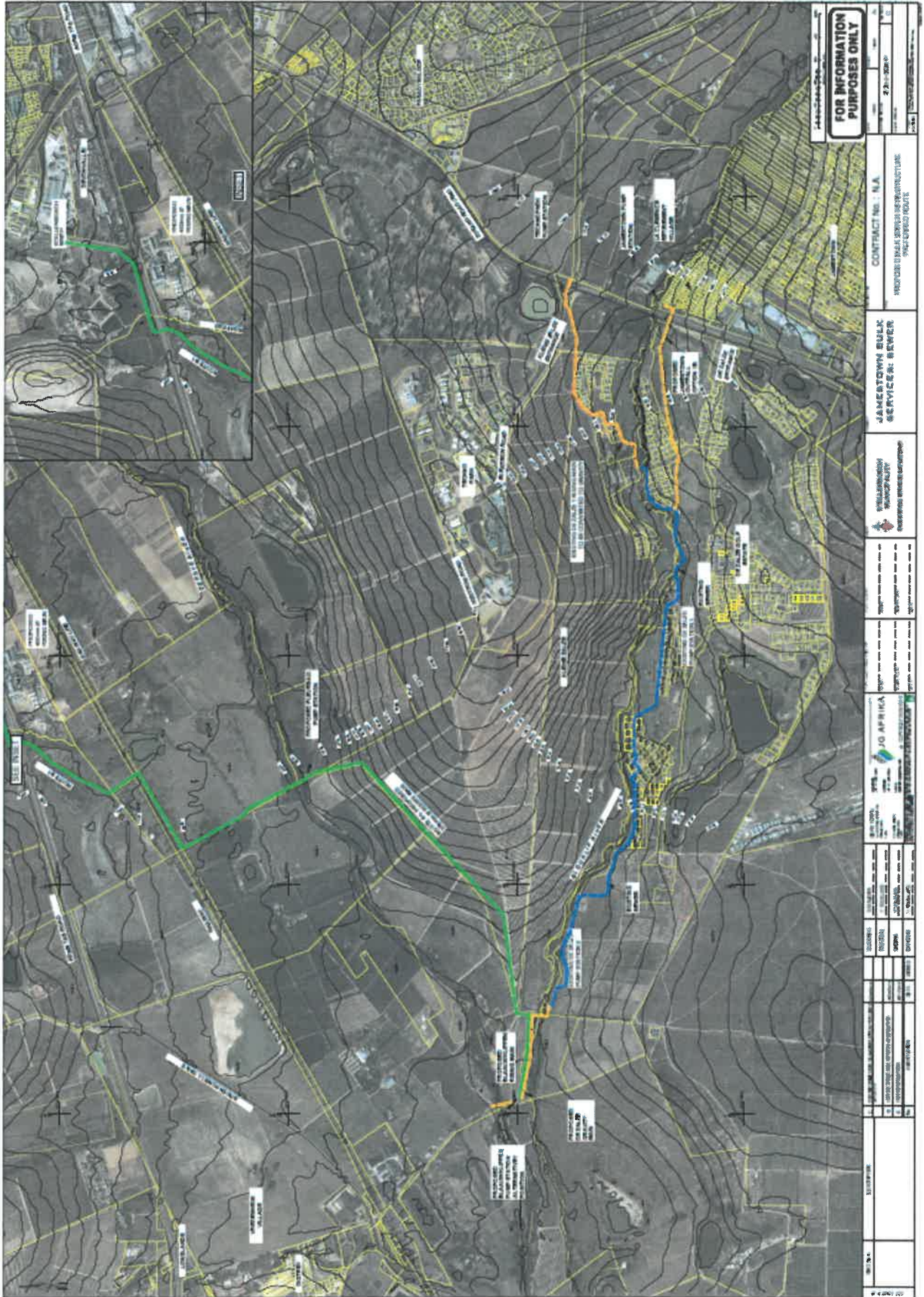
Cc: (1) Larry Eichstadt (Resource Management Services)
(2) Schalk van der Merwe (Stellenbosch Municipality)

Fax: (021) 975 1373
Fax: (021) 886 6899

ANNEXURE 1: LOCALITY PLAN



ANNEXURE 2: SITE PLAN



ANNEXURE 3: REASONS FOR THE DECISION

In reaching its decision, the Competent Authority considered, inter alia, the following:

- a) The information contained in the Application Form dated 8 December 2017, the draft Basic Assessment Report received by the Department on 8 December 2018, the amended draft Basic Assessment Report received by the Department on 26 March 2018 and the EMPr submitted together with the final Basic Assessment Report on 21 May 2018 and the additional information received on 22 August 2018;
- b) Relevant information contained in the Departmental information base, including the Guidelines on Public Participation and Alternatives (dated March 2013);
- c) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998);
- d) The comments received from I&APs and responses to these, included in the Basic Assessment Report received on 21 May 2018; and
- e) The balancing of negative and positive impacts and proposed mitigation measures.

No site visits were conducted. The Competent Authority had sufficient information before it to make an informed decision without conducting a site visit.

All information presented to the Competent Authority was taken into account in the consideration of the application for Environmental Authorisation. A summary of the issues that were considered to be the most significant for the decision is set out below.

1. Public Participation

The public participation process included:

- identification of and engagement with I&APs;
- the placing of a newspaper advertisement in the "Eikestadnuus" on 7 December 2017;
- giving written notice to the owners and occupiers of land adjacent to the site where the listed activities are to be undertaken, the municipality and ward councillor, and the various organs of state having jurisdiction in respect of any aspect of the listed activities on 8 December 2017;
- fixing a notice board at the site where the listed activities are to be undertaken;
- making the draft Basic Assessment Report available to I&APs for public review from 8 December 2017; and
- making the amended draft Basic Assessment Report available to I&APs for public review from 26 March 2018.

All the concerns raised by I&APs were responded to and adequately addressed during the public participation process. Specific management and mitigation measures have been considered in this Environmental Authorisation and in the EMPr to adequately address the concerns raised.

The Competent Authority concurs with the Environmental Assessment Practitioner's responses to the issues raised during the public participation process and has included appropriate conditions in this Environmental Authorisation and in the EMPr.

2. Alternatives

The municipality's preferred option for the Jamestown bulk sewerage infrastructure upgrade was identified through the original master planning process and design, which allow the drainage areas clustered around the Blaauwklippen River to drain by gravity to a point located at the western end of the De Zalze Estate, from where the sewage will be pumped via a new rising main to the Stellenbosch WWTW.

It is proposed to implement the required upgrades in phases, as outlined below, as each stage is dependent on the completion of the preceding stages. However, although the full benefit of the scheme will be achieved by completing all the phases, each phase and sub-phases will be fully functional and will provide improvement, independently of the future phases.

Preferred Sewer Alignment (Preferred alternative herewith authorised):

The Jamestown bulk sewerage infrastructure upgrade will be developed in the following phases:

➤ Phase 1 – De Zalze and Techno Park (for immediate implementation)

- Construction of a new 355mm diameter rising main from De Zalze Pump Station No. 2 to Fleurbaix;
- Construction of a new 400mm diameter rising main from Fleurbaix to the Stellenbosch WWTW;
- Construction of a new 52kW Blaauwklippen Pump Station;
- Construction of a new 355mm diameter De Zalze gravity sewer from De Zalze Pump Station No. 2 to the new Blaauwklippen Pump Station;
- Decommissioning of the De Zalze Pump Station No. 2;
- Construction of a new 355mm diameter bypass around the De Zalze Pump Station No. 1;
- Decommissioning of the De Zalze Pump Station No. 1; and
- Converting the existing 200mm De Zalze to Techno Park Rising main to gravity outfall.

➤ Phase 2 – Jamestown (for immediate implementation)

- Construction of a new 315mm diameter gravity outfall pipe and R44 crossing, from the Jamestown reticulation, connecting to the existing De Zalze sewer reticulation;
- Decommissioning of the existing Jamestown Pump Station; and
- Decommissioning of the existing Techno Park Pump Station.

➤ Phase 3 – Fleurbaix and Vlottenburg (for future implementation)

- Construction of a new 250mm diameter gravity sewer from Vlottenburg to the new Blaauwklippen Pump Station; and
- Construction of a new Fleurbaix Pump Station that links into the previously constructed rising main.

A: The following alternatives were considered for the sewer alignment through or around the De Zalze Estate:

Option 1 is the municipality's preferred alignment. This option has been split into Option 1a, Option 1b (preferred), and Option 1c:

Option 1(a):

This option starts at the Jamestown Pump Station. The pipe will cross the R44 road via the Blaauwklippen River culvert and continue through the De Zalze Golf Course, along the southern edge of the river and would then tie into the existing sewer system within the De Zalze Estate. A section of the existing sewer in the De Zalze Estate, located between the residences and the

Blaauwklippen River would have to be upgraded. This route was not preferred due to the potential significant impacts on adjacent residents and it will be difficult and costly to construct.

Option 1(b) (Preferred alternative herewith authorised):

This alignment starts at the La Clemence Retirement Village and gravitates across the R44 road towards the De Zalze Estate. The pipe will enter the estate south of the houses and tie into the existing network in close proximity to De Zalze Pump Station No. 1. The pipeline will be constructed between the houses and the De Zalze golf course. Although costly to construct, this alternative is preferred since it would have a lower impact on residents and due its position away from the river, it poses a lower risk to the Blaauwklippen River. This option is therefore environmentally and socially more acceptable.

It was proposed to install a new shredder or screening facility at the Jamestown Pump Station site to eliminate foreign objects in the flow and thus mitigate the risk of blockages in the downstream reticulation in the De Zalze Golf Estate. Due to space restrictions along this route the proposed installation cannot be accommodated. Therefore, the construction of traps at problem areas within the Jamestown system is proposed to mitigate the risk of foreign obstruction in the downstream pipes.

Option 1(c)

This option entails the construction of the sewer along the northern bank of the Blaauwklippen River, as recommended by the Freshwater Specialist. This was however not feasible from an engineering perspective for the following reasons:

- Due to the constraints of a continuously downward slope that is required for gravity sewers, pipe bridges will not be possible.
- This route would cross the Blaauwklippen River twice, and the pipe would have to be buried in the river bed, but the river bed is almost entirely hard granite at the proposed crossing locations.

B. The following two route alternatives were considered for the sewer rising main alignments from the proposed Blaauwklippen Pump Station to the proposed Fleurbaix Pump Station:

Route A1 (Preferred alternative herewith authorised)

This route runs along the western boundary of Farm No. 377, which is owned by the municipality and is leased for agricultural use (vines). This alternative was identified to avoid the sensitive area along the Eerste River, but it has a higher pumping cost than Route Alternative A2. Nonetheless it is preferred since it will have the lowest construction cost, no servitude is required, as the land is owned by the municipality and it avoids routing along the Eerste River. It is more favourable for landowners and poses a low river pollution risk.

Route Alternative A2

This route follows the Eerste River, through Farm No. 388 and Portion 1 of Farm No. 389, both privately owned. This was the original identified route and has the lowest pumping cost. The continuously rising profile also adds the flexibility to convert the pipeline to a gravity main, pumping in the opposite direction in future. The construction costs are however higher than Route Alternative A1 due to the presence of rock and a winding route, following the course of the river. This alternative was not preferred since landowners did not give consent to this route across their properties due in part to the perceived risk of sewage overflows/spills resulting in pollution of the river system.

C. Two route alternatives were considered for the sewer alignment from the Fleurbaix Pump Station to the Stellenbosch WWTW:

Route Alternative B1 (Preferred alternative herewith authorised)

This route runs along the western edge of Farm No. 284 (Troughend) and then follows an existing gravel road to the Adam Tas Road (M12) and then to the Stellenbosch WWTW. The drawbacks of this route are that it is unlikely to permit flow by gravity in the opposite direction and it bisects Farm No. 279, which could be restrictive to future development of that property. This is however the preferred route as it is considered to be the most economical, practical and environmentally friendly route.

Route Alternative B2

This route runs along the boundary of Farm No. 279 and may thus be less restrictive to future development of this property. It is however more expensive to construct than Route Alternative B1. This route also does not permit gravity flow in the opposite direction and it will also require the demolition and reconstruction of privately owned buildings on Portion 1 of Farm No. 284. It was therefore not preferred.

D. Two site alternatives were considered for the Blaauwklippen Pump Station:

Site Alternative 1 (Preferred alternative herewith authorised)

This alternative involves the construction of the Blaauwklippen Pump Station between the Eerste and Blaauwklippen Rivers on Farm No. 387. A new 355mm diameter extension of the De Zalze sewer would be required from the De Zalze Pump Station No. 2, crossing the the Blaauwklippen River and discharging to the new Pump Station. The future flows from the Vlottenburg area would be accommodated via a new 250mm diameter gravity sewer crossing the Eerste River and connecting to the new Pump Station. From there, the combined flow would be pumped to the proposed Fleurbaix Pump Station.

With regard to the two river crossings, pipe bridges would not be possible due to the design constraints of sewer slopes, and it would be necessary for both river crossings to be below the river bed. It is also anticipated that horizontal directional drilling may not be possible due to the rocky river bed, therefore the river crossings may have to be open trench crossings. This option is more expensive than Site Alternative 2, due to the river crossings and deeper pipe trenches required. The Pump Station will also require a deeper sump than Site Alternative 2 to accommodate the gravity pipe requirements. Notwithstanding the greater construction cost, this alternative was preferred by the Municipality due to the strategic and operational benefits as the site can service both the Blaauwklippen and Vlottenburg drainage areas.

Site Alternative 2

This alternative is located within the De Zalze Golf Estate on De Zalze Erf 4 (a fallow open space). The Blaauwklippen Pump Station will be positioned adjacent to the existing De Zalze Pump Station No. 2 and it would potentially be possible to re-use the existing sump. Due to the ground elevation, it would not be possible for the Vlottenburg area to gravitate to this site. An additional Pump Station (Vlottenburg Pump Station) would be required to the north of the Eerste River, with a rising main crossing the Eerste and Blaauwklippen Rivers and discharging to the new Blaauwklippen Pump Station. An additional Blaauwklippen River crossing will be required by the new rising main before proceeding northward to Fleurbaix Pump Station. This alternative was not preferred since the Vlottenburg area will not be able to gravitate to the Blaauwklippen Pump Station.

System Alternatives considered

In addition to the route alternatives described above, the Municipality also evaluated alternatives to the system configuration described above, as a whole. This was in response to concerns raised by De Zalze Estate that the construction and alteration of infrastructure within the De Zalze Estate and channeling of external bulk sewer flows through the Estate, holds risk to the Estate, might compromise the commercial activities of the golf course and poses a pollution risk to the Blaauwklippen River. Five scheme alternatives (Options 1-5) were identified and evaluated in a consultative process with De Zalze's appointed technical representative, Option 1 being the Municipality's original proposal. The evaluation of options comprised a technical evaluation on the basis of quantifiable life-cycle cost (construction and operation) and a qualitative evaluation of risks and social, economic and environmental impacts. Subsequent to this process, certain costs were revised in the light of construction risk factors identified through stakeholder discussions, the Municipality identified a sixth option, which was also evaluated, and Option 1 was amended by including an alternative route for the Jamestown outfall sewer and two site alternatives were considered for the Baauwklippen Pump Station. Ultimately, the evaluation determined the above outlined preferred options as the most reasonable and feasible alternatives.

No-go Alternative

This alternative represents the current *status quo*, which is sewer lines that are insufficient to convey both the current and predicted flows towards the Stellenbosch WWTW. This alternative is not preferred since it will not allow the construction of bulk sewerage infrastructure that is required to alleviate the current capacity shortcomings, especially at the Jamestown Pump Station. The *status quo* will continue to pose an environmental and social risk and hampers economic growth.

3. Impact Assessment and Mitigation measures

3.1 Activity need and desirability

The development will alleviate the current capacity shortfalls in the Jamestown and surrounding area. According to the Sewer Master Plan in the Municipal Integrated Development Plan, it is a priority to provide an intact and operational sewage waste management infrastructure network for the town. The development also falls in line with the Municipal Spatial Development Framework which states that upgrades to both water and sanitation infrastructure are required where necessary. The proposed activity will alleviate the current capacity shortfalls and will support and enable future residential and/or commercial development within Jamestown and surrounding areas.

3.2 Biophysical Impacts

The site for the preferred routes is located to the south of the town of Stellenbosch and consist mainly of vineyards and agricultural land. The site was historically covered with Swartland Granite Renosterveld vegetation but has been removed as a result of agricultural practices and urban development. According to the Freshwater Assessment dated November 2017 and the addendum thereto dated February 2018, compiled by BlueScience, three rivers are present along the route of the proposed upgrades, namely the Veldwagters River, the Blaauwklippen River and the Eerste River, as well as wetlands associated with the lower Veldwagters River. The development will cross the Blaauwklippen River and the Eerste River. These two rivers have not been mapped as Freshwater Ecosystem Priority Areas. A number of small Critical Biodiversity Areas have been mapped along the three rivers. The wider channels of the Blaauwklippen River and Eerste River are classified as Ecological Support Areas by SANBI. The Eerste River in the reach where the proposed river crossing will be is considered as largely to severely modified, with a moderate Ecological Importance and Sensitivity. The affected section of the Blaauwklippen River is rated as moderately to largely

modified and it has a moderate Ecological Importance and Sensitivity. The Veldwagters River is largely to critically modified and its Ecological Importance and Sensitivity is moderate to low.

The potential impacts associated with the development includes loss of aquatic habitat and associated biota, modification of flow, impairment of surface water quality, impacts on the beds and banks of the watercourses. Due to the modified state of the aquatic habitats of the Eerste, Blaauwklippen and Veldwagters Rivers and the associated wetland areas where the proposed activities will take place, the impacts are generally of a medium to low significance. In terms of overall impacts for the proposed preferred sewerage infrastructure upgrades, Option 1 will have the highest potential impact, albeit of medium to low significance due to the higher Ecological Importance and Sensitivity and better ecological condition of the freshwater features associated with the Blaauwklippen River. The potential aquatic ecosystem impacts for Route Alternative A1 between the De Zalze 2 Pump Station and Fleurbaix Pump Station will be low with the implementation of the recommended mitigation measures. Route Alternatives B1 and B2 between Fleurbaix Pump Station and the Stellenbosch WWTW will have a similar impact on the freshwater features and will also be of low significance after mitigation. The decommissioning of the selected Pump Stations and the construction of the new outfall sewer adjacent to the Blaauwklippen River will all have a low significant impact after mitigation. The construction end operational phase impacts will be addressed sufficiently through the implementation of the EMPr (accepted in Section E, Condition 9). A Water Use Licence Application ("WULA") in terms of the National Water Act, 1998 (Act 38 of 1998) has also been submitted to the Department of Water and Sanitation, which will further investigate the watercourse related impacts.

Furthermore, a MMP has also been compiled as part of the EMPr to address routine maintenance activities taking place in the affected watercourses. The maintenance of the crossings authorised in this Environmental Authorisation forms part of this MMP. It must be noted that the accepted maintenance activities only relate to the activities described in the MMP. Should any new activities and associated infrastructure, not included in the MMP, require maintenance and if any of the applicable listed activities are triggered, an Environmental Authorisation must be obtained prior to the undertaking of such activities. It remains the responsibility of the proponent to determine if any other listed activities are triggered and to ensure that the necessary Environmental Authorisation is obtained.

The fact that the MMP is adopted by the Competent Authority does not absolve the applicant from its general "duty of care" set out in Section 28(1) of the NEMA, which states that *"Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment."* (Note: When interpreting their "duty of care" responsibility, cognisance must be taken of the principles of sustainability contained in Section 2 of NEMA).

The development will result in both negative and positive impacts.

Negative Impacts:

Construction phase impacts on the water quality, beds and banks of the watercourses and disturbance to private property owners during construction.

Positive impacts:

The provision of an adequate sewage reticulation and a capacity increase to effectively accommodate current and future developments in the Jamestown and surrounding area. Temporary employment opportunities will be created during the construction phase.

4. National Environmental Management Act Principles

The National Environmental Management Principles (set out in section 2 of the NEMA, which apply to the actions of all organs of state, serve as guidelines by reference to which any organ of state must exercise any function when taking any decision, and which must guide the interpretation, administration and implementation of any other law concerned with the protection or management of the environment), *inter alia*, provides for:

- the effects of decisions on all aspects of the environment to be taken into account;
- the consideration, assessment and evaluation of the social, economic and environmental impacts of activities (disadvantages and benefits), and for decisions to be appropriate in the light of such consideration and assessment;
- the co-ordination and harmonisation of policies, legislation and actions relating to the environment;
- the resolving of actual or potential conflicts of interest between organs of state through conflict resolution procedures; and
- the selection of the best practicable environmental option.

5. Conclusion

In view of the above, the NEMA principles, compliance with the conditions stipulated in this Environmental Authorisation, and compliance with the EMPr, the Competent Authority is satisfied that the proposed listed activities will not conflict with the general objectives of integrated environmental management stipulated in Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and that any potentially detrimental environmental impacts resulting from the listed activities can be mitigated to acceptable levels.

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